

**U.K. AND U.S. MULTINATIONAL
CAPITAL BUDGETING AND FINANCING
DECISIONS**

by

VINCENT JAMES HOOPER

A thesis submitted to the University of Plymouth in
partial fulfilment for the degree of

DOCTOR OF PHILOSOPHY

The Plymouth Business School

October 1994

UNIVERSITY OF PLYMOUTH LIBRARY SERVICES (B)	
Item No.	900 -189936
Class No.	T 338.6041 H00
Contl. No.	X702974233

90 0218993 6



REFERENCE ONLY

LIBRARY STORE

**U.K. AND U.S. MULTINATIONAL
CAPITAL BUDGETING AND FINANCING
DECISIONS**

by

VINCENT JAMES HOOPER

Abstract

The purpose of this study is to investigate the capital budgeting and financing decisions of UK and US multinational enterprises. Following a survey approach, this study examines the impact that the general equilibrium and the disequilibrium schools of reasoning have upon international investment and financing decisions of the multinational. Further, the degree of centralisation in financial policy is investigated in the light of the two schools of thought which partition corporate finance theory. A conjoint methodology is utilised in order to evaluate the gravity of various environmental issues upon the foreign direct investment decision as well as the utilities for discrete levels of those determinants. The research inquiry is enriched with in-depth interviews with fourteen senior finance managers of British based multinational companies.

LIST OF CONTENTS

	Page
Contents of the Chapters	II
List of Tables in the Chapters	IX
Contents of the Appendices	XI
Acknowledgements	XIV
Declaration	XV
Introduction	1

CONTENTS OF THE CHAPTERS

Chapter 1

Literature Review

1.1	Introduction	6
1.2	General Background	6
1.3	Theories of the Multinational Enterprise	9
1.3A	The Risk Reduction Hypothesis	10
1.3B	The Theory of Internalisation	13
1.3C	Eclectic Theory of the Multinational Enterprise	16
1.3D	Political Theories of the Multinational Enterprise	18
1.3E	Ethical Perspectives of Multinational Theory	20
1.4	Capital Structure: Market Equilibrium or Market Imperfections	21
1.4A	Traditional Capital Structure Theory	22
1.4B	Multinational Capital Structure	24
1.5	Cost of Capital of the Multinational	28
1.6	Political Risk Distortions to Financial policy	30
1.6A	Strategies Adopted in Order to Reduce Political Risk	32
1.6B	Expropriation Risk	34
1.6C	Political Risk Insurance	34
1.7	Foreign Exchange Hedging	35
1.7A	Does Hedging Increase the Value of the Multinational Enterprise ?	35
1.7B	Strategic Aspects of Foreign Exchange Management	36
1.7C	Currency Portfolios and Adjustment of Cash Flows	37
1.8	International Financing Models	42
1.9	Foreign Exchange Exposure	43
1.10	Modelling the Financing Decision	44
1.11	Multinational Capital Budgeting, Cash Management and Treasury Sophistication	45
1.11A	Capital Budgeting Sophistication	47
1.11B	Cash Management Sophistication	53

1.11C	Hedging Sophistication	54
1.12	Organisation Structure and Centralisation	56
1.13	UK and US Multinational Capital Budgeting and Financing Decisions	62
1.14	The Relative Importance of the Distortions to the Financial Policy of the Multinational Enterprise	63
1.15	Summary of the Hypotheses to be Tested	66
1.16	Summary	69

Chapter 2

Methodology

2.1	Introduction	71
2.2	Secondary Data Sources	72
2.3	Primary Source Data	72
2.4	Sample Selection	75
2.5	Survey Design	76
2.6	Statistical Techniques Used to Analyse Questionnaire	78
2.7	Rationale and Limitations of Conjoint Analysis	82
2.8	Indepth Interviews	84
2.9	Summary	87

Chapter 3

General Equilibrium Theory versus Market Imperfections Approaches to Financing

3.1	Introduction	89
3.2	Debt financing strategy and the value of the multinational enterprise	90
3.3	Hedging and the value of the multinational enterprise	93
3.4	Global Optimum Capital Structure of the Multinational Group	96
3.5	Currency Mix goal	98

3.6	Financing Multinationals in Countries with High Political Risk	100
3.7	Summary and Interpretation	102

Chapter 4

UK and US Multinational Capital Budgeting and Financing Decisions

4.1	Objectives of the Capital Structure Decision	105
4.2	Optimum Capital Structure	107
4.3	Currency Mix Goal	108
4.4	Operation in Countries with High Political Risks	109
4.5	Finance from Countries with High Political Risk	109
4.6	Strategies Adopted in Relation to Financing	110
4.7	Policies Relating to the Configuration of Assets and Liabilities	112
4.8	Financing Considerations in Relation to Political Risk	114
4.9	Sources of Finance	116
4.10	Country Specific Considerations	118
4.11	Project specific considerations	120
4.12	Hedging Foreign Exchange	122
4.13	Financial Instruments used to Hedge Interest Rate Risk	124
4.14	Trend in Finance Functions	125
4.15	Centralisation of Financing	126
4.16	Centralisation of Hedging Functions	127
4.17	Overseas Project Evaluation	128
4.18	Adjustments to the Discount Rate and Cash Flows	130
4.19	Techniques Used in the Capital Budgeting Process	131
4.20	Multinational Hierarchy and Project Evaluation	132
4.21	Multinational Capital Structure versus the Domestic Situation	133
4.22	Subsidiaries' capital structure in high political risk countries	134

4.23	Impact of Debt and High Tax Rates upon the Value of the Multinational Enterprise	134
4.24	Impact of Hedging upon the Value of the Multinational Enterprise	135
4.25	Significant Differences between UK and US Multinationals	136
4.26	Summary	141

Chapter 5

A Factor Analysis of the Main Survey

5.1	Introduction	146
5.2	Interpretation of the Factors	146
5.3	Issues Involved with the Capital Structure Decision	147
5.3A	Factor 1-Configuration of Debt	147
5.3B	Factor 2-The Minimisation of Cost of Capital	147
5.3C	Factor 3-Level of Decentralisation of the Capital Structure Decision	148
5.4	Political Strategies in Relation to Financing	148
5.4A	Factor 4-Strategic Financial Management Policies	148
5.4B	Factor 5-Politicking	148
5.4C	Factor 6-Political Risk Avoidance	149
5.5	Risk Management Policies	149
5.5A	Factor 7-Risk Minimisation	149
5.5B	Factor 8-Non risk Considerations	150
5.6	Motives for Raising Finance in Countries with High Political Risk	150
5.6A	Factor 9-Financial Management Policies v Political Risk	150
5.6B	Factor 10-Incentives v Political Risk	151
5.7	Sources of Finance	151
5.7A	Factor 11-Local Equity and Equity Joint Ventures	151
5.7B	Factor 12-Local Debt	152
5.7C	Factor 13-Internal Funds	152

5.7D	Factor 14-International Funds	152
5.8	Country Specific Issues in Relation to Financing	152
5.8A	Factor 15-Host Country Financial Environment	153
5.8B	Factor 16-Transaction Costs	153
5.8C	Factor 17-Political Risk	153
5.9	Project Specific Issues in Relation to Financing	154
5.9A	Factor 18-Project-Risk	154
5.9B	Factor 19-Costs	154
5.10	Instruments to Hedge Foreign Exchange Risk	154
5.10A	Factor 20-Short Term Derivatives	155
5.10B	Factor 21-Long Term Swaps	155
5.11	Instruments to Hedge Interest Rate Risk	155
5.11A	Factor 22-Short Term Derivatives	155
5.11B	Factor 23-Long Term Swaps	155
5.12	Centralisation of Hedging Functions	156
5.12A	Factor 24-Centralisation of Foreign exchange hedging	156
5.12B	Factor 25-Centralisation of Interest Rate Risk	156
5.13	Centralisation of Finance Functions	156
5.13A	Factor 26-Centralised Treasury	157
5.13B	Factor 27-Centralisation of Investment and Working Capital Decisions	157
5.14	Test for the Validity and Robustness of the Factor Solution	158
5.15	Summary	159

Chapter 6

Tests on the Factor Groupings

6.1	Formulation of Inductive Hypotheses Derived From the Factor Analysis	160
6.2	Interpretation of the Analysis	161
6.3	Summary	167

Chapter 7

The Relative Importance of the Distortions to the Financial Policy of the Multinational Enterprise

7.1	Introduction	169
7.2	Method for the Conjoint Analysis	169
7.3	Scenario Evaluation Exercise	172
7.4	Analysis	173
7.5	The Differences between UK and US Multinational Enterprises	173
7.6	Relationship between Attribute Levels for UK and US Multinational Enterprises	176
7.7	Significant Differences between UK and US Multinationals	178
7.8	Discriminant Analysis	179
7.9	Relative Importance	181
7.10	Segmented Conjoint Analysis using the SPSS Quick Cluster	182
7.11	The Significant Differences between Cluster 1 and Cluster 2	185
7.12	Relative Importance	187
7.13	Robustness of the Conjoint Model	188
7.14	Non Response of the Conjoint and Survey	189
7.15	Limitations of Survey Based Non-Response Investigations	190
7.16	Method for Testing for Non-Response	190
7.17	Hypotheses- Non-Response Bias	191
7.18	Results of the Non-Response Investigation	192
7.19	Summary	193

Chapter 8

In-depth Interviews

8.1	Introduction	196
8.2A	COMPANY A	196

8.2B	COMPANY B	197
8.2C	COMPANY C	198
8.2D	COMPANY D	200
8.2E	COMPANY E	201
8.2F	COMPANY F	202
8.2G	COMPANY G	203
8.2H	COMPANY H	204
8.2I	COMPANY I	205
8.2J	COMPANY J	206
8.2K	COMPANY K	207
8.2L	COMPANY L	207
8.2M	COMPANY M	208
8.2N	COMPANY N	209
8.3	Activities of the Groups	210
8.4	Summary	212

Chapter 9 Conclusions

9.1	Conclusions	215
-----	-------------	-----

REFERENCES

References	395
------------	-----

LIST OF TABLES IN THE CHAPTERS

Table 4.1	The Capital Structure Decision	106
Table 4.2	Parent Company with an Optimum Capital Structure	107
Table 4.3	Multinational Group with an Optimum Capital Structure	108
Table 4.4	Currency Mix Goal	108
Table 4.5	Operation in High Political Risk Countries	109
Table 4.6	Finance from High Political Risk Countries	110
Table 4.7	Strategies in Financing	111
Table 4.8	The Allocation of Currencies	113
Table 4.9	Debt Financing Considerations in High Political Risk Countries	115
Table 4.10	Financing Sources	117
Table 4.11	Country-Specific Factors	119
Table 4.12	Project Specific Issues	121
Table 4.13	Foreign Exchange Hedging	123
Table 4.14	Interest Rate Hedging	124
Table 4.15	Trend in Finance Functions	126
Table 4.16	Centralisation of Financing	127
Table 4.17	Centralisation of Hedging functions	128
Table 4.18	The Discount Rate in Overseas Project Evaluation	129
Table 4.19	Percentage of Respondents using Different Discount Rates	130
Table 4.20	Adjustments to Discount Rate or Cash Flows	130
Table 4.21	The Percentage of Companies using Each of the Capital Budgeting Evaluation Techniques.	131
Table 4.22	Level at which Projects are Evaluated	132
Table 4.23	Multinational versus Domestic Capital Structure	133
Table 4.24	Debt Equity Ratio of Subsidiaries Located in High Political Risk Countries	134

Table 4.25	Effect of Debt and High Tax Rates upon Value	135
Table 4.26	Hedging and the Value of the Multinational Enterprise	136
Table 4.27	The Significance of Differences between UK and US Multinationals	137
Table 5.1	Tests for the Validity and Robustness of the Factor Solution	150
Table 7.1	Differences between UK and US Multinationals	175
Table 7.2	Results from the Stepwise Discriminant Analysis	180
Table 7.3	Relative Importance of the Attributes for UK and US Multinationals	181
Table 7.4	Significant Differences between Cluster 1 and Cluster 2	184
Table 7.5	Relative Importance of Attributes for the Two Clusters	187
Table 7.6	Tests of Robustness	188

CONTENTS OF THE APPENDICES

APPENDIX I

Table I-3.1	Significant Differences between those Companies that Supported Modigliani and Miller (1958) / Miller (1977) and Modigliani and Miller (1963)	233
Table I-3.2	Market Imperfections v General Equilibrium Approach to Hedging	235
Table I-3.3	Comparing Group C with Group D: Global Optimal Structure	237
Table I-3.4	Comparing Group E and Group F: Currency Mix Goal	238
Table I-3.5	Comparing Group G and Group H: Finance for Countries with High Political Risk	240

APPENDIX II

Table II-5.1	Factor Analysis of the Issues Involved with the Capital Structure Decision	242
Table II-5.2	Rotated Factor Matrix	243
Table II-5.3	Factor analysis of the political strategies in relation to financing	244
Table II-5.4	Rotated Factor Matrix	245
Table II-5.5	Factor analysis of the allocation of currency policies	246
Table II-5.6	Rotated Factor Matrix	247
Table II-5.7	Factor Analysis of the Motives for Raising Finance in Countries with High Political Risk	248
Table II-5.8	Rotated Factor Matrix	249
Table II-5.9	Factor Analysis of the Sources of Finance	250
Table II-5.10	Rotated Factor Matrix	251
Table II-5.11	Factor Analysis of the Country Specific Issues in Relation to Financing	252
Table II-5.12	Rotated Factor Matrix	253

Table II-5.13	Factor Analysis of the Project Specific Issues in Relation to Financing	254
Table II-5.14	Rotated Factor Matrix	255
Table II-5.15	Factor Analysis of the Instruments used to Hedge Foreign Exchange Risk	256
Table II-5.16	Rotated Factor Matrix	257
Table II-5.17	Factor Analysis of the Instruments used to Hedge Interest Rate Risk	258
Table II-5.18	Rotated Factor Matrix	259
Table II-5.19	Factor Analysis of the Centralisation of the Hedging Functions	260
Table II-5.20	Rotated Factor Matrix	261
Table II-5.21	Factor analysis of the centralisation of the finance functions	262
Table II-5.22	Rotated Factor Matrix	263

APPENDIX A
Discriminant Functions

Table A.1 to A.34	Discriminant Analysis	264
-------------------	-----------------------	-----

APPENDIX B
Analysis of the Extracted Factors

Table B.1 to B.27	T-tests on factor 1 to factor 27	288
-------------------	----------------------------------	-----

APPENDIX C
Non-response Bias

Table C.1-C.4	Main survey-UK	369
Table C.5-C.8	Main survey-US	369
Table C.9-C.12	Conjoint-UK	370
Table C.13-C.16	Conjoint-US	371
Table C.17-C.20	Sample of UK v Sample of US Companies for the Main Survey	374
Table C.21-C.24	Sample of UK v Sample of US Companies for the Scenario Analysis	375

APPENDIX D
Conjoint Analysis-Sample Scenarios

Sample Scenarios	377
------------------	-----

APPENDIX E
The Main Survey

Questionnaire	383
---------------	-----

APPENDIX F
Nature of the Interview Questions

Sample of questions asked at the interviews	391
---	-----

APPENDIX G
**Frequency Tables for the Survey Data for the Combined
Sample of Multinationals**

Frequencies	393
-------------	-----

ACKNOWLEDGEMENTS

To keep an aircraft in the sky requires not only the skill of the pilot himself but the dedication of the navigator and the support of the ground crew. Acknowledgements go to the navigator, Dr. John Pointon who has been the director of studies for the past three years of this assignment. His enthusiasm for the project has been sustained from day one. His eyes light up when I mention capital structure. The ground crew are of course my parents, all the staff and technicians who have supported this project over the past three years in one form or another.

Many thanks go to the University of Plymouth, and in particular Don King, the Dean of Plymouth Business School who have facilitated the research by awarding me a research studentship for the past three years. Additionally, they provided me with the enjoyment of a computer and paid for expenses this thesis incurred. Without the funding it is highly unlikely that this research thesis would have been accomplished. Also I appreciate the part-time teaching, invigilation and marking allocated to me by Dr. Peter Atrill, the Head of Accounting Studies. Without this additional source of income my lifestyle would have been relegated to some lower altitude.

1 The pilot also needs a frame of reference in order to maintain his determined flight path. Professor David Ashton of the University of Bristol offered constructive counselling on the evaluation of alternate directions and destinations the pilot could fly. Also within this context I would like to pay tribute to Professors Alan Rugman, Lawrence Booth and Alain Verbeke of the University of Toronto, Canada who spoke to me in the Summer of 1991 and gave me additional insights into where the "flight path" of such a project may lie. Professor Rugman is an international guru of multinationality. Also recognition goes to Paul Collier of the University of Exeter who helped cultivate the survey design stage of the investigation which was greatly enhanced by his recent research experience into the hedging practices of UK and US multinational enterprises for the Institute of Chartered Accountants in England and Wales. To all these good people I express many thanks for helping to map out a demanding intellectual journey.

Finally, I would like to express sincere gratitude to the senior finance managers of UK and US multinationals who spent time completing questionnaires, scenario evaluations and allowing me to conduct in-depth interviews with them at their head offices in London. Their contribution has been this dissertation's nourishment therefore ensuring its survival, since the project has followed a logical positivist approach. Without them, normative research in finance can not be reconciled with reality.

AUTHOR'S DECLARATION

At no time during the registration for the degree of Doctor of Philosophy has the author been registered for any other University award.

This study was financed with the aid of a studentship from the Plymouth Business School. A programme of advanced study was undertaken in statistics. In addition, relevant British Accounting Association colloquium conferences were attended at which work was presented to contemporary doctoral candidates.

Colloquium Conferences at which work was presented:

Hooper, V. J. (1991). 'Hedging Strategies, Risk Analysis and Taxation in U.K. Multinationals', *British Accounting Association Doctoral Colloquium (Conference)*, University of Salford, April.

Hooper, V. J. (1992). 'The Financing and Capital Budgeting Decisions of UK and US Multinational Enterprises', *British Accounting Association Doctoral Colloquium (Conference)*, University of Brunel, April.

Hooper, V. J. (1994). 'The Determinants of the Foreign Direct Investment Decision by UK and US Multinationals', *Accounting Association of Australia and New Zealand Conference*, University of Wollongong, July.

Chapter Contribution to a Book

Hooper, V. J. (1994). 'Multinational Capital Budgeting and Finance Decisions', Chapter in Issues in Business Taxation, Ed. John Pointon, Avebury Publishers.

Signed.....

VJ Hooper

Date.....

22 Sept 1994

INTRODUCTION

The financing and capital budgeting decisions of the multinational can be distorted by barriers to financial flows such as exchange controls, different national taxation systems, political risks, international capital market segmentation and foreign exchange risks, in addition to the internal organisational structure of the enterprise.

The primary aim of this research thesis is to discover whether multinational companies adopt financial policies which reflect a disequilibrium situation in financial markets, or whether their policies support a general equilibrium framework. A secondary aim is to investigate the degree of centralisation in the decision making of the financing and capital budgeting functions, in relation to whether a company supports either the general equilibrium or disequilibrium scenario. The third aim is to discover whether there are significant differences between UK and US multinationals, in relation to their capital budgeting and financing decisions. The other main aim is to investigate the relative importance of major distortions to the financial policy of the multinational enterprise.

The evolution of the theory of the multinational is reviewed in chapter 1, since many of the existing paradigms help to explain the underlying philosophy of the company's financing and investment decisions. Multinationals are described as creatures of market imperfections whose operations straddle many disparate economies within a framework of fierce oligopolistic competition. Also, chapter 1 places the thesis within the context of the literature by addressing the central distortions to the financing and capital budgeting decisions of the multinational enterprise.

The distortions considered are political risks encountered by the multinational, taxation, foreign exchange rate risks and organisational structure. It is important to consider the distortions to the financing and capital budgeting decisions since it is these that may cause the multinational to adopt policies that support a general equilibrium or disequilibrium in financial markets.

The literature review complements hypotheses formulated in this chapter in order to satisfy the major aims of this research thesis.

The purpose of chapter 2 is to present the methodology used to test the hypotheses generated in chapter 1. The research method was empirical, utilising a survey, a conjoint analysis and interviews to explore the various dimensions and angles of the research question.

The results of main empirical survey of UK and US multinationals are outlined in chapter 3 to 6.

In chapter 3, the combined sample of UK and US multinationals is divided according to whether their financial policies supported a general equilibrium or disequilibrium rationale. Differences between the two groupings were examined using univariate and multivariate statistical techniques. The null hypothesis was rejected which stated that there was no significant differences between multinational companies that supported either the general equilibrium or disequilibrium approach to financial policy. Parallel to the general equilibrium line of thought, this chapter also divides the combined sample of UK and US multinationals according to whether:

they believe that the multinational group has a global optimum capital structure

the multinational has a currency mix goal, and finally whether the multinational raises debt finance from countries with high political risk .

The rationale behind this exercise is to establish which financial policies are being adopted, and in particular whether they support a general equilibrium or disequilibrium in financial markets.

Significant differences between each of the pairs of groups are investigated using the t-test and discriminant analysis.

Specifically, the objective of chapter 4 is to investigate some of the potential differences between UK and US multinationals in relation to the underlying strategies and procedures adopted in their financing and capital budgeting decisions. Significant differences between UK and US multinationals are discovered which reject the null hypotheses that there are no significant differences between UK and US multinationals. A non-response bias is also conducted for both surveys which pointed towards there being differences between respondents and non-respondents. Respondent companies for both surveys from each country tended to have greater market values and overseas tax liabilities, than non-respondents. Therefore, it was inferred that responding companies were more multinational than non-responding companies, thus, reinforcing the appropriateness of the results of this doctoral thesis to the community of multinational companies in Britain and the United States of America.

A factor analysis of the combined data of UK and US multinational is undertaken in chapter 5. Results indicate that there are latent relationships between elements of the financing and capital budgeting decision of the multinational, or factors. These orthogonal factors were formed using principal component extraction methods. The factor solutions are augmented by varimax rotation and new groupings of companies are formed on the bases of either scoring low or high on a factor. In all, twenty seven factors were uncovered. Initial interpretation of the identity of the factors was attempted. Robustness and validity test results of the factor models added weight to the belief that it was appropriate to use factor analysis on the survey data.

In chapter 6, a rigorous examination was undertaken of the factor groupings formed in chapter 5. This analysis strengthened the initial interpretation of the twenty seven factors. This chapter was predominantly inductive with the aim of gleaning further insights into the underlying linkages between the survey data, especially within the general equilibrium-disequilibrium market context.

In chapter 7, a conjoint methodology is conducted in order to determine the strength of the core financial and political environmental factors that have an impact upon the investment and financing decisions of the multinational. This is considered in the light of financial policies that are adopted which reflect a general equilibrium situation in financial markets. The sample data is derived from a scenario exercise undertaken by UK and US multinational finance directors. The investigation revealed that there were few significant differences between UK and US multinationals in relation to the importance that they place upon various environmental variables that affect the foreign direct investment decision.

Unstructured indepth interviews were conducted with senior managers of UK multinationals, which are outlined in chapter 8. This allowed the researcher to reinforce issues that emerged form the empirical work which required greater focus and also acted to corroborate information given in the survey.

A comprehensive conclusion to this doctoral work is given in chapter 9 which reconciles the main aims of the thesis with the results of the empirical survey.

The chapters are supported by additional tables and documents in appendices.

It is hoped that the reader will find the research thesis stimulating reading and that the outcome of this research can be disseminated to a wider audience through the publication of scholarly articles and through the attendance at seminars and conferences.

Chapter 1

Literature Review

1.1 Introduction

The purpose of this chapter is to place the thesis in the context of the relevant literature, by reviewing the various theories of the multinational. Also examined in this chapter are the major distortions to the financial policy of the multinational enterprise which may cause the multinational to adopt policies that support a general equilibrium or disequilibrium situation in financial markets.

1.2 General background

The world economy has evolved into an interdependent system of triad based competition in which multinational enterprises from three corners of the planet are engaged in fierce competitive rivalry. Multinational enterprises from North America, the European Community and Japan account for a significant proportion of world trade. We live in a world made smaller by the trans-Atlantic "digital highways" that link our international centres of commerce, to the endeavour of corporates to eke out a living on the fringes of civilisation where there are mineral and oil riches inconspicuously concealed beneath the earth's cladding. Multinationals have impacted upon every aspect of our lives in terms of the products and services we now purchase. This growth in world trade has converted many economies in the Western world from closed entities into open free trading economies. The emergence of the triad power [Ohmae (1985)] as the three pillars of world trade has induced many countries to bind themselves to at least one of the triad markets. For

instance, within a European context we have the European Economic Community. The free trade agreement between Canada, Mexico and the United States of America is a step towards liberalisation of trade within North America. The Pacific Rim have their free trade zones. The move towards multinationality by the nation's top corporate giants has been driven by every conceivable blemish in factor, product and capital markets possible, induced to a large extent by segmented markets, created by the host government. Based upon the premise that there are over one hundred and fifty countries in the world, the number of imperfections must be enormous. However, these anomalies have become fewer in recent times following the Uruguay round of the General Agreement on Tariffs and Trade (GATT) talks causing a metamorphosis within markets from segmentation towards integration. This has been paralleled by the mission of international bodies such as the Organisation for Economic Co-operation and Development (OECD) who have embarked upon a programme of smoothing out the fluctuations of international flows of capital by encouraging the removal of some of the tax induced distortions to investment in order to achieve a more equitable flow of funds across national boundaries

"In an ideal world, international investment would be taxed neither more nor less favourably than domestic investment, and flows across frontiers would respond to differences in pre-tax rates of return" [OECD (1990)].

The objectives of international tax reform have been to attenuate some of these defects in the global tax system, in order to stabilise the transborder flux of funds. In reality, they are likely to be transformed into an imperfection elsewhere but not necessarily upon the surface from where they are scoured. Therefore, it is critical that the socio-political landscape

is not neglected in any analysis of the foreign direct investment decision by multinational companies.

The theories underlying the concept of multinationality are numerous. Early theories originated from the writings of Stephen Hymer's (1960) PhD thesis (first published in 1976), Charles Kindleberger (1969) and Richard Caves (1971). It is believed that the doctoral dissertation by Hymer in 1960 was the first study which associated multinationality with oligopolistic behaviour. He was one of the greatest analysts of the multinational enterprise of his time. It was the pioneering work of Hymer that caused the writings on international capital movements to curve away from theories that relied exclusively upon neo-classical financial theory of portfolio flows like Iversen (1936). In a frictionless world of perfect competition capital flows were believed to occur in response to changes in interest rate or profit differentials and there was no consideration of foreign direct investment by multinational enterprises. It was the pioneering work of Hymer that first depicted the multinational as a creature of market imperfections. Kindleberger (1969) built upon Hymer's work

"For direct investment to thrive there must be some imperfection in markets for goods or factors including among the latter technology, or some interference in competition by government or by firms, which separates markets".

Market imperfections, in general, can be conceptualised as impediments to the "simple interaction of supply and demand to set a market price", [Rugman (1981)]

The multinationals of today move abroad to become global players, if they are to survive. This is very true of the computer hardware and telecommunications industry. The issue with segmented markets is that there exists a protected market which discourages competitive approaches by potential entrants. For example, many multinationals in the United States view the establishment of a single market in Europe as a fortress, that will "lock out" their exports [Rugman and Verbeke (1991)]. In order for them to maintain their competitive advantage against European companies, they need to have access to the internal markets. A potential strategy would therefore be to enter the EEC through the acquisition of a wholly owned subsidiary. The process is driven by imperfections, since the multinational may perhaps increase the value of the tax shield on debt by raising funds locally, relative to raising funds in the US. In addition to some of the financial market imperfections that may occur between the US and EEC markets, labour and raw material costs may be cheaper. If the US company acquires a supplier or a distributor, then a higher degree of vertical integration has transpired, which implies that the multinational can utilise its economies of scale. Writing on competitive advantage, Porter (1986) has been able to simplify the work of earlier scholars in the field of strategic management and describes five critical forces, which have a bearing upon the firm in relation to its competitive position. Critical of Porter has been Rugman (1991), who argues that the Porter model is not necessarily applicable within an international setting.

1.3 Theories of the Multinational Enterprise

An abundance of literature that was published during the late 1970's and early 1980's tended to concentrate upon the risk reduction potential of international portfolio diversification of real assets. The theory of the

multinational has undergone a transformation from a risk reduction rationale [Rugman (1979)] and internalisation theory [Buckley and Casson (1976)], where the multinational is seen to be "internalising" imperfect factor and financial markets to Dunning's (1988) eclectic paradigm.

The following sections outline some of the theories on the multinational corporation.

1.3A The Risk Reduction Hypothesis

Markowitz's (1959) theory of portfolio selection under conditions of uncertainty was first applied within an international setting by Grubel (1968). Grubel demonstrated that it was possible for individual asset holders to reduce risk by holding an efficiently diversified portfolio of international assets. Rugman (1979) built upon this work by investigating the portfolio diversification benefits of real assets by multinational enterprises and found an inverse relationship between the stability of profits and the multinational size. However, the risk reduction rationale behind multinationals has become somewhat of a delusion. The underlying theme of being multinational is to acquire businesses, from distributors through to suppliers. This line of thought is not only consistent with Hymer (1976) but can also be portrayed within Porter (1986). The international involvement phenomenon of multinationals can be described more readily in terms of vertical integration on a global scale, described in the literature as "internalisation" theory, than some of the orthodox theories derived from finance theory such as portfolio theory where risk reduction is emphasised. Dunning and Rugman (1985) argue that finance theorists neglect the contribution of the doctoral dissertation of Stephen Hymer in formulating the theory of finance because Hymer had said

"that profits in one country may be negatively correlated with the profits of another country...."

[Hymer (1960), page 94] and that

"an investor may be able to achieve greater stability of profits by diversifying his portfolio and investing part in each country. This investment may be undertaken by shareholders of the firm, and not the firm itself....", [page 95].

Dunning and Rugman argue that when Hymer wrote his dissertation the modern theory of finance theory had not been developed. The mean-variance framework was not widely comprehended nor had the capital asset pricing model been developed.

A popular diversification strategy of domestic enterprises is to diversify the product line so that cash flows are less perfectly correlated and isolated from industry-specific events, Vernon (1966). Mariotti and Ricotta (1986) undertook a review of diversification trends involving 300 companies in the US and Europe. They found that the majority were diversified into correlated activities. In general, European companies tended to be more highly diversified than their American counterparts. Within a British context, Thompson (1985) applies the risk reduction methodology of Rugman (1979) to a sample of UK multinationals engaged in manufacturing and discovers that the international involvement phenomena results in only marginal reductions in risk. However, it is believed by a broad base of academics and business practitioners that by diversifying overseas, multinationals are unable to reduce total risk. Parallel to this line

of thought, Karikari and Collins (1989) highlight that fluctuations in exchange rates can increase the operating exposure of a multinational corporation as these changes can induce fluctuations in cash flow generated by the multinational organisation which is inherently linked to prices, output and market share. If the hedging strategy is not carried out effectively then operating exposure may increase more than anticipated due to international diversification. In addition, Brewer (1989) presents evidence concerning the returns and risk diversification benefits from investing in US multinational corporations. Sample multinational companies were formed into portfolios, and estimates of systematic risk components and investment performance were derived. Although the results reflect that investors wishing to diversify the unsystematic component of risk can do so with a smaller sized portfolio of multinational enterprises compared to investing in strictly domestic firms, when the portfolio size becomes large, multinationals were not more effective than domestic companies at diversifying unsystematic risk. Aggarwal and Soenen (1987) in their study, argue that during the period of 1978 to 1986, multinational corporations were not rewarded with higher price earnings ratios or reduction in systematic risk. Further the results of this study are consistent with the assertion that international capital markets are becoming increasingly globalised and integrated with an apparent decrease in the benefits of international diversification undertaken by multinational companies. Geringer, Beamish and Dacosta (1989) find that the diversification strategy of the multinational enterprise is significantly related to the multinational's performance. Herschey (1985) argues that the multinational enterprise should be rationalised on the basis of imperfections in input and output markets rather on the basis of imperfections in international capital markets.

Another explanatory variable of the conflicts to the traditional risk reduction foundations of multinational theory has been argued by Hitt and Ireland (1987) who highlight how a number of largely diversified multinational corporations have experienced financial performance problems in recent years. One of the major factors has been the inability of multinational enterprises to manage the diversity that results from the firm's operations.

The adverse benefits of international portfolio diversification into developing countries, where there is a higher propensity for segmented markets to exist is highlighted by Collins (1990). Although overseas diversification may benefit investors through superior cash flows or lower risk relative to a portfolio of domestic firms, Collins found that multinationals operating in developing countries are related to low performance. The results indicate that US multinationals do not benefit their shareholders by diversifying into developing countries.

1.3B The Theory of Internalisation

A core theory of the multinational enterprise is known as internalisation theory. By the theory of internalisation, originally developed by Buckley and Casson (1976) is meant the organisational process by which imperfect markets are internalised by multinational companies to the extent where the net benefits of internalisation equals its benefits. On this premise, Rugman and Verbeke (1990) suggest that internalisation theory constitutes the core of strategic capital budgeting decisions in multinational enterprises.

It would be myopic to say that risk reduction is not important, it is, but it is not often a primary motivator for domestic corporations to go multinational. To some extent Hanink (1985) reconciles the risk reduction hypothesis with internalisation theory by offering a mean-variance approach to multinational location theory which is realistically a hybrid of risk reduction and internalisation theory. Whereas early studies on international portfolio diversification of real assets have advocated risk reduction, later studies have questioned the risk reduction rationale behind the international diversification strategy of multinational enterprises. Again, the writings of Hymer linked multinationality with oligopoly

"The large firms of the world are all competing for the various sources of future growth but in an oligopolistic rather than in a cut-throat way. They recognise their mutual interdependence and strive to share in the pie without destroying it. As they do so they become less and less dependent on their home country's economy for their profits, and more and more dependent on the world economy. Conflicts between firms on the basis of nationality are thereby transformed into international oligopolistic market sharing and collusion".

[Hymer (1979), edited by Cohen, Page 82]

Rugman and Verbeke (1990) also consider the fulfilment of four basic conditions before foreign direct investment can take place. These four are:

1. The multinational must be able to develop production capabilities overseas that will be competitive compared to domestic operations of host countries.

2. The net benefits associated with foreign direct investment are higher than in the case of foreign market penetration through exports, licensing or joint venture activity.
3. An optimal location can be identified for the foreign direct investment.
4. The multinational enterprise's management is able to decide upon the optimal time concerning the execution of the investment project.

Critical of internalisation theory has been Horaguchi and Toyne (1990) who state that new theories on the multinational enterprise which emerged during the 1970's, such as internalisation theory did not provide any clear alternatives to what Hymer (1960) and Kindleberger (1969) proposed, since both emphasised market imperfections and transaction costs. Hymer viewed large multinational enterprises as consisting of widespread internal markets that straddle industries and countries, which in itself is what contemporary writers in international business would define as being internalisation theory. Internalisation theory is fundamentally vertical integration on a global scale. Buckley (1988) has also criticised internalisation theory because of its lack of empirical verification. Galbraith and Kay (1986), Hill and Kim (1988) propose a theory of multinational enterprise based upon the transaction cost economics approach. Transaction cost economics originates from the work of Oliver Williamson who considers economics as a science of contract rather than a science of choice. The theory of internalisation is inherently related to transaction cost economics because the multinational "internalises" imperfect markets in order to minimise transaction costs. However, the benefits of internalisation can be offset by governance costs associated with

inefficient hierarchical organisation structures. Williamson (1981),(1985) and Teece (1985) view the existence of an efficient organisational structure capable of implementing capital budgeting decisions as a major explanatory element in the growth of multinational enterprises in world trade and investment. One example of such an organisational structure is the M form, multidivisional structure. Governance costs could be reduced since the directors of the multinational enterprise could focus upon strategic issues including capital budgeting decisions whilst the managers at the divisional level could concern themselves with the operating decisions. This form of structure would also increase the responsibility of divisional managers.

1.3C Eclectic Theory of the Multinational Enterprise

The eclectic theory of the multinational was formulated by John Dunning (1976). It offers a framework by which to identify and evaluate factors affecting both the initial act of foreign production by enterprises and the growth of such production. The term "eclectic" is defined as selecting various doctrines from several schools of thought. It follows that the eclectic theory of the multinational enterprise is a medley of risk reduction, internalisation and transaction cost economics. The eclectic or the OLI theory (OLI represents ownership, location and internalisation advantages) of the multinational enterprise contains 3 basic concepts:

1. the ownership advantage
2. the location advantage
3. the internalisation advantage

The eclectic theory of the multinational enterprise is not without its critics. Itaki (1991) argues that the eclectic paradigm can not be significantly differentiated from the theory of internalisation because the ownership advantage is redundant because it originates from the internalisation of imperfect markets and integration. However, with regard to the financing decisions of the multinational enterprise, the ownership advantages relate to the financing mode. For example, a joint venture as a market entry strategy will require a different form of financing than if a wholly owned subsidiary is chosen as an entry mode. Location advantages identified in association with the capital budgeting decision influence the financing decision, since multinationals often will match local assets with local currency borrowings in order to pursue a zero net exposure position, in each currency. Internalisation advantages on offer to the multinational with regard to the financing decision relate to the company's capacity to take advantage by "internalising" disparities in asset prices, including anomalies in the world taxation system, interpreted as market imperfections.

The eclectic paradigm remains a useful and robust general framework for explaining and analysing the economic rationale of international production and many organisational issues relating to multinational enterprise activity. Dunning (1988) suggests that the eclectic paradigm could be developed in this decade towards understanding-:

1. a more formal modelling of the paradigm
2. inclusion of dynamic and developmental aspects of international production
3. locating the locus of decision making

4. examining the impact of multinational activity on home and host country economic goals.

Identifying the locus of decision-making as reflected in some measure of the degree of centralisation is especially pertinent to the capital budgeting and financing decisions of multinationals, since the company must have a coherent organisational structure capable of capitalising upon transaction cost market imperfections.

1.3D Political Theories of the Multinational Enterprise

It has been argued that political behaviour by multinational enterprises has been ignored by the leading economic theories of the multinational enterprise. Boddewyn (1988) projects Dunning's (1988) eclectic paradigm to embrace elements of its firm-specific, internalisation, and location advantages. The analysis assumes traditional economic goals for the multinational enterprise such as survival, profitability, and growth. The integration of political elements into multinational theory may offer a better understanding of why certain multinationals have succeeded, while a purely economic analysis may not be able to account for their success. Therefore, the political angle of the multinational's financing and capital budgeting decisions needs explicit consideration in view of the alternate strategies the company can utilise in order to mitigate political risk. Brewer (1993) argues that host country governments can be seen as the major creators of market imperfections and that some of the effects of government policies on market imperfections and hence the foreign direct investment decision are the opposite of those previously noted in the literature.

Later on [Cohen et al (1979)], Hymer's radical work shifted towards determining multinational theory within a Marxist framework where he focused upon the impact that the multinational enterprise had upon the changes in welfare of the host nation state. Essentially, his Marxist critique of the multinational viewed them as organisations which transferred capital from rich countries to developing countries so as to divide labour and extensively modify the political dynamics of the host country. It has been claimed by some authors [Cohen et al (1979)] that this was the most valuable and stimulating work of Hymer, which flourished about a decade after his initial doctoral thesis contribution, since it was to set the agenda for research into multinationals for the rest of this century. The later work of Hymer, although perhaps distorted by his public commitment to Marxism was relevant to policy creating organisations such as the United Nations Centre for Transnational Companies which has published a resolution on the conduct of multinational enterprises outside the home country. The code of conduct supports the concept of national responsiveness by encouraging companies to respect the laws and customs of the host country [see the United Nations Centre for Transnational Corporations (UNCTC): Proposed Draft Code of Conduct on Transnational Corporations (1990)]. In relation to the formulation of the capital structure of the multinational, the company may seek to issue bonds locally to the host country government or financial institutions in order to reduce expropriation risk. This risk is defined as the uncertainty that the host country government could confiscate the assets of the multinational enterprise. Therefore, by capturing the host government as a potential source of debt finance can mitigate this nature of political risk since the local administration has a vested interest in the survival of the enterprise. The engagement by the multinational in a joint venture with either the host country government or a host nation company can be viewed as an

alternate means for reducing political risk through risk sharing. Both of these political risk reduction strategies have consequences for the financial policy of the multinational enterprise such as the hedging policy and the optimum capital structure. In addition, organisational perspectives need to be considered in relation to the modification of the locus of control in financial decision-making.

More recently, Rugman (1991) has demonstrated that an alternative theory of the multinational can be explained under a political framework, in which multinational corporations seek to attain competitive advantages by lobbying governments, and in doing so they are attempting to make markets segmented and therefore less integrated thus modifying the dynamics of the market and creating greater transaction cost imperfections. This process of multinationals lobbying of governments is especially prevalent in the United States, where the political system is one of extensive decentralisation and thus more prone to lobbying. The lobbying power of American multinationals can be compared to that of European multinationals, where the future political spectrum is more fragmented and complex.

1.3E Ethical Perspectives of Multinational Theory

It is reassuring that foreign direct investment decisions are examined by Stanley (1990) from an ethical perspective, and the individual and corporate morality involved in such decisions is considered. She stresses that, in the past, financially normative capital allocation models have been viewed as ethically normative as well. Theological and philosophical considerations provide alternative ethical guide-lines. Foreign direct investment and multinational capital budgeting decisions will tend to be

more responsibly made by those who have the propensity to engage in moral reasoning and to be aware of the importance of human moral agency. Stanley's critical assessment of the fallacies of purely normative models to describe multinational investment behaviour, like Boddewyn's (1988) perspective on multinational theory reflect a shift away from the traditional narrow view that only encompasses the economic outlook of the enterprise.

1.4 Capital structure policy: market equilibrium or disequilibrium

In terms of the parameters that support the financial policy formulation, Holland (1985) argues that there are four main determinants of financial policy of the multinational enterprise. These are the perception of markets as efficient, market imperfections, multinational corporations as active economic agents and political risks faced by firms. In relation to the capital structure decision, the taxation distortions are viewed as market imperfections. On the issue of capital structure, finance theory is categorised into two competing schools of thought. These are capital structure relevance or irrelevance to a firm's value. The next section outlines the seminal finance papers that put forward arguments for and against capital structure relevance or irrelevance.

In the next sections, detailed hypotheses are formulated which satisfy the primary aim of this research thesis, which is to discover whether companies are adopting financial policies which support a general equilibrium in financial markets or whether they reflect a disequilibrium situation.

1.4A Traditional Capital Structure Theory

Modigliani and Miller (1958)-Capital structure irrelevance

Modigliani and Miller (1958) propose that the total value of the firm is independent of its capital structure. This posit implies that the financial policy of the firm in relation to the formulation of capital structure decisions is irrelevant. However, the assumptions relating to Modigliani and Miller (1958) are somewhat restrictive. Modigliani and Miller's cost of capital formulas only work under certain assumptions, including:

- (a) There exists perfect capital markets and therefore no transaction costs with perfect information available to all economic agents.
- (b) Companies are classified into homogeneous risk classes.
- (c) There are no taxes.

Defects of the Modigliani and Miller theory are given by Dempsey (1991) who draws attention to the market spread between borrowing and lending which constitutes a cost for corporate borrowing. He demonstrates that under the UK tax system, the market spread between risk free borrowing and lending rates is more than enough to cancel the tax benefits of corporate borrowing which means corporate borrowing could imply a net disadvantage for the valuation of a company's equity by up to about 9% of the debt's market value. Caution also needs to be taken when considering the tax advantage of debt. Ashton (1991) argues that if there exists a tax advantage to debt in the UK, it is likely to be quite small, no more than 6% of the market value of debt. Further, he argues unlike the US system of taxation, the UK system generally favours rather than discriminates against dividends. Other departures from Modigliani and Miller theory have

included analysis of transaction costs, agency costs, information asymmetry with signalling, and sub optimal managerial compensation contracts. These departures from the Modigliani and Miller propositions are driven by imperfections rather than "lines of fault" in the mathematical derivation of Modigliani and Miller's formula. Central to the Modigliani-Miller theory is a system with perfect capital markets. If capital markets were perfect, companies would be no more than legal entities, serving no purpose beyond maximising their shareholders wealth [Gordon (1989)]. One possible reason why the capital structure theories may not be upheld within a multinational context is that there are greater market imperfections on a global scale than within a purely domestic situation, hence there are greater opportunities to exploit the differences in asset prices. It should be unlikely that the finance director believes in perfect markets, since the theory of the multinational has advocated that multinationals are driven by imperfections.

Modigliani and Miller (1963)-Capital structure relevance

Modigliani and Miller (1963) postulated that firms should prefer to use debt over equity in financing assets, because additional value accrues to the firm in the form of a tax shield on debt. This additional value exists in the tax deductibility of interest payments. However debt usage raises the possibility that the firm's earnings will not be sufficient to match promised debt service obligations in the form of debenture interest payments.

Miller (1977)-Capital structure equilibrium

Miller (1977) postulates that a firm's capital structure is irrelevant. Miller relaxes the assumption in relation to taxes for the Modigliani and Miller

(1958) original formulation of capital structure irrelevance to incorporate the effects of the interaction with the investor's personal taxation position. In general equilibrium Miller (1977) proposes that the tax advantages of debt are dissipated when the personal taxation system discriminates between stock and bond holders. The capital structure irrelevance concepts suggests that the corporate treasurer who takes issue of how to raise a firm's capital is acting irrationally, since it is unable to alter its weighted average cost of capital. Alternatively, the firm is unable to increase the value of the firm by altering its debt-equity mix.

1.4B Multinational Capital Structure

A primary aim of the research is to discover whether multinational finance managers are adopting financial policies which reflect a general disequilibrium in financial markets, or whether their policies support a general equilibrium framework. In particular the impact of international taxation will be investigated in relation to the financial policies of the multinational enterprise, since multinational enterprises can raise debt finance in countries with different tax rates. This research will therefore attempt to identify whether the Modigliani and Miller (1963) or the Modigliani and Miller (1958) or Miller (1977) model holds, i.e. whether multinational firms raise more debt where the tax rate is higher or whether they believe that, in general equilibrium, any tax advantages are offset by a combination of personal taxes and a rise in interest rates.

A primary hypothesis is:-

H1₁

There are no significant differences between the multinationals who implicitly support [Modigliani and Miller (1958), Miller (1977)] and [Modigliani and Miller (1963)].

Thus, companies that are following Modigliani and Miller (1958) and Miller (1977) are adopting financial policies which reflect a general equilibrium in financial markets. Those companies that are following Modigliani and Miller (1963) are taking advantage of market imperfections, i.e. taxation, to maximise the value of the multinational corporation and in doing so are implementing financial policies which support a disequilibrium in financial markets.

Similarly, another null hypothesis is formulated which is closely related to H1₁ which examines the optimality of the multinational's capital structure:-

H1₂

There are no significant differences between companies who believe that their multinational has a global optimum capital structure and those that do not believe that their multinational has a global optimum capital structure.

Companies that believe that they have a global optimum capital structure are adopting financial policies which reflect a general equilibrium situation in financial markets. Companies that do not believe that the multinational has a global optimum capital structure are implying that there is a disequilibrium situation in the market.

Within an international context, it can be argued, McClure (1988), that purchasing power and interest rate parities are distorted by the international tax system causing the simultaneous maintenance of these relationships to be void. However, a theory of international capital structure equilibrium is proposed by Hodder and Senbet (1990) through an extension of Miller's (1977) general equilibrium model on tax and capital structure. Their analysis highlights the importance that international corporate tax arbitrage plays in generating an international capital structure equilibrium. The authors highlight that tax arbitrage must be responsible for the fact that evidence on international parity relationships tend to hold for both equity returns and bond yields. Modigliani and Miller (1958),(1963) and Miller (1977) propositions have been subject to great controversy and are yet unresolved; their applicability within a multinational context is subject to even more debate. Modigliani and Miller assume that markets are perfect apart from taxation and within a multinational context, added dimensions such as operating within a more complex environment may tend to negate the applicability of their general theory.

The multinationals capital structure decisions differ from that of the domestic situation essentially by the barriers to cash flows, exchange rate risk, interest rate risk and political risk as well as different nation taxation systems. An examination of whether US based multinationals have different capital structures than US domestic companies was undertaken by Lee and Kwok (1990). Empirical tests used for analysis attempted to decide if multinationals and domestic companies have the same amounts of agency costs, bankruptcy costs, and debt ratios. The foreign tax ratio was used as an alternative measure of multinationality. Their results indicate that multinationals do not have lower bankruptcy costs and tend to have

lesser debt ratios than domestic companies. They add that further research is needed to examine the interaction between industry effects and capital structure determinants. The effect of international diversification upon the multinational's financing policy is investigated by Fatemi (1988), who computes capital structure measures for eighty four multinational enterprises and fifty two domestic companies, the sample drawn from the US. The weighted analysis of variance of ranks is used to determine whether the two groups are identical with respect to each of the measures. The results indicate that United States based multinationals have capital structure ratios significantly below those of their domestic counterparts. Fatemi infers that this outcome is possibly due to a higher level of expected non interest tax shields, the higher agency and bankruptcy costs associated with international diversification together with the higher risk of foreign currency denominated debt. The multinational appears to obtain a larger proportion of its funding from short term sources.

An empirical study was conducted by Aggarwal and Baliga (1987) to identify the determinants of capital structure of large Latin American companies. The sample contained over two hundred companies in twenty two countries. Differences in country, industry, and company size were considered. The results indicated that size does not seem to be significant. However, both country and industry were significant in determining capital structure in both bivariate and multivariate statistical tests. Aggarwal and Baliga conclude that it is not advisable for multinationals to assume uniformity of capital structure across countries and industries in Latin America. Therefore the outcome is relevant to the financial management policy for multinationals with subsidiaries in Latin America.

An alternative approach to financing of the multinational company can be demonstrated when the finance director does not believe that financial markets are perfect. In relation to this assertion, the finance director would attempt to exploit differences in assets prices, including differences caused by taxation systems, in order to maximise the tax shield on debt. This would include attempting to maximise the tax shield on debt and raising debt finance in countries in high rates of corporation tax.

"In a rarefied world of Walrasian perfection, where markets are continually in equilibrium, the question of how the market responds to disequilibria is ruled out-all equilibrating adjustments are assumed to be instantaneous, either because changes are timeless or because all changes have been foreseen." [Kaldor (1972), pp. 1247)]

However, Vickers (1974), pp. 375 argues that

"It would be a betrayal of economic analysis to imagine that the equilibrium constructions in the analysis were describing precise states of affairs. In the matter of investment, for example, or in relation to financing decisions: the firm considers undertaking additional expenditures not because it is in some kind of equilibrium situation, but because it explicitly recognises a disequilibrium condition; disequilibrium in the sense that additional profit and income opportunities are seen to exist and investment is contemplated to take advantage of them"

1.5 Cost of Capital of the Multinational

The cost of capital is a vital consideration to the multinational enterprise, since it is inherently linked to the capital structure decision and firm value

maximisation. By operating within an international setting, the multinational has the potential to lower its weighted average cost of capital by having access to a larger number of financing sources. The relationships that subsist between different currencies, i.e. the risk diversification associated with debt portfolios, may benefit the multinational. The cost of capital of the multinational is affected by higher exchange rate exposure, segmented capital markets and corporate income taxes [Senbet (1979)]. Shapiro (1984) shows that, in the absence of taxation, multinationals are indifferent between issuing debt denominated in one currency or another. However, with differential corporate taxes, a firm should borrow in the country with the weaker currency in order to minimise the expected financing costs. This is supported by Rhee, Chang and Koveos (1985). More recently, Madura and Fosberg (1990) demonstrate that assuming no corporate taxes and that if the International Fisher Effect holds, the expected net present value of a multinational project is invariant to the debt denomination. Madura and Fosberg extend their analysis to incorporate market imperfections such as taxation and conclude that taxation considerations cause the multinational to have a debt denomination preference. The limited literature on multinational debt denomination decisions tends to support the idea of value enhancement to the multinational when it raises debt finance from countries with high rates of corporation tax. Diametrically opposed to this assertion, there is support to suggest that in the absence of taxation, multinationals would be indifferent as to where they would locate debt. A potential weakness of the studies on the cost of capital is the neglect of the effects of the firm's hedging policy upon the location of debt in terms of matching local assets with local currency borrowings.

1.6 Political Risk distortions to financial policy

The impact of political risk upon the debt denomination decision is also a neglected line of thought because debt can have more than one purpose, other than as a source of finance. The additional usages of debt are linked to the idea that debt can be used as a governance instrument [Williamson (1988)]. If the host nation government becomes a debenture holder in the overseas subsidiary, then this can be interpreted as a manoeuvre to reduce the level of political risk encountered by the multinational, in addition to naturally hedging the balance sheet. Jacque and Lorange (1984) found that multinational companies tended to arbitrarily segment hyper inflationary countries from their total opportunity set, when hyper inflation is usually a transitory and reversible process affecting the host economy. Multinationals tend to assign a high risk factor to such countries. Along similar lines, Sethi and Luther (1986) highlight some of the potential problems and measurement of political factors in direct foreign investment. A realistic approach must take account of the general socio-political international environment, the foreign and domestic policies of the host country and the relative bargaining power of the multinational enterprise. Generally, political risks emerge when there is a conflict of interest between the host country government and that of the multinational enterprise. Political risk is incorporated into the theory of the multinational by a number of authors. Doz and Prahalad (1987) for example propose that the multinational enterprise needs to balance the local needs of the host country with that of having a coherent global strategy. They express this strategy as being nationally responsive whilst balancing a global vision of the multinational enterprise. Their generic strategy is of especial relevance when the multinational has operations in countries with a high degree of political risk. Political risk is also a

fundamental concern for multinationals who operate in countries where the political spectrum is insecurely fragmented. Work in this area, within an international domain has tended to concentrate upon macro-economic issues and not at the firm level. The impact of political risk upon the financing strategies and capital budgeting practices of multinationals is also a neglected line of research. Intuition would suggest that the risk profile of the multinational is a key determinant in whether a multinational is willing to undertake projects in countries that tend to be unstable. Nevertheless, internalisation and eclectic theories of the multinational enterprise specify that location advantage is an explanation for the multinational being in a particular country. For example a multinational like a mining conglomerate may be willing to operate in a country with a high degree of political risk to an extent where the net benefits would compensate for the increase in risk.

Political risks can also be related to the locus of control of the multinational corporation [Ghadar (1982)] and hence the level of centralisation in decision-making. Ghadar evaluated the increasingly nationalisation of the multinational oil companies. It was discovered that as the multinational corporation loses control over its operations, then political risks increase and corporate profitability levels decline.

Since political risks can be viewed as a potential distortion to the financing and capital budgeting decisions of the multinational, it is important to determine what impact political risks have upon the financial policy of the multinational (within the general equilibrium-disequilibrium context). A further hypothesis is:-

H13

There are no significant differences between companies who raise debt finance from high political risk countries and those that do not raise debt finance from high political risk countries.

1.6A Strategies adopted in order to reduce political risk

Heenan (1988) supports a rapprochement between multinational companies and host governments as a means of reducing the extent of political risk faced by the multinational corporation. A relationship may be extended from short term to long-term. Heenan proposes that the multinational could emerge as an idiom of international strategy or policy. Strategic partnerships in the form of an equity joint venture can be viewed as a means of reducing conflict between private and public enterprises and the host country government. A decision matrix is offered by Kennedy (1988) that integrates political risk concepts with portfolio planning. The Boston Consulting Group's market growth and relative market share matrix is used as a foundation. In general, five political risk strategies are available to the multinational enterprise:

1. adapt, by conforming to government policies. Chan (1988) empirically investigates the effects of competition and political responsiveness on the multinational's bargaining power. The findings indicate that the more intense the competition, the weaker the bargaining power of the multinational corporation vis-a-vis that of the host governments. Further, higher corporate political responsiveness plays an increasingly important

role in safeguarding the bargaining power position of multinationals as competition intensifies.

2. politick, by acting informally behind the scenes,
3. withdraw from or avoid the country,
4. restructure with a serve strategy, involving the sale of equity and its replacement by management-service contracts, and
5. restructure as joint venture formation which is also supported by Beamish and Banks (1987) who extend Dunning and Casson's internalisation theory of the multinational to embrace equity joint ventures. Using the transaction cost paradigm of Williamson (1975), potential threats posed by opportunism can be minimised to a level where joint ventures become an efficient strategy for overcoming environmental uncertainty such as political risk, within the constraints of bounded rationality.

Political risk can be classified into many areas, nevertheless it is those that affect the flow of cash into and out of the enterprise that are most important from a financial perspective, since the total value of the multinational enterprise is the sum of all the net cash flows discounted at the appropriate cost of capital. In order to reflect the additional uncertainties faced by the multinational with operations in a high political risk country, it would be logical to assume that the finance director should either be using a relatively higher discount rate than normal to evaluate a project's cash flow or be reducing the net cash inflows by more than normal.

1.6B Expropriation Risk

Expropriation risk is associated with all host country actions resulting in the involuntary confiscation of a multinational enterprise's assets of its foreign direct investment by the government or nationals of the host country.

Mahajan (1990) applies the theory of option pricing as a methodology for pricing the expropriation risk of an overseas project in capital budgeting, to select assets. The proposed framework provides an economic rationale for the observed behaviour of multinationals in managing their expropriation. The essence of the model is to identify the most suitable financial strategy that will maximise the overseas project's value net of expropriation costs. Mahajan suggests that the proposed options framework could also incorporate risks from other types of government threats to the enterprise that have option like characteristics, such as contract re negotiations or the imposition of windfall profit taxes.

1.6C Political risk insurance

Multinational companies can opt to insure overseas projects against war, expropriation, and currency inconvertibility [Mandel (1984)] in countries with high levels of political risk. In 1988, the US and the UK ratified a convention establishing the Multilateral Investment Guarantee Agency (MIGA), a wholly owned subsidiary of the World Bank. MIGA's main objective is to encourage the flow of foreign direct investment to developing countries. MIGA hopes to achieve a co-operative synergism between developing and developed countries. It has two primary functions, which are providing advisory and technical services for the improvement

of investment conditions and guaranteeing foreign investments against non-commercial risks arising from-:

1. losses occurred in the remittance of moneys in the form of profit or dividend, such as through a revision of foreign exchange control laws,
2. losses caused by civil disturbances or war,
3. losses owing to the seizure of the investing company's facilities by the host country , and
4. losses from a breach of contract by the host government

[World Bank Annual Report (1992)].

1.7 Foreign exchange hedging

1.7A Does hedging increase the value of the multinational enterprise ?

Foreign exchange exposure management is closely linked with the foreign exchange risk and exchange market efficiency. The value of the multinational is a function of risk. The theoretical foundations of foreign exchange hedging imply that hedging does not increase or decrease the value of the enterprise. Therefore a further hypothesis, relating to the financial policy of the multinational is that:

H14

There are no significant differences between companies who believe that hedging increases the value of the multinational and those that believe that the value of the multinational remains the same.

This hypothesis relates to hedging within the general equilibrium context. Those companies that believe that hedging does not increase the value of the multinational are adopting policies which reflect a general equilibrium in financial markets, whereas, those that believe that hedging increases the value of the multinational are taking advantage of market imperfections and adopting financial policies which reflect a disequilibrium in markets.

The evolution of the international monetary system from fixed exchange rates toward a multicurrency reserve has caused excessive volatility on the world's foreign exchange markets. The rise in volatility of financial markets has precipitated into a comparable increase in the variability of corporate earnings. This impetus has led to an increase in corporate hedging by the multinational enterprise. Although hedging may appear to be a worthwhile activity, in the sense that it can reduce volatility, the issue is not definite. Eckl and Robinson (1990) argue strongly from portfolio theory and considerable empirical evidence, supporting the view that the appropriate discount rate depends only upon the securities' systematic risk, the return to the market portfolio, and the risk-free rate of return. This would mean that a profitable hedging strategy requires the hedger to "beat" the market. As a result, they caution that hedging is only likely to result in the treasury function breaking even.

1.7B Strategic aspects of foreign exchange management

A multinational can only hedge short term foreign exchange exposure since long term exposure cannot be managed by using traditional hedging techniques available using financial markets. Aggarwal and Soenen (1989) warn that such exposure must be managed because there are persistent deviations from parity conditions and from efficiency in the foreign

exchange markets. In this respect, fundamental beliefs of whether the foreign exchange market is efficient will shape the multinational's financial policy. They suggest that firms must use their marketing, production, and financial strategies to safeguard against losses in value related to long term changes in exchange rates. Therefore strategic planning should be integrated with each of the functions. Further, Aggarwal and Soenen (1989) advocate a long term approach to the management of foreign exchange exposure. There are three main strategic options:

1. The company can adjust its operating policies with regard to sourcing, pricing, sales, and marketing to respond to exchange rate changes,
2. The company can match inflows and outflows of operational and financial cash flows,
3. A portfolio of business operations can be selected with exposures that offset one another.

1.7C Currency portfolios and adjustment of cash flows

Hymer gave valuable insights into the cost of hedging

"If a company is truly international so that its liabilities each year in any currency were proportionate to its income in that currency it would be no more concerned about the changes in the exchange rates than American firms are concerned with the devaluation of the dollar when they decide to invest in America".

[Hymer (1976), page 36]

This statement supports the desire by multinational corporations to borrow funds locally in order to offset local assets with local currency borrowings. Soenen (1979) has applied the portfolio approach to the allocation of currencies within a multinational enterprise. He constructs a model using covariance matrices, the data inputs to the model being:

- a set of known variables, e.g. spot and forward exchange rates, domestic and foreign exchange rates,
- a set of variables that are assumed to be known, e.g. the foreign exchange exposure of the company, and
- a set of unknown random variables, e.g. the future spot exchange rates at the end of the planning period.

The hedging problem then can be viewed as minimising the variance of the portfolio, subject to a set of operational constraints reflecting a specified maximum level of hedging costs and bounds on the amounts of hedging transactions.

The portfolio approach to foreign exchange management makes an explicit consideration of the inherent relationship among the currencies in the firm's foreign currency portfolio. Soenen (1979) found:

1. when hedging costs are measured correctly, i.e. the sum of transaction costs and the differences between the forward rate and the forecast of the future spot rate, one can substantially reduce the variance of the firm's foreign exchange portfolio at a very low cost,
2. substantial reductions in transaction costs may be undertaken by using a strategy of cross hedging, i.e. engaging in a hedging transaction for a

particular currency to hedge exposure in another currency, whose movements are highly correlated to those of the currency of the hedging transaction, and

3. hedging should be used much more extensively.

These findings have the following implications for the management of foreign exchange management:

a) the true variance of the foreign exchange portfolio or foreign exchange risk to the company may be seriously understated,

b) the possibility of cross hedging and of the inherent substantial savings in the hedging costs, may be neglected,

c) foreign exchange may be managed on the basis of incomplete information, delayed information and uncoordinated information, and

d) hedging may be restricted to the positions that seem to contain downside potential and positions which seem to contain upside potential, may be left uncovered

The companies interviewed by Soenen (1979) measured the costs of hedging as the spread between the current spot and forward rates. Soenen highlights that this procedure can result in the over estimate of the costs of hedging and thus an under hedging of the company's foreign exchange risk. He suggests that future research may help identify the problem of assessing the end of period value of foreign exchange exposure, taking into account the effects of the changes in exchange rates on its value. Later,

Soenen (1985) suggests that exposure to currency fluctuations could also be controlled to some extent by adjusting its incoming and outgoing cash flows. Madura and Nosari (1984) also advocate the usage of a portfolio of currencies to mitigate exchange rate exposure.

Soenen (1988a) suggests that even in a period of volatile exchange rates, stable relationships between different currencies can exist. He undertook an empirical study into the variability of 31 currencies from January 1974 to July 1985. He discovered that many countries exhibit low variability and low pairwise correlation amongst themselves, both characteristics being desirable in order to lessen the exchange rate risk of a "currency cocktail". Multinationals can substantially reduce exchange rate risk by investing or financing in currency cocktails rather than in a single currency. Further, Soenen (1988b) followed a similar methodology of Madura and Nosari (1984) and investigated the use of currency portfolios to reduce exchange rate risk. He looked at the effectiveness and diversification with the objective of reducing the degree of variability of a currency cocktail, with particular emphasis upon the market value of the portfolio, the time horizon of data observation, the weighting of constituent currencies and the base currency upon risk reduction. The study included twelve currencies, and the cocktails incorporated an increasing number of different currencies. Equally weighted portfolios were produced at random and estimates of the exchange rate variability or risk of the foreign currencies and cocktails were based on end of month exchange rates against the US dollar, using data from International Financial Statistics for 1974 to 1985. An average risk measure was used. Soenen's study found that the marginal reduction in the variation of the firm's currency portfolio by adding currencies to the cocktail diminishes rapidly

and becomes almost insignificant with the inclusion of more than eight currencies.

Cooper (1987) highlights the role of the SDR (special drawing right) created by the International Monetary Fund to prevent a liquidity shortage and permit the national and internationally controlled creation of reserves. The author stresses that a currency cocktail is more stable than most individual European currencies. In relation to the currency of the denomination of debt, Eaker and Lenowitz (1986) provide a strategy for determining the currency of borrowing for the denomination of currency decisions in multinational companies. This strategy is derived from extensive empirical work in the economics literature. Evidence is provided to show the effects of implementing the strategy over a five year period. The evidence suggests that the proposed strategy would have reduced borrowing costs, but at the same time exposed the firm to higher levels of risk. Praagman and Soenen (1986) investigate the stability of currency cocktails and show that not only are the expected currency holding periods unstable, but also the variances of the currency cocktails.

A company that does not allocate currencies in a portfolio to minimise risks are adopting policies which reflect a general equilibrium in financial markets. Companies that are allocating currencies in a portfolio to minimise risks are taking advantage of the relationships between currencies and therefore taking advantage of a disequilibrium in financial markets. A further hypothesis is therefore:-

H15

There are no significant differences between companies who have a currency mix goal and those companies that do not have a currency mix goal for the items in the survey.

1.8 International financing models

The extent of risk reduction in terms of international diversification is the same for an asset currency portfolio as for a liability portfolio of equal maturity. Therefore a multinational can take advantage of relatively low foreign financing rates, whilst diversifying to reduce exchange rate risk.

Madura (1985) develops a short term international financing model and then applies them to financing decisions over time so that their performance may be evaluated. The advantages of the model are:-

1. The model is based on financing in international capital markets rather than in an investment perspective.
2. The model uses an ex ante methodology rather than an ex post approach.

Madura compares the short term financing model with that of a risk free financing strategy. The four possible models based on an uncovered liability are:

1. An equally Weighted Portfolio

In this type of portfolio the loan is denominated equally amongst each available currency.

2. An equally weighted portfolio, adjusted to exclude the currencies that exhibit a higher interest rate than the domestic rate

3. The use of special depository receipts (SDRs)

4. A mean variance Model

A mean variance model can identify the optimal portfolio from an ex post viewpoint which may be adapted to incorporate an ex ante analysis.

Madura found that if an ex post approach was used in conjunction with the mean variance portfolio of currency loans then this method would outperform the alternatives.

1.9 Foreign exchange exposure

In order for foreign exchange hedging to be effective, it is critical to measure the underlying exposure. The most well known method of measuring foreign exchange exposure has been developed by Adler and Dumas (1984). Adler and Dumas show how an investor's currency exposure can be ascertained by regressing the domestic value of the currency value of the cash flow on the exchange rate. The regression coefficient represents the number of foreign currency units that should be sold forward to hedge the foreign exchange exposure. The potential weaknesses of the simple Adler Dumas technique of measuring exposure is

that it does not incorporate exposure in more than one currency. Schnabel (1989) uses the Adler Dumas simple linear regression approach to foreign exchange exposure measurement when hedging is extended to the case of exposure in many currencies. Flood and Lessard (1986) also propose an alternative methodology for measuring foreign exchange exposure.

Hekman (1983) proposes a practical theory and applies it to measuring foreign exchange exposure. Hekman defines that-:

" A firm's total exposure to foreign exchange rate changes is derived by subtracting the proportion of the firm's value that is naturally hedged from the proportion of the firm's value that is not financially hedged. When applied to a hypothetical firm operating in several foreign countries, this approach suggests that a firm's economic value is considerably less sensitive to foreign exchange risk than accounting conventions imply". Hekman applies this model to a multinational organisation.

Booth (1982) argues that economic exposure need only be hedged if capital markets are imperfect and that, as a result, non-systematic risk as well as systematic risk affects market value. Draper (1983) outlines how financial futures can be utilised for hedging long-term debt.

1.10 Modelling the Financing Decision

Some authors have attempted to model the financing decision by developing a multicriteria approach to the formulating of international financing strategies for multinational enterprises [Eom and Lee (1987)]. They use goal programming in an effort to create an optimal project financing strategy. The model can also be used as a framework for

designing an ownership structure and a financing package that can facilitate huge capital demands and deal with high-risk pressure while meeting the various management goals of joint ventures. The model requires-:

1. The fund availability from all sources is larger than the total investment budget.
2. Financing cost is assumed to be a linear function.
3. All loans are creditor denominated, and the transaction risk is undertaken by the project entity.
4. Each payment of principal and interest is adjusted by the exchange rate at payment time.

The model is effectively a decision support system that can assist in minimising project failures by providing financial managers of multinational companies and banks with a decision-support tool that minimises risks.

1.11 Multinational Capital Budgeting, Cash Management and Treasury Sophistication

The impact of portfolio diversification of real assets upon the capital budgeting process of the multinational enterprise.

It was a common held belief by academics in the ninety seventies [Rugman (1976,1979)] that multinationals could reduce risk by diversification of operations abroad that were less perfectly correlated than operating within a purely domestic arena. This risk reduction rationale behind international portfolio diversification is related to the belief that there are defects and

pricing anomalies of risk between markets, for those who hold the imperfections' view of markets. Those who uphold the general equilibrium school of thought would not believe that by diversifying overseas they are able to reduce risk. The protagonists of general equilibrium theory believe that risk is priced the same in any market and no benefit accrues to the multinational enterprise by operating within an international setting relative to domestically because any decrease in systematic risk is offset by a corresponding increase in operating exposure due to the influence of differential financial environments. There has opened up a vast schism on this issue between the theory and past experience of international portfolio diversification of real assets. Theoretically, it can be demonstrated that risk reduction can occur by diversifying overseas, but internalisation theory argues that this is not essentially a motivating force for companies to become multinational. Indeed, many companies in recent times have found that it increases risk.

A fundamental principle in capital budgeting is to discount the relevant cash flows in order to assess whether the expected returns are sufficient to compensate for the risk involved. In a multinational context, risk reduction can be achieved through international diversification of operations which are less perfectly correlated than those within a purely domestic environment. Studies of multinational enterprises' capital budgeting and financing practices have had a strong US bias, since the theory of the multinational is largely a North American one. UK studies of capital budgeting have tended to concentrate on domestic operations [Pike(1981)]. Previous work has shown significant gaps between theory and practice in the use of discount rates and risk analysis in multinationals [Kim, Crick and Farragher (1984)], Stanley and Block (1983). Gaps between theory

and practice also exist in the treatment of taxation in domestic capital budgeting [Hodgkinson (1989)].

1.11A Capital Budgeting Sophistication

Within a domestic context, there has been a multitude of empirical studies conducted in the UK and US on capital budgeting decisions within firms. However, limited attention has been devoted to UK and US multinational capital budgeting decisions. Several UK studies reveal differences in the capital budgeting techniques used. Whilst Westwick and Shohet (1976) and Carsberg and Hope (1976) found widespread use of the simple internal rate of return method, there is also controversy since another study by McIntyre and Coulthurst (1987) found that the net present value technique was used more often. The conflicting findings could be due to a significant time lapse between them, and studies have been conducted in order to gauge the changing awareness of capital budgeting techniques over time. Generally, studies indicate greater practice of discounted cash flow methods in the US than in the UK and there appears to be a preference for the net present value technique. Recent research on capital budgeting in the UK and US has focused upon the issue of sophistication, perhaps one of the most prolific of scholars in the UK has been Richard Pike. Ho and Pike (1991) find firms prefer simple risk adjustment and sensitivity analysis with a primary focus on total project risk. They find the use of advanced risk analysis techniques, such as risk simulation, covariance analysis, and the capital asset pricing model, to be of limited usage by the 146 medium to large sized UK firms they sampled. The results also suggest that firms with higher market risk or larger asset size are more actively involved in utilising advanced risk analysis tools. In addition, they find that sophisticated techniques do not replace simple ones, but complement one

another. Pike and Sharp (1989) examine the trends in the use of management science techniques for capital budgeting decisions in the UK. Data were collected by 3 surveys of the same 100 large firms between 1975 and 1986. Using logistic regression, forecasts were made for probable usage in this decade. The results revealed an increase in understanding management science techniques. Over half of the responding firms use a computer package or financial modelling system for at least some capital budgeting decisions. Forecasts of usage for 1991 for financial techniques showed an increase to around 75%-80%. However, forecast usage for beta analysis and mathematical programming was below 30%, demonstrating a lack of affinity to the more sophisticated techniques. Further research on the same sample over the identical time periods, by Pike (1989) revealed an association between the introduction of sophisticated investment evaluation systems resulting and decision making effectiveness. The senior executives were asked to assess the extent to which their firms' investment decision making effectiveness had changed during the period being reviewed. The study concluded that senior managers perceive greater capital budgeting effectiveness because of the increased use of sophisticated methods.

Within a US context, Reichert, Moore and Byler (1988) investigated how US companies respond to fundamental changes in the economy from a capital budgeting and risk management perspective. Responses were compared to those gathered in a 1980 survey of the Fortune 500. Results indicate that the level of sophistication in financial analysis seems to have increased over the five year period. The usage of financial futures to hedge foreign exchange rate risk has increased as well as cash management models, that incorporate netting. Net present value and internal rate of return still dominate in capital budgeting. In support of this empirical

evidence, Mukherjee (1988) discovered from a smaller sample of US firms that-:

1. Projects are identified and in general developed at the lower level of management and flow upwards.
2. Most companies use cash flows as cost-benefit data in capital budgeting decisions.
3. The payback period method is still popular.
4. Almost every firm uses the discounted cash flow tools for analysis, and the internal rate of return is the most popular choice.
5. Sensitivity analysis is a popular risk assessment method, while the risk-adjusted discount rate is the favoured means of risk adjustment.
6. In most companies, there is some sort of post-audit system in place.

Gordon, Pinches and Stockton (1988) argue that from an internal organisational perspective, a transaction cost economics approach would portray firms organising capital budgeting to minimise governance costs [Williamson (1975), (1986)]. Since these losses are directly related to the number of hierarchical levels in an organisation, the use of standardised operating techniques, such as sophisticated capital budgeting methods, should decrease as the top hierarchical levels of an organisation are approached. Simple non hierarchical organisations are expected to rely less on sophisticated techniques. The degree of use of sophisticated capital budgeting methods in different types of organisations, and at different levels within an organisation, is still an issue subject to contention. They argue that more research is needed into the relationship between maximising the firm's value and its capital budgeting methods.

Kee and Bublitz (1988) examine the use of the payback method for evaluating a project's risk. Their results suggest that the use of a hurdle payback period as a threshold for identifying proposals, with acceptable risk and return attributes, is consistent with more quantitatively oriented investment techniques under certain conditions. The relationship between payback and profit orientated capital budgeting models is examined. They suggest that payback and profit oriented techniques measure different aspects of an investment and complement each other in cash flow analysis and description.

Ang and Dukas (1991) develop a capital budgeting model that incorporates competitive and asymmetric information. They demonstrate, using a probabilistic model of competitive entry, that disregarding the impact of competition in the valuation process can seriously overstate the value of an investment and can lead to incorrect investment decisions. If competition is considered, the net present value of an investment is a decreasing function of the level of competitive intensity in the market and the duration of the project's cash flows. Further Ang and Dukas (1991) infer that the decrease in net present value and internal rate of return associated with an increase in competitive intensity or duration should be incorporated into the capital budgeting decision.

An alternative branch of capital budgeting is that described as stochastic rationing or capital budgeting. This approach differs from net present value methodologies since it attempts to incorporate uncertainty to the capital budgeting decision. It has been argued by Kira and Kusy (1991) that-:

1. Deterministic models ignore the uncertain nature of capital budgeting problems.
2. Models that incorporate uncertainty have serious computational problems when applied to larger problems.

They propose the usage of a stochastic capital rationing model. In their examples its use demonstrates its superiority over comparable deterministic models.

Empirical evidence on the use of a risk return framework in multinational capital budgeting is offered by Wilson (1990) who attempts to determine how risk is included in the capital budgeting techniques of 59 UK multinationals. Results indicate that there is a marked difference between the theoretical framework of risk and return and the practice in multinational firms in both the US and the UK, with the latter being generally less sophisticated. There is some evidence to suggest that financial managers do not have the theoretical apparatus to enable them to incorporate risk in the financial analysis, particularly political risk. Some variations of the discounted cash flow capital budgeting models address the complexities of capital budgeting for foreign direct investment and in particular that employed by the adjusted present value method. Empirical evidence has revealed that the use of risk adjusted cash flows is preferable to a risk adjusted discount rate. Several other approaches to measuring the cost of capital have been suggested, including a divisional cost of capital approach for both multinational and domestic firms. An alternative means of evaluation is the adjusted present value method, which separates the investment from the financing decision. The adjusted present value method first evaluates a project at the rate appropriate for its business risk, thereby treating it as if it were all equity financed. Then, to this base case

are added any benefits that may arise as a result of the particular method of financing [Lessard (1985)].

Holland (1990) constructs a decision model that is based on the adjusted present value rule, which focuses on each present value term. A version of the capital asset pricing model should be used to calculate discount rates for systematic foreign risks. Cash flows are classified into project dependence-independence and contractual-non contractual categories. Traditional finance theory is adapted to account for imperfections in markets for international capital and foreign exchange. The APV approach is applied to:

1. the decision to invest overseas,
2. the identification of overseas capital budgeting projects and their unique cash flows,
3. the incorporation of political risk analysis to identify the origin of market imperfections and the role of governments in their maintenance.

Other financing models exist in the literature, Aggarwal and Soenen (1989) are critical of the classic methods of capital budgeting, since they have always emphasised the decision to "enter" a project. It is also important to examine the decision to "exit" a project. The effect of terminating a project can be graphed, forming the exit economic profile for the life cycle of the project. This allows the investor to quantify the economic consequences of exiting at different stages and provides a measure of the risks involved in project, which is particularly relevant to environmental uncertainty which may be induced by unstable host country governments in the form of expropriation.

1.11B Cash management policies sophistication

Soenen and Aggarwal (1989) undertook a survey into cash management procedures in the UK, the Netherlands and Belgium, in the areas of:

1. policy and responsibility;
2. decentralisation versus centralisation,
3. cash planning and foreign exchange forecasting,
4. banking relationships and international cash management services,
5. hedging translation and transaction exposure,
6. conflicts with other departments, and,
7. computerisation of cash and foreign exchange management

A questionnaire was sent to 750 large industrial companies in 1983, of which 259 responded. The importance of the cash management function in the 3 countries is evident from the finding that responsibility for this function usually is assigned to senior executives. Centralisation of these functions appears to be increasing.

Soenen (1989) also attempted to measure the sophistication of treasury management, in order to discover whether there is an association between a company's sophistication and its size. He stressed that the characteristics of sophisticated companies are:

1. a greater interest in linkups between computers in banks and the company,
2. the use of financial futures to manage interest rate or exchange rate risks,

3. banking relations that have been established mainly on the basis of the quality of bank services.

The more sophisticated companies tended to be more active in:

1. making daily transfers between bank accounts to obtain an overall ending zero balance,
2. making value dating arrangements with banks,
3. using Euro-currency markets,
4. acquiring exchange rates and money market information more than once a day,
5. using computer support systems for treasury management, and,
6. predicting exchange rates by a foreign exchange committee and paying attention to comovements in exchange rates.

Generally, the sophistication of treasury management increases with company size and is higher for foreign companies compared with Belgian companies.

1.11C Hedging sophistication

The corporate treasurers of multinational enterprises are becoming more sophisticated in the foreign exchange markets. They use hedging techniques to protect profit. The hedging strategy and techniques will differ in multinationals due to variations in risk profile. For instance, some companies may use options instead of forward contracts, thereby maintaining some profit potential and covering their downside risk in a single transaction. However, currency gains and losses can have a major impact on corporate profit levels. The globalisation of the financial

markets has necessitated foreign exchange expertise and the use of technology in the multinational treasury departments. There now exists a number of management consultancies who specialise in designing risk management strategies for corporate treasurers of multinationals. Derivative products have caused a shift away from standard hedges to synthetic hedges, especially in the United States. Software hedging programs tend to incorporate forecasting programs for both currencies and interest rates. It has been suggested by Pershing (1989) that the extent of a company's involvement in foreign exchange hedging is determined by the internal culture of the multinational. In addition, many multinationals in the US are appointing futures and options traders to their treasury departments [Quinn (1989)].

Empirical research into the management of foreign exchange rate risk in UK multinationals has been conducted by Belk and Glaum (1990). Data were obtained from seventeen major UK industrial companies during 1988. In depth interviews were conducted with senior financial managers. They found that:

1. accounting exposure was managed actively by a majority of the respondents,
2. transaction exposure management was central to a company's foreign exchange risk management
3. the management of economic exposure was subject to very heterogeneous practices.

A majority of multinationals had centralised to at least some extent. The surveyed multinationals demonstrated a lower degree of centralisation than the relevant literature suggests. The majority of respondents described

their companies as totally risk averse. However, Belk and Glaum hint that it would be wrong to assume that these multinationals do not participate in speculative hedging activities.

Further research encompassing both UK and US multinationals has been conducted by Collier, Davis, Coates and Longden (1990). They undertook a case study analysis of currency risk management practices in large UK and US multinational firms in order to extend the findings obtained in a preliminary survey of 51 UK multinationals. The basis of the research was information developed from interviews conducted with 11 UK and 12 US multinational enterprises. They discovered that US firms demonstrated financial management policies that were inclined toward asymmetric risk aversion. In relation to translation risk, a significant number of the large multinationals interviewed, particularly in the UK, act in contradiction to the traditional efficient markets' view, because they managed translation risk exposure.

1.12 Organisation Structure and Centralisation

The relationship between the degree of centralisation in decision-making and financial policy of the multinational enterprise and whether multinationals support either a general equilibrium or disequilibrium in financial markets

In recent years despite the fact that multinationals have been an authoritative force in cultivating global infrastructure, they have come under fire for their unwillingness to conform to the requirements of the host country, which has resulted in the nationalisation of some multinational companies in some countries. Therefore, multinationals can

only be successful if they couple national responsiveness with that of a global vision [Doz and Prahalad (1987)]. Diversity in the nature of the operations of multinationals, has led to the advocacy of decentralisation of capital budgeting within multinationals by some authors [Rugman and Verbeke (1990)], leading to greater efficiency. Therefore a particular aim of this research thesis is to discover whether there are significant differences between multinationals which operate on centralised or decentralised bases, in relation to their financial policies. The organisational structure of the multinational enterprise can extensively distort the financing and capital budgeting decisions of the multinational enterprise in terms of the various ownership structures that are utilised, in addition to the added financial complexities of operating within a multinational context. An alternative angle to the traditional theory of capital structure proposed by Modigliani and Miller is that which has its origins in Williamson's transaction cost economics. The difference between the preference for debt or equity can be explained by the fact that debt governance works out the rules, but equity governance is a more flexible method of control [Williamson (1988)]. Multinationals need to be nationally responsive which can extensively distort its ownership structure. This approach can help to explain why multinational enterprises tend to have different capital structures than solely domestic enterprises. Within an international context, multinational enterprises often encounter political risks which can often dictate the types of ownership structures such as joint ventures and financing strategy. Joint ventures are viewed as a flexible method of control, but a reduction in the locus of control, however they can allay political risks to an extent. Raising debt locally is not always a strategy for taking advantage of high tax rates, but to offset political risks such as expropriation risk, by matching asset values with local borrowings in each country. This can alter the multinational ownership structure.

Therefore the transaction cost approach to the financing of the multinational, first affects the ownership and then the control of the enterprise in terms of the level of centralisation of decision making. Therefore, this thesis pays particular attention to the link between the general equilibrium and disequilibrium schools of thought (in relation to financial policy) and the level of centralisation of the financing and capital budgeting decisions of the multinational enterprise. A hypothesis is therefore:

H16

There is no relationship between whether companies adopt policies that support a general equilibrium or disequilibrium in financial markets and the degree of centralisation in financial decision-making.

On the level of centralisation of US, Japanese and European multinationals, there is a growing body of literature which supports more intense centralisation of US multinationals than non-US firms [Otterbeck (1981), Negandhi and Baliga (1981), and Negandhi and Welge (1984)]. These studies also discovered that subsidiaries in developing countries tended to be allowed less autonomy than those in developed countries. Young, Hood and Hamill (1985) also found a higher degree of centralisation of US multinationals than Continental European companies, in relation to their subsidiaries that were based in the UK. Specifically, the authors uncovered the fact that the level of centralisation depended upon the proportion of equity stock held by the parent. Wholly owned subsidiaries tended to be more centralised than partly owned subsidiaries, like joint ventures. Another stimulating finding was that pressure from host country governments caused decision-making structures to become more

decentralised. However, the research literature is under nourished in terms of attempting to compare UK with US multinational decision-making centralisation.

There is a wealth of research that suggests that the hedging is carried out on a centralised basis rather than a decentralised basis. Davis, Collier et al (1991) undertook case studies of UK multinationals to find that:

1. In a majority of UK multinationals there was a degree of centralised control of group currency risk management and formal currency exposure management policies existed.
2. Centralised control appeared to be less marked for overseas subsidiaries than for those in the UK.
3. Active management of currency transaction risk was associated with centralised control.
4. Where the overall dimension of currency risk appeared high, the policies adopted by firms were found to be risk averse in that automatic close out policies were applied. Conversely, for those companies where transaction risk is low, there was a corresponding willingness to actively manage at least part of the risk.

Child (1984) distinguishes between decentralisation and delegation. The term delegation indicates that authority for specific decisions has been shifted to the lower levels of the hierarchy of the organisation. It is important to note that decentralisation does not always mean a transfer of

control. Suhar (1980) stresses that the expert hedger needs to be located where the central management is.

The added dimensions of operating within an international arena induce complexities into the organisational design process of the multinational enterprise. The multinational needs to couple national responsiveness and cultural awareness with that of a global vision [Doz and Prahalad (1987)]. Meleka (1985) suggests two basic strategies and their implications to assist the survival and growth of multinationals. First, multinationals should "institutionalise" themselves as to achieve greater acceptance by the host country. This form of strategy may help to reduce some of the political risks associated with some countries by conforming to the cultural norms of the host country. Rosenzweig and Singh (1991) follow this line of argument but term "institutionalise" as achieving "isomorphism" with the host country. Second, multinationals should attempt to acquire the ability to reciprocate to the host country's needs. This would make them appear as important agents for growth and development, and consequently their presence would be more desirable. This added consideration in the organisational design of the multinational enterprise can cause management control difficulties [Doz (1981)].

In terms of the architecture of authority within the multinational enterprise, Hedlund (1986) argues against hierarchy as the dominant or stable form of organisational system within a global competitive framework. Hedlund says that this type of organisational structure may be detrimental to many multinational strategies. Multinationals are evolving towards more complex structures and strategies. These are characterised by a "heterarchy" of many different kinds of centres where multinational subsidiaries take strategic responsibilities for the whole of the

multinational enterprise, there are coalitions with other firms and strategies are aimed at seeking and creating new competitive advantages rather than exploiting old ones. In support of this idea is Galbraith and Kazanjian (1986) who support the principles of a matrix organisational design as opposed to simple structures as appropriate and responsive to the strategies of diversified multinational companies. The authors acknowledge many of the administrative problems that can arise in managing the multinational enterprise. Ghoshal and Nohria (1990) argue that the internal structure of a multinational is a complex, multi-unit organisation. The structure is not homogeneous but systematically differentiated in an attempt by its directors to achieve compatibility with the different environmental and resource contingencies faced by the different national operating environments. Ghoshal and Nohria call this necessity as 'requisite complexity'. A method for overcoming the problems caused by an internally differentiated organisational structure is proposed by Stephens and Apasu (1986) who support a need for a greater utilisation of strategic boards in multinational enterprises. Kriger (1988) augments this greater role for multinational subsidiary boards. The evidence suggests that:-

1. Subsidiary boards are in a process from lesser to greater autonomy.
2. Multinational companies with headquarters in North America, Japan and Europe perceive the usefulness of these boards in various ways.

Recommendations are provided for the involvement in the design of these strategic boards to safeguard against sub optimality through managerial opportunism.

An explanation is given by Gomes-Casseres (1989) of how multinational enterprises choose their ownership structures for foreign subsidiaries. The process can be decomposed into two stages: first, a determination of the multinational's preference and second the entry negotiations with the host nation government. They support the transaction cost economic arguments, originating from the writings of Williamson, as useful for understanding the organisation of foreign subsidiaries. Internalisation theory can explain that management costs should be considered because the cost of managing a joint venture may be greater than the benefits of using ownership structures such as management service contracts.

1.13 UK and US Multinational Capital Budgeting and Financing Decisions

The reasons why this research project concentrates upon the decision-making of UK and US multinationals are because more multinationals are based in these two countries than any other combination of countries [United Nations, 1983]. Secondly, the UK uses the imputation taxation system and the US uses the classical system. Therefore, it would be interesting to test the differences between UK and US MNCs. Therefore a final hypothesis is:-

H2₁

There are no significant differences between UK and US multinationals, in relation to their capital budgeting and financing decisions.

1.14 The Relative Importance of the Distortions to the Financial Policy of the Multinational Enterprise

The main theme of this chapter has been to address the distortions to multinational capital budgeting and financing decisions, like exchange rates, differences in inflation rates and interest rates and tax systems, political risks, financing arrangements and degree of centralisation of decision-making which may cause a multinational to adopt financial policies which either reflect a general equilibrium or disequilibrium in financial markets. Dunning's (1976),(1988) eclectic paradigm focuses upon ownership, location and internalisation advantages offered to the multinational enterprise. Whilst these are the fundamental dimensions of the foreign direct investment, his analysis tends to ignore some of the distortions to foreign direct investment such as the political stability of the host country and financial operating environmental considerations. The impact of political risk upon the drift of capital from the home to the host country is subject to controversy. The environmental factors impacting upon the foreign direct investment have been examined from the perspective of the multinational enterprise by a number of authors. In Hymer's (1960) dissertation, the political dimension of foreign direct investment was ignored, [Dunning and Rugman (1985)]. The seminal work on political risk and its interaction with foreign direct investment was undertaken by Basi (1964) who recorded that political risk was of high priority with respect to the variables that the multinational enterprise considered important in its location decisions. More recently this is supported by Akaah and Yaprak (1988). However, Bennett and Green (1972) found in their study of forty six companies that political stability was insignificantly related to inward investment from the US. Another study by Green and Cunningham (1975) which was based upon a smaller

sample of twenty five countries confirmed that political stability was irrelevant.

Research on the impact of taxation upon the foreign direct investment have signalled that taxation is a significant determinant of FDI activity. A few studies have focussed upon tax differentials [Kopits (1976), He and Guisinger (1992)]. Kopits found that as relative tax rates increase, multinational activity declines. Also, He and Guisinger (1992) discovered that the propensity of US multinationals to reinvest their foreign earnings is sensitive to the host country's tax rate as well as differences between home and host country's tax rates.

The impact of differential interest rates (or inflation rates) between the host and home country should be irrelevant under the forces of the international interest rate parity theorem (purchasing power parity). A neglected line of empirical research is the preference that multinationals have for different sources of finance, which is linked to the level of interest rates and inflation rates.

Further, the literature on the strategic capital budgeting decisions of multinational enterprises have advocated that they can only be efficient if they are conducted on a decentralised basis [Rugman and Verbeke (1990)], yet the majority of multinationals tend to be centralised with quite striking national differences between control mechanisms [Otterbeck (1981) Negandhi and Baliga (1981)]. These studies found that US multinationals tended to be more centralised than their European and Japanese counterparts. Young and Hood (1985) offer instances where centralised control is more apparent than others. They find a direct relationship between the degree of multinationality and centralisation. Martinez and

Jarillo (1989) highlight how multinationals are often forced to formulate decentralised decision-making structures in some countries by the host government.

Conjoint analysis is widely used in marketing. It is an experimental design that can reduce the biases of asking close ended questions. It also offers an alternative dimension to the research by presenting the finance director with a decision-making scenario exercise. The conjoint approach has been applied to the foreign direct investment attraction problem by Akaah and Yaprak (1988) in which data were collected in 1984 from executives in ninety six multinational firms in Ghana. Based on foreign direct investment literature, six country attributes were chosen, and each attribute was represented at three levels. The attributes chosen were maximum foreign equity allowed, dividend repatriation restrictions, tax incentives provided, the extent of political stability, protection against nationalisation and the annual inflation rate.

The findings indicate:-

1. political risk-related attributes are powerful discriminators in foreign direct investment donors' willingness to commit investment resources to potential foreign direct investment sites
2. tax incentives are not effective foreign direct investment inducers compared to lower levels of political or financial risk
3. foreign direct investment donors seek different sets of benefits in making foreign direct investment site allocation decisions

4. the foreign direct investment donor market can be segmented to enhance foreign direct investment attraction.

Therefore, in chapter 7 a conjoint analysis is conducted on a sample of UK and US multinationals to determine the relative importance of the major distortions to the financial policy of the multinational enterprise, considered in this literature review chapter. Hypothesis H2₂ is tested:

H2₂

There are no significant differences between UK and US multinationals in relation to the relative importance of the distortions in financial policy.

1.14 Summary of hypotheses to be tested

H1₁

There are no significant differences between the multinationals who implicitly support [Modigliani and Miller (1958), Miller (1977)] and [Modigliani and Miller (1963)].

H1₂

There are no significant differences between companies who believe that their multinational has a global optimum capital structure and those that do not believe that their multinational has a global optimum capital structure.

H1₃

There are no significant differences between companies who raise debt finance from high political risk countries and those that do not raise debt finance from high political risk countries.

H1₄

There are no significant differences between companies who believe that hedging increases the value of the multinational and those that believe that the value of the multinational remains the same.

H1₅

There are no significant differences between companies who have a currency mix goal and those companies that do not have a currency mix goal.

H1₆

There is no relationship between whether companies adopt policies that support a general equilibrium or disequilibrium in financial markets and the degree of centralisation in financial decision-making.

H2₁

There are no significant differences between UK and US multinationals, in relation to their capital budgeting and financing decisions.

There are no significant differences between UK and US multinationals in relation to the relative importance of the distortions in financial policy.

1.15 Summary

The financing and capital budgeting decisions of the multinational can be distorted by barriers to financial flows such as exchange controls, different national taxation systems, political risks, international capital market segmentation and foreign exchange risks, in addition to the internal organisational structure of the enterprise.

This chapter has introduced the various theories in the literature on the theory of the multinational. The multinational finance director formulates the financing and capital budgeting decisions within this framework. Attention has been directed towards the distortions that cause multinationals to adopt financial policies which reflect a general equilibrium or disequilibrium situation in financial markets. The research thesis will therefore attempt to discover the predominant approach by UK and US finance directors, in relation to their capital budgeting and financing decisions.

The theory of the multinational has evolved from the early writings of Caves, Kindleberger and Hymer into a modified version known as internalisation theory. Hybrids of internalisation theory include the eclectic paradigm of the multinational which has recently been extended by Dunning (1988). Multinationals are driven by imperfections in markets, including factor, product, financial markets, and differences in taxation

system, within a framework of fierce oligopolistic competitive rivalry. Market imperfections, in general can be rationalised as obstructions to the interaction of supply and demand to set a market price. The theory of internalisation is inherently related to transaction cost economics because the multinational "internalises" imperfect markets in order to minimise transaction costs. However, the benefits of internalisation can be offset by governance costs associated with inefficient hierarchical organisation structures [Williamson (1981),(1985) and Teece (1985)]. Therefore, the degree of centralisation in decision-making is a crucial factor in assessing the multinational's adequacy to take advantage of market imperfections which can be extensively influenced by political risks encountered by the multinational. The risk reduction theories of the multinational were cloned from international portfolio diversification theories developed in the finance literature. Research into the benefits of international portfolio diversification of real assets has been plentiful, with earlier studies advocating a decrease in risk associated with multinationality whilst recent studies have refuted this evidence.

The literature has focused upon other angles of multinational theory such as the political perspective. This facet of multinational theory describes them as active political actors, lobbying government officials in order to gain competitive advantages against multinationals outside the domain of their triad market, or internal market, by proposing protectionist policies to discourage outside competition. One could argue that the immense power that multinationals command is a major generator of imperfections today. However, political uncertainties, created by the host country government can be viewed as a distortion to its financial policy, especially in respect to its hedging, financing and capital structure decisions.

It is within the context of this chapter, that detailed hypotheses which lead from the broad aims of the thesis have been developed. The next chapter outlines the methodology used to test the hypotheses formulated in this chapter.

Chapter 2

Research Methodology

2.1 Introduction

The objective of this chapter is to outline the methodology followed in this research project to test the hypotheses which were formulated in chapter 1. The nature of the project was such that managers' attitudes and preferences towards the usage of various financial policies needed to be measured via a survey. Indepth interviews were conducted at a later stage to corroborate the outcome from the analysis of the survey. A conjoint analysis was conducted after the survey (but before the indepth interviews) in order to assess the relative importance of the central distortions to the financing and investment decisions of the multinational corporation. It is these distortions which cause a company to pursue financial policies which reflect a general equilibrium or disequilibrium in financial markets. The conjoint method was followed because it presents the finance director with decision-making scenarios where the researcher is able to measure finance directors' preferences for particular country scenarios, rather than for certain financial policies (which were measured using the survey). The conjoint analysis was conducted after the survey. The issues and dimensions that emerged from the survey were used as attributes in the conjoint analysis, so that their relative importance could be assessed.

The nature of the project made it necessary to collect primary data. A major reason for this was that specific data could be gathered in order to test the hypotheses generated in chapter 1, which relate to the attitudes, preferences and beliefs of the finance director. However, the researcher did consider using secondary data sources.

2.2 Secondary data sources

Whilst there are a number of external databases like Datastream and Reuters, it was decided not to use them because they do not illuminate the actual manager's motive for implementing a specific financial policy of the multinational. There are many econometric research projects that have been undertaken in the UK which use data from these sources. Further, it was the intention of this project to measure attitudes and preferences for adopting certain financial policies which cannot be investigated by capturing data from external databases.

The method followed in this research thesis is by survey, scenario analysis and indepth interviews, which requires the collection of primary data.

2.3 Primary source data

The mainstream primary data collection techniques are listed overleaf.

(i) Observation method

The hypotheses can be examined by observing the actual financial policies finance directors implement in certain events. This is known as the observation method. The observation method would rely upon 'observing' the finance director. The major strength with this method is that the researcher can measure the way in which the finance director reacts to certain events, stimuli and conditions. This method has certain strengths and weaknesses. Whilst the observation method results in original data being gathered and that it is timely, it is very difficult to arrange observation case studies. The reason for this is that finance directors are privy to extremely sensitive information and would almost certainly not want a researcher analysing their actions. There is also the possibility that the presence of the researcher may influence the behaviour of the finance director being measured. However, in general, subjects tend to accept an observational intrusion better than questioning. The observation method can result in semi-structured and unstructured data being gathered which is difficult to analyse and draw conclusions about. A further weaknesses of the observation method is that the researcher must be at the scene when the event occurs.

An example of an event that may occur in a multinational corporation is the acquisition of a foreign subsidiary or entering into an equity joint venture in a high political risk country. Whilst it would be possible to get some of this information from secondary sources such as newspapers, it would be difficult to measure the intentions, attitudes, opinions or preferences of the finance director, or belief in general equilibrium models.

It was decided not to follow the observational method in this research thesis because of these weaknesses.

(ii) Surveying

The questionnaire is a popular vehicle with which to measure managers' attitudes and is used widely in accounting and finance research. More specifically, it has been used by a number of authors to study the hedging strategies of UK and US multinationals [see Collier and Davis (1985)]. The data collected via a questionnaire can be easily analysed using statistical techniques which are discussed later on in this chapter. Surveying as a data collection technique has the advantages in the sense the questions asked can be specific and related to hypotheses formulated, whereas the observation method is a less direct method. Secondly, it is virtually impossible for a researcher to learn about the attitudes and preferences of the finance director without questioning. The survey is one vehicle by which questioning may be conducted. In business research, it is widely accepted that surveys are more efficient and economic than studying observations. The major weakness of surveys is that the quality of information depends upon the finance director's willingness to co-operate which may depend upon the sensitivity of the questions asked. This is a major set back when studying the attitudes and preferences of finance directors of multinational companies as they tend to be very busy and do not often have the time to complete questionnaires from outside research institutions. In this thesis, the survey did not ask the finance director any sensitive questions in order to increase the degree of cooperation. The questionnaire was addressed to the finance director, who would then be able to pass the questionnaire onto a person capable of answering correctly.

However, despite these weaknesses, surveys tends to be used more than the observation method in business research because they are economically viable. It was therefore decided to follow this approach.

(iii) Indepth interviews

Questioning can also be carried out by other methods. For example, can be conducted through indepth interviews. Indepth interviews tend to result in the gathering of unstructured to semi-structured data and cannot be as easily analysed as survey data. Indepth interviews were used in this research thesis to corroborate the findings from the survey and scenario analysis which were used to test the hypotheses formulated in chapter 1. The data gathered by means of the survey and scenario analysis are more easily analysed than data gathered by interviewing because the data is well structured. The survey and scenario analysis were the main research instruments. Indepth interviews are a rich source of data which provide complementary data gathered from the survey and scenario analysis.

The great advantage of conducting interviews is that the interviewer can ask probing questions to find out the rationale behind implementing various financial policies. They should be consistent with the data sought from the survey and scenario exercise and should help to clarify some of the issues that emerge from the analysis.

2.4 Sample selection

A total population of 232 UK and 519 US multinationals were identified for this study. Using the Dunn and Bradstreet stock market information

system, Datastream, three criteria were used to identify the sample of multinationals. First, the market capitalisation of the multinational needed to be in excess of £50 million pounds. Second, it had to have overseas production capabilities in the form of overseas production facilities. Thirdly, the company had to be paying tax to an overseas government.

2.5 Survey design

The survey was designed around testing the hypotheses formulated in chapter 1, which satisfied the main aims of the research thesis. The primary aim of this thesis was to discover whether financial managers are adopting financial policies which reflect a general disequilibrium or equilibrium in financial markets. The major financial policies this thesis investigates is the hedging and financing strategy (with particular emphasis upon taxation as a market imperfection). A secondary aim was to investigate the degree of centralisation in the decision making of the financing and capital budgeting functions, in relation to whether a company supports either the general equilibrium or disequilibrium scenario. The third aim was to discover whether there are significant differences between UK and US multinationals, in relation to their capital budgeting and financing decisions.

With respect to the equilibrium-disequilibrium aim, the questionnaire set out to try and divide the respondents into two groups. One group was respondents who supported a general equilibrium in financial markets and the other a disequilibrium. A number of questions were asked in order to discover whether the respondent was a supporter of a general equilibrium or a disequilibrium in financial markets [Refer to the survey in Appendix E and tabulation of responses in Appendix G]. These questions are

numbered Q2, Q3, Q4, Q5, Q7, Q30, Q33 and Q34. Also, the respondent could be classified as UK or US. In addition, two questions were asked which allowed the respondents to be grouped at a later stage. These questions were related to whether or not the company operated in a high political risk country (Q6), and whether the company raised finance from a country with high political risk.

The financial policy questions related to capital structure (Q9), financial policies operated in countries with high political risk (Q10, Q11), financing source (Q13), country specific (Q14) and project specific (Q15) issues involved with raising finance from overseas, derivative securities used to hedge foreign exchange exposure (Q16) and interest rate risk (Q17).

The centralisation questions related to the centralisation of initial capital expenditure (Q19), trend in the centralisation of finance functions (Q20), centralisation of debt financing (Q25), equity financing of overseas subsidiaries (Q26) and the capital structure decision

Responses were measured on a likert scale from 1 to 5. (1 indicated of no importance to 5, which indicated of highest importance). This allowed for each response to be coded and entered into a statistical package.

In addition, a number of subquestions were asked which were used in a factor analysis in Chapter 5. The idea behind the factor analysis was to identify the relationship between the sub issues, to create factors and new respondent groupings.

2.6 Statistical techniques used to analyse the questionnaire

Three statistical techniques were used on the survey data, to test the hypotheses generated in the first chapter. First, a series of t-tests was conducted in order to test the null hypothesis that the difference between the two groups of respondent's mean score for a survey item is zero (measured on a Likert-scale of one to five). Second a series of discriminant functions was produced for each batch of sub-issues (or question) in order to discover what the most powerful discriminating sub-issues are in relation to minimising Wilk's lambda, using step-wise discriminant analysis. Wilk's lambda was used as a basis for entering the discriminating variables because it considers both the extent of intra-group cohesiveness and inter-group differences, Klecka (1980). Wilk's lambda is a multivariate test of significance with a range of zero to one. Large values of the statistic indicate that the means of two variables being analysed are not significantly different whereas small values reflect significant differences between the means. Discriminant analysis delivers a better picture of the differences because the t-test considers each of the sub-issues in isolation. However the t-test does give valuable insights into where the differences lie. Third, a factor analysis was conducted on the subquestions in order to find out what the 'latent' relationships were between the subissues, to be used in chapter 6 to test inductive hypotheses which support the deductive formulated in chapter 1.

The results are divided into the following chapters:

Chapter 3: *General Equilibrium versus Disequilibrium Schools of Thought*

Chapter 3 investigates the differences between companies that adopt financial policies which either support a general equilibrium or disequilibrium in financial markets. Hypotheses are tested relating to the two groups of multinational finance directors that there are no significant differences between them in relation to their responses to the survey items. These hypotheses are tested on various other respondent groupings in order to investigate the general equilibrium and disequilibrium schools of thought, in relation to the company's financial policy. The statistical techniques used in this chapter were the t-test , to identify the significant differences between the groups, and discriminant analysis.

Chapter 4:*UK and US Multinational Enterprises*

The differences between UK and US multinational enterprises in relation to the response to the survey items is given in this chapter. One of the primary hypotheses is that there is no difference between UK and US multinationals based upon the response to the survey items by the finance director.

Chapter 5:*Factor Analysis*

A factor analysis was conducted on the combined sample of UK and US multinationals in order to discover 'latent' relationships between issues for each group of questions. The results are set out in chapter 5. The factor analysis, utilising principal component extraction and the varimax rotation technique to augment the factor solution, resulted in the creation of new

factors which were considered as new variables for subsequent analysis. The factors were used to support the deductive hypotheses formulated in chapter 1. The varimax rotation is an orthogonal rotational technique which means that the derived factors are uncorrelated with each other. Factor scores were also calculated for use in further analysis, in chapter 6. The aim of this chapter is to present initial interpretations of what the various extracted factors are, which leads to the formulation of a series of inductive hypotheses. These inductive hypotheses are tested in Appendix B, in order to support the hypotheses formulated in chapter 1.

Chapter 6: Tests on the Factor Groupings and Formulation of Inductive Hypotheses Derived From the Factor Analysis

The approach followed in chapter 6 signifies a change from the traditional "scientific method" and the "hypothetico-deductive" approach to the social science research which has been the agenda for much of this century under which deductive hypotheses are formulated and data collection centres around accepting or rejecting these propositions. Under this model, the scientist examines the phenomenon, proposes a hypothetical explanation, deduces some additional consequences of the explanation, and then devises experiments to see if these consequences are reflected in reality. The inductive method originated from the work of Lord Bacon during the 17th century, which involved collecting a vast number of facts about a phenomenon and then working out what general statements were applicable to the data. In the embryo years of science, the inductive approach was synonymous with the scientific method, until the end of the 17th century. There appears to be no understanding why scientists became satisfied with inductive research. Since the original data collection for this research thesis utilised the hypothetico-deductive approach, it would be

fruitful to formulate some inductive hypotheses which can be tested using the same data set, in order to describe the data more readily and also work out what "general statements" are ingrained in the data.

Chapter 7: The relative importance of the distortions to the financial policy of the multinational enterprise: The utilisation of conjoint analysis

It is distortions like exchange rates, differences in inflation rates and interest rates and tax systems, political risks, financing arrangements and degree of centralisation of decision-making which cause a multinational to adopt financial policies which either reflect a general equilibrium or disequilibrium in financial markets. The purpose of this chapter 7 is to assess the relative importance of each distortions to multinational capital budgeting and financing decisions, through the usage of conjoint analysis, by presenting the finance director with decision-making scenarios. The key issues that emerged from the survey were used as attributes in the conjoint analysis, so that their relative importance could be assessed. The great advantage of conjoint analysis is that it considers the distortions to the financing and investment decisions of the multinational, jointly, rather than separately.

Chapter 8: The Indepth Interviews

In addition to the broadly empirical research on the capital budgeting and financing decisions of the multinational enterprise, the author conducted interviews with some senior multinational finance managers. This was attempted in order to corroborate information gleaned from the main survey and conjoint analysis. Some of the multinationals from which

managers were interviewed were amongst the largest companies in the world.

2.7 Rationale and limitations of conjoint analysis

Conjoint analysis was utilised for this research thesis. The rationale underlying the usage of conjoint analysis was to find out the relative importance of the central distortions to the financial policy of the multinational company. The technique requires the researcher to present to the respondents stimuli or scenarios that reflect predetermined attribute combinations and to ask them to make preference evaluations. An attribute is a component of a decision "package". The objective of conjoint analysis is to estimate the utility scores for each attribute level, termed part-worths considered jointly rather than individually [see chapter 7 for the method followed]. Conjoint analysis achieves this by utilising the full concept or full profile method.

Conjoint analysis appears to perform better in situations in which the decision attributes are easily described in terms of discrete levels. Conjoint analysis can present problems when the number of attributes is large. Various kinds of hybrid conjoint approaches have been developed to simplify the respondent's evaluation task. Also, treating each attribute separately can dramatically reduce the data collection burden on the respondent.

One of the disadvantages of the traditional conjoint methodology is that the SPSS version of conjoint analysis uses orthogonal fractional factorial experimental designs to construct a set of hypothetical stimuli, termed as cards. These designs may include correlated attributes that can lead to

stimulus profiles that are not representative of the subject's environment. For example, political instability and low inflation would be typically non-representative.

An adaptive conjoint analytical technique can utilise an orthogonal array within plausible sets (OWPS). This technique can create designs of maximum efficiency for a given coding scheme, containing no combinations of attribute levels deemed to be incongruous. For example a card may be generated that contains an unstable political environment and a stable exchange rate. The respondent may find this scenario as hypothetical because high political risk countries often have unstable exchange rates. However, there are instances when this scenario can occur as in the case of the Mexican peso. In this situation, political risk was high since the Mexican government was unstable but the exchange was fixed. If the exchange rate was fixed then it is considered stable, provided it is not devalued on a regular basis.

On this issue of environmentally correlated attributes leading to unrepresentative samples, Moore and Holbrook (1990) conducted a series of three experiments to compare a stimulus set, that has environmentally correlated attributes, to one using an orthogonal array, in terms of perceived realism and predictive power. Results indicate that environmentally correlated attributes may present fewer problems in practice than in theory. As expected, the orthogonal profiles were found to be less realistic than their orthogonal-within-plausible sets counterparts. The perception that a profile was unrealistic did not lead to distortion in the evaluation rating task. This reinforces the appropriateness of SPSS Conjoint module. (However, it is possible to purchase software which

incorporates OWPS known as Adaptive Conjoint Analysis, produced by Sawtooth Software Inc. [Green, Krieger, Aggarwal and Johnson (1991)].

2.8 Indepth Interviews

Within the context of research on multinationals, Davis, Coates, Collier and Longden (1991) have applied the indepth interview approach as a sequel to earlier questionnaire survey based research on the hedging practices of UK and US multinational enterprises [Collier and Davis (1985)]. This thesis follows the same approach as them, using data from the interviews to corroborate the findings from the questionnaire survey.

Although indepth interviews are an advantageous source of information, Mohr (1985) alerts that

'the ordinary, story-telling sort of case study, where the causal insights and analyses that are offered may well be true, but there is generally nothing about the method itself that gives a basis for confidence in such validity'.

All of the main survey respondents from UK multinationals were contacted by telephone and invited to supply further information in the form of face to face interviews, at their head offices in the UK. About half of the main respondents indicated a willingness to take part in an indepth unstructured interview and these appointments were subsequently arranged for a mutually convenient time during July of 1993. One of the central disadvantages was that due to time and money constraints, the author was unable to interview any finance managers from US multinationals. Therefore, the indepth interviews could not be used as a benchmark of comparison for UK and US multinationals. The interviews were

unstructured and indirect in order to allow maximum flow of information to the researcher. Although, this can result in 'story-telling', as outlined earlier, an agenda was placed in front of the author so that the interviewees could be asked to respond more closely to the issues when they became out of focus, from the interviewer's perspective. It was discovered that the social dynamics of the indepth interview were heterogeneous because each interviewee's job title, responsibility and role within the multinational company was slightly different. Therefore, the questions were not asked in the same order to each finance manager, since this tended to impede the rich flow of information, within the context of the interviewee's background. It was thus discovered that it was difficult to present every interviewee with the same stimuli [unlike the conjoint analysis in chapter 7, and the main survey]. This is a potential weakness of attempting to analyse the data collected by indepth interview. It was also sensed that if a set of standardised questions had been asked this would have suppressed the variability of responses and behaviour of the interviewees. It must be remembered that every multinational is unique in terms of its people, systems, culture and scope of operations and a list of standardised questions may not derive as much utility as an indepth interview which tends to be based in conversation. Another potential explanatory factor underlying the usage of unstructured-indepth interviews was that the two empirical surveys were well structured in nature. The data was therefore easier to analyse despite using complex statistical analysis techniques such as factor and conjoint analysis. Further, the outcome of the main survey and the conjoint analysis were reconcilable.

The flow of information was recorded by the means of a dictaphone. The interviewer asked the permission of the interviewee to use a dictaphone in order to record the interview, with no major problems. However, one

interviewee out of the fourteen did not allow me to record their interview, and therefore short-hand notes were used to record this interview. This refusal was beneficial in the sense that the author was able to compare the results of this interview with the recorded interviews with the conclusion that the use of the dictaphone, in retrospect greatly enhanced the quality and quantity of information gathered. In the majority of cases, the unspoken undercurrents to the interviewer seemed to suggest that the interviewee did not mind in the slightest the presence of the dictaphone, probably because they liked the feeling of being an authority in their area. Also, there was a sense that the interviewee felt more at ease because the author was able to maintain eye-to-eye contact without 'shuffling' pieces of paper around in front of them.

The focus of the interview was upon three major issues. These were the centralisation of decision-making, political risks faced by the enterprise and taxation in relation to the financing of overseas subsidiaries and affiliates. The objective was therefore to find out the underlying philosophies behind the financing decision in order to corroborate data gleaned from the survey. The nature of questions, which the finance managers were asked, is given in Appendix F under the broad categories of:

background information,

political risks encountered in relation to financing,

the capital structure decision,

the centralisation in decision-making,

general equilibrium and disequilibrium approaches to hedging and

raising debt finance in countries with high rates of corporation tax,

and,

project evaluation.

The questions asked were not sensitive and were related to the questions asked in the survey (i.e. corroborative in nature).

The indepth interviews captured by the dictaphone were transcribed to document format and then summarised [refer to chapter 8]

2.9 Summary

This chapter has outlined the method this thesis used to investigate the beliefs, attitudes and preferences of finance directors, in relation to the financial policies that they are adopting. Secondary sources of information were not used because they do not indicate managers beliefs, attitudes or preferences for implementing specific financial policies. Different methods of testing the hypotheses formulated in chapter 1, were considered. These were by observation, questionnaire survey and by indepth interviews. The observation method was rejected because it is difficult to arrange case studies and costly. The questionnaire survey was chosen to be a sound research tool in combination with corroborative indepth interviews. A questionnaire survey has been used by Davis and Collier to investigate the hedging strategies of UK and US multinationals and it has been demonstrated to be a valuable research method. A conjoint style methodology was followed in this thesis to ascertain the relative importance of distortions to the financial policy of the multinational enterprise.

Chapters 1 & 2 have addressed the research question to be investigated in terms of relevant literature, hypotheses formulation and appropriate

methodology. The objective of the next chapter is to outline the results of the main survey. Specifically, chapter 3 investigates the differences between companies that reflect either a general equilibrium or disequilibrium in financial markets.

Chapter 3

General Equilibrium Theory versus Disequilibrium Approaches to Multinational Financing

3.1 Introduction

The purpose of this chapter is to examine some of the differences between companies that are adopting financial policies which support a general equilibrium in financial markets and those who support a disequilibrium situation.

First, this chapter examines the significant differences between multinationals whose rationale for raising debt in countries with high rates of corporation tax determines whether there is support for Modigliani's and Miller's (1958) and Miller's (1977) capital structure irrelevancy propositions or whether they support Modigliani's and Miller's (1963) tax advantage to debt proposal and hence capital structure relevancy. The combined sample of UK and US multinationals is used to test the null hypothesis that there is no significant difference between the classification of a company's implied school of thought and the survey items (hypothesis H₁).

Second, the combined sample of UK and US multinationals are formed into two groups according to whether they believe that when the multinational enterprise engages in hedging, the value of the multinational remains the same or whether they assert that the value of the firm increases (H₁₄). Approximately half of UK and US multinationals were classified by the existence of the two schools of thought. Group 1 represents the companies that were determined to be in support for the

general equilibrium school of thought and group 2 represented those multinationals that endorsed the disequilibrium rationale to financing and hedging policies.

Third, the combined sample was divided according to whether:

they believe that the multinational group has a global optimum capital structure (to test hypothesis H1₂).

the multinational has a currency mix goal (to test hypothesis H1₅), and finally whether the multinational raises debt finance from countries with high political risk (to test hypothesis H1₃).

3.2 Debt financing strategy and the value of the multinational enterprise

It has been stated that the finance directors were asked to indicate what they believed happened to the value of the multinational enterprise, when it raised debt from countries with high rates of corporation tax. The respondents were divided into two groups. The two groups represented two types of respondents. The first believed that the value of the multinational remained the same when the multinational raised debt finance from countries with high rates of corporation and the second group believed this strategy increased the value of the group. Therefore, the first group implicitly supported Miller's (1977) general equilibrium framework in relation to their financing policy, and the second were assumed to maintain the Modigliani and Miller (1963) tax advantage to debt and hence the disequilibrium approach to their financing decisions (reflecting a disequilibrium in financial markets). There is of course a third group which represented a small number of respondents who

believed that when the multinational company raised debt finance in countries with high rates of corporation tax, this resulted in a decrease in the value of the enterprise. A series of t-tests were conducted for the two groups in order to test the hypothesis that there was no significant difference between the two groups. The significant differences are shown in Table I-3.1. The stated hypothesis is:

H1₁

There are no significant differences between the respondents who implicitly support [Modigliani and Miller (1958), Miller (1977)] and [Modigliani and Miller (1963)].

There was evidence to reject H1₁. In relation to the issues involved in the capital structure decision, the group of respondents who supported disequilibrium in relation to their debt financing indicated greater importance than those who reflected a general equilibrium situation in financial markets of the maximisation of the tax shield on debt. Table A.27 (see Appendix) shows the results of the discriminant analysis and confirms that the maximisation of tax shield on debt was the most powerful discriminating variable in terms of minimising Wilk's lambda. This is consistent with the assertion that raising debt finance in countries with high rates of corporation tax increases the value of the firm through maximising the tax shield on debt.

Those companies who implicitly supported a general equilibrium situation in financial markets placed more importance than their market disequilibrium counterparts upon matching the assets against liabilities for the subsidiary in countries where political risk was high. (See Table A.28).

This can be explained by the fact that raising debt to maximise the tax shield is not a major issue for the general equilibrium group of respondents. Therefore matching can be viewed as a currency allocation policy used by companies who believe in a general equilibrium in financial markets.

The supporters of general equilibrium theory indicated lesser importance than the supporters of disequilibrium upon the variability of project cash flows denominated in the home currency. (This is related to the fact that the general equilibrium group of companies stressed the importance of matching which would reduce the impact of currency fluctuations on a project's cash flow).

In relation to hedging, supporters of the general equilibrium theory stressed lesser importance than the disequilibrium group upon the usage of currency swaps to hedge foreign exchange rate risk exposure. The discriminant analysis confirms this (Table A.30). Again, this can be explained by the fact that the general equilibrium group of companies emphasised matching which would reduce the extent of hedging.

In relation to the debt financing of overseas subsidiaries, the disequilibrium group demonstrated that this function was more highly centralised than was the case for the general equilibrium group. Thus it can be inferred that the exploiting of disequilibrium is linked to the a highly centralised debt financing function.

The disequilibrium group believed to a greater extent than the general equilibrium group of respondents that when the subsidiary and parent raised debt finance they were able to lower the weighted average cost of

capital of the subsidiary and parent. This is consistent with raising debt finance from countries with high rates of corporation tax increasing the value of the multinational, since lowering the weighted average cost of capital increases the value of the firm because it can be argued that the value of the multinational is determined by:-

$$\text{Value of the multinational} = \frac{\text{Net Operating Income}}{\text{WACC}}$$

The general equilibrium theory group of respondents indicated that there was a marginal difference between the capital structure of subsidiaries in low political and high political risk countries. However, the disequilibrium group believed that the capital structure of their subsidiaries in high political risk countries was significantly higher than for subsidiaries in low risk countries. This result can be explained by the fact that in countries with high political risk, debt-equity ratios tend to be higher (than in countries with lower levels of political risk). In this context, the disequilibrium group are using debt to hedge political uncertainties in the host country, as well as taking advantage of the tax shield on debt. Companies that uphold general equilibrium are implying that the risk profile of the multinational does not alter in countries with high political risk and that in equilibrium, any decrease in political risk by increasing the proportion of debt to equity (relative to low risk countries) is offset by an increase in financial risk.

3.3 Hedging and the value of the multinational enterprise

A similar approach to the hypothesis on taxation (in the previous section) was followed in testing whether respondents believed that hedging affected

the value of the multinational enterprise. The first group believed that, by hedging, no additional value accrued to the multinational, thereby supporting a general market equilibrium. The second group believed that hedging increased the value of the multinational, implying they supported the disequilibrium approach to hedging. A series of t-tests were conducted for the two groups in order to test the hypothesis whether there was no significant difference between the two groups. The significant differences are shown in Table I-3.2. The stated hypothesis is:

H14

There are no significant differences between companies who believe that hedging increases the value of the multinational and those that believe that the value of the multinational remains the same.

There was evidence to reject H14. In relation to issues associated with the capital structure decision, supporters of a disequilibrium approach to hedging indicated greater importance than their general equilibrium counterparts, upon achieving the target currency configuration of debt and minimising the global cost of capital of the multinational group. Table A.31 (see Appendix) shows the discriminant analysis confirms this result. This result is consistent with disequilibrium, since unlike the general equilibrium group of companies they believe that they are able to lower the weighted average cost of capital of the multinational group by pursuing an active debt financing policy.

The supporters of disequilibrium emphasised greater importance than the general equilibrium group upon insuring a project in a high risk country

with a political risk insurer. Insurance can be viewed as being similar to hedging. The discriminant analysis (Table A.32) confirmed this result.

The disequilibrium group placed greater importance than the general equilibrium group upon taking advantage of generally higher tax shields on debt (See Table A.33). This is consistent with disequilibrium.

In relation to the centralisation of economic exposure risk, capital structure and debt and equity financing, the disequilibrium group expressed greater centralisation of these functions than the general equilibrium group. This is consistent with the results to the previous section (3.2) which suggests that the disequilibrium approach is associated with greater centralisation of the finance function than the general equilibrium avenue of thought. Therefore the hypothesis H1₆ is rejected which stated that:

H1₆

There is no relationship between whether companies adopt policies that support a general equilibrium or disequilibrium in financial markets and the degree of centralisation in financial decision-making.

The disequilibrium group believed that when the subsidiary raised debt finance, they were able to lower the weighted average cost of capital of the subsidiary to a greater extent than the general equilibrium group could. This is also consistent with the results to the previous section.

3.4 Global Optimal Capital Structure of the Multinational Company

Under sections 3.2 and 3.3, the combined sample of UK and US multinationals were separated into two groups and compared and contrasted. The intention of the following sections is also to treat the US and UK multinationals as a combined sample and then divide them according to whether:

they believe that the multinational group has a global optimum capital structure (to test hypothesis H12)

the multinational has a currency mix goal (to test hypothesis H15), and finally whether

the multinational raises debt finance from countries with high political risk (to test hypothesis H13).

The combined sample was divided into two according to whether they believed that the multinational company had a global optimum capital structure or not. Group A represented those companies that did not believe that the multinational had a global optimum capital structure and group B consisted of those companies that believed that the multinational had a global optimum capital structure. T-tests were conducted on the two groups in relation to the survey items (See Table I-3.3). The hypothesis is:

H1₂

There are no significant differences between companies who believe that their multinational has a global optimum capital structure and those that do not believe that their multinational has a global optimum capital structure.

The hypotheses H1₂ was rejected. In relation to the importance of the various issues involved with the capital structure decision, Group D companies stressed lesser importance upon achieving the target currency configuration on debt. This can be explained by the fact that this group of companies were more motivated by minimising the cost of capital by maximising the tax shield on debt. (This result is also supported by the fact that Group D companies placed relatively less importance upon matching the values of assets and liabilities in each currency than multinational group C companies).

Group D companies tended to place less importance upon equity joint venture than group C companies. This is confirmed by the discriminant analysis, Table A.9. Thus, equity joint ventures can be viewed as a distortion to the capital structure of the consolidated multinational company. Often equity joint ventures are forced upon the multinational by regulations in the host country, which will tend to affect capital structure optimality.

Group D companies placed more importance upon the variability of the exchange rate, the variability of host country interest rates together with the variability of project cash flows denominated in the home currency, which is linked to the discovery that Group D companies placed less importance upon matching assets and liabilities in each currency. This is

related to the finding that Group D companies did not place greater importance than group C companies upon matching the values of assets and liabilities in each currency. It was discovered earlier that the matching policy is associated with a general equilibrium in financial markets.

Group D companies believed that when the parent multinational raised debt finance this had a lesser impact upon lowering the weighted average cost of capital of the parent than group C companies. This is indicative of companies with an optimum capital structure, since raising more debt finance will tend to move an optimum capital structure to a non-optimum.

3.5 Currency mix goal

For the question that asked the finance directors whether the multinational group had a currency mix goal or not, the combined sample of UK and US multinationals was divided into two. Group E represented those companies that did not have a currency mix goal and group F represented those companies that did have a currency mix goal. T-tests were conducted on the two groups in relation to the survey items (Table I-3.4). The hypothesis is:

H1₅

There are no significant differences between companies who have a currency mix goal and those companies that do not have a currency mix goal.

The hypotheses H1₅ was rejected. In relation to the issues involved in the capital structure decision, multinationals who operated a currency mix

goal (group F) stressed greater importance than those who did not have a currency mix goal (group E) upon maximising the value of tax shield on debt, achieving the target configuration on debt and diversifying the investor base. This is consistent with a currency mix goal and is reinforced by the discriminant analysis (Table A.10). Essentially, group E companies are behaving as if markets were in general equilibrium by not taking advantage of relationships that exist between markets. Therefore, group F may be identified as the disequilibrium group by exploiting the relationships between currencies.

Companies with a currency mix goal (group F) placed greater emphasis upon allocating assets and liabilities in each respective currency and allocating assets and liabilities in a portfolio to maximise expected currency returns. These findings are also consistent with group F companies believing in disequilibrium. The results are reinforced by the discriminant analysis (Table A.11).

In relation to reasons underlying raising debt finance in countries with high political risks, companies that had a currency mix goal placed greater importance upon taking advantage of generally higher tax shields on debt and reducing the incidence of exchange controls. This is supported by the discriminant analysis in Table A.12. It appears that companies that operate a currency mix goal are also seeking to gain tax advantages from pursuing this strategy (reflecting a disequilibrium in financial markets).

The translation risk of subsidiaries was less centralised for companies that had a currency mix goal than those companies that did not have a currency mix goal. This is reinforced by Table A.14. This can be explained by the fact that if the multinational's assets and liabilities are naturally hedged

then there is no need to operate a centralised translation risk function (as opposed to if the multinational did not operate a currency mix goal).

3.6 Multinationals in countries with high political risk

The combined sample of UK and US multinationals was then split according to whether the multinational group raised finance from a high political risk country or not. Group G represented those companies that did not raise finance from a high political risk country and group H represented companies that did raise finance from high political risk countries. T-tests were conducted on the two groups in relation to the survey items (See Table I-3.5) in order to test the hypothesis that:

H13

There are no significant differences between companies who raise finance in high political risk countries and those that do not raise finance in high political risk countries.

The hypotheses H13 was rejected. In relation to the issues involved in the capital structure decision, group H companies (that raise finance from countries with high levels of political risk) tended to stress greater importance on conforming to the industry and cultural norms of the host nation than group G companies, that did not raise finance in countries with high political risk. This is supported by the discriminant analysis in Table A.20 (see Appendix). This reflects Doz and Prahalad's (1987) argument that multinationals need to be nationally responsive whilst maintaining a global vision.

The avoidance of high political risk countries applied more strongly to group G companies, that did not raise finance in countries with high political risk than it did for group H multinationals. The discriminant analysis confirms this (Table A.21). Therefore it can be inferred that Group G contains risk averse companies.

Group H companies (that did raise finance in countries with high political risk) stressed greater importance than group G companies on decreasing the risk that assets may be expropriated. This is a policy which is related to national responsiveness and the propensity to conform to host country industry and cultural norms (See also Table A.22). This strategy is synonymous with raising finance from local sources (i.e. from countries with high political risk). This finding is reinforced by the fact that companies that raised finance from countries with high levels of political risk (group H) indicated greater importance of local debt markets of host country as a means of financing than group G companies. This also applied to the raising of finance from host country banks and governments. This is supported by the discriminant analysis in Table A.23. Raising debt finance from countries with high political risk can be viewed as a policy which reflects a disequilibrium in financial markets, since the company can lower risk, whilst taking the advantage of tax shields on local debt.

Group H placed greater emphasis upon the importance of the host country inflation rate than those that did not raise debt finance from countries with high political risk (See also the discriminant analysis in Table A.24). This is synonymous with a local financing strategy.

There was a significant difference in the importance of the usage of other swaps, in relation to hedging foreign exchange risk. Group H companies,

that raise finance in countries with high political risk, tended to place greater importance upon their usage of other swaps than group G companies. Group H (the disequilibrium group) are taking advantage of a general disequilibrium in the financial markets of the high political risk country by hedging, using swaps. In relation to the degree of centralisation of hedging, companies that raise debt finance in countries with high political risk indicated a slightly lower degree of centralisation. This is supported by Table A.26. This may be explained by the fact that some host governments in high political risk countries force multinationals to have decentralised decision-making structures [Martinez and Jarillo, 1989].

Companies that raised finance from countries with high political risk believed that they had the same debt-equity ratio as they would have had if they operated within a purely domestic situation. Those companies that did not raise finance in countries with high political risk, believed that the debt-equity ratio of their multinational was significantly higher than if they operated within a purely domestic situation. This result may be explained by the fact that political risk makes the multinational more risky than for companies that do not operate in high political risk countries, requiring a lower debt equity ratio than in the normal domestic case. Therefore, companies that have operations in countries with high political risk will attempt to keep their debt-equity ratio low.

3.7 Summary

Essentially this chapter has examined the differences between companies who are implementing financial policies which reflect either an equilibrium or disequilibrium situation. The disequilibrium group believe that they are able to maximise the tax shield on debt, which is inherent of a

disequilibrium situation in markets. In contrast, the equilibrium group tended to match assets and liabilities in a matching configuration, implying that they were not willing to take open positions in currencies in order to take advantage of upside potential in currency swings (or a disequilibrium in financial markets). The matching concept explains why the equilibrium group of companies placed less importance upon variability of exchange rates. In general, the finance function of the disequilibrium group was more heavily centralised than the equilibrium group of companies, suggesting a link between belief in equilibrium and centralisation (and thus rejecting hypothesis H16). Taking advantage of disequilibrium is inherently linked to a coherent organisational structure capable of capitalising upon market imperfections. Although the finance function is largely run on a centralised function, there is evidence to suggest that companies, whose debt financing is driven by taxation considerations have more centralised debt financing. However, where a company had operations in countries with high political risk, debt financing was less centralised, supporting political risk as a distortion to the locus of control of the multinational corporation. The usual mode of entry into a high political risk country, i.e. by equity joint venture was viewed as a distortion to the capital structure of the multinational corporation.

The general equilibrium group believed that there was a marginal difference between the capital structure of subsidiaries in countries with low or high political risk. The equilibrium group therefore implied that the risk profile of the multinational did not change. However, the disequilibrium group implied that debt-equity ratios of subsidiaries in high political risk countries tend to be high (as opposed to low political risk). The equilibrium group imply that a decrease in political risk, by issuing

more debt in high political risk countries is offset by an increase in financial risk.

This chapter has found out what the differences are between companies that are adopting policies which reflect either a general equilibrium or disequilibrium in financial markets. Within this context, the next chapter examines the differences between UK and US multinational capital budgeting and financing decisions.

Chapter 4

UK and US Multinational Capital Budgeting and Financing Decisions

The purpose of this chapter is to investigate some of the differences between United Kingdom and United States multinational enterprises in relation to their financing and capital budgeting decisions, since this is one of the aims of this research thesis. Attention is also directed towards the general equilibrium-disequilibrium rationale, in order to support or reject the hypotheses formulated in chapter 1.

4.1 Objectives of the capital structure decision

The finance directors of UK and US multinational enterprises were asked to indicate the scale of importance of a number of issues as set out in Table 4.1.

Table 4.1
The Capital structure decision

Factor	US		UK	
	Mean	Standard deviation	Mean	Standard deviation
Minimise the cost of capital of the parent multinational	4.00	1.28	3.98	1.37
Minimise the cost of capital of the subsidiaries	3.10	1.45	2.85	1.19
Maximise the value of the tax shield on debt	3.61	1.20	3.77	1.31
Conform to the industry and cultural norms of the host nation	2.86	1.33	2.44	1.05
Achieve the target configuration on debt	2.79	1.18	3.27	1.34
Minimise the global cost of capital of the multinational group	3.97	1.30	4.05	1.26
Diversify the investor base	2.45	1.06	2.25	0.98

For US multinationals, minimising the cost of capital of the parent company was of highest priority, also minimising the global cost of capital of the multinational group was of high importance. Diversification of the investor base was of lowest priority. The ordering of priority was virtually the same for UK multinationals. Therefore firms are pursuing policies which attempt to maximise the value of the firm because this is synonymous with minimising the cost of capital.

4.2 Optimum capital structure

The parent company

For the question asking the finance directors whether they believed their parent company had an optimum capital structure, the respondents were partitioned approximately equally between the general equilibrium and disequilibrium schools of thought. The results are set out in Table 4.2.

Table 4.2
Parent company with an optimum capital structure

	US	UK
	%age	%age
No	36	42
Yes	64	57

The multinational group

There was a similar pattern of responses for the question relating to whether or not the finance director believed the entire multinational group had an optimum capital structure. However, there was more support for an optimum capital structure. This is set out in Table 4.3.

Table 4.3
Multinational group with an optimum capital structure

	US	UK
	%age	%age
No	42	41
Yes	58	58

4.3 Currency mix goal

The responses to the question on whether the multinational had a currency mix goal is shown in Table 4.4.

Table 4.4
Currency mix goal

	US	UK
	%age	%age
No	59	27
Yes	41	72

An overwhelming 72% of UK companies had a currency mix goal. The majority of US companies did not have a currency mix goal. If a company has a currency mix goal then there is less need to hedge currency risk, because assets and liabilities, in each currency are naturally hedged (using portfolio theory). This supports some of the findings of Davis, Coates, Collier and Longden (1991) who find that US multinationals use derivative instruments to a greater extent than UK companies to hedge foreign exchange risk.

4.4 Operation in countries with high political risks

The responses to the question on whether the multinational operated in countries with high political risk is shown in Table 4.5.

Table 4.5
Operation in high political risk countries

	US	UK
	%age	%age
No	31	50
Yes	69	50

The majority of US companies had operations in countries with high political risk. Half of the UK multinationals responding to the survey had operations in high political risk countries.

4.5 Finance from countries with high political risk

For the question that asked the finance director to indicate whether their multinational raised finance from high political risk countries, the results are set out in Table 4.6.

Table 4.6

Finance from high political risk countries

	US	UK
	%age	%age
No	38	50
Yes	62	50

The majority of US companies raised finance in countries with high political risk. Half the UK companies raised finance from countries with high political risk. Companies with operations in high political risk countries tend to raise finance for those ventures, reinforcing emphasis placed upon local sources of finance. Local debt is being used as an instrument to hedge political uncertainties such as expropriation risk, rather than to maximise the tax shield on debt. Local debt is an effective device for hedging political risks because host country institutions have a vested interest in the survival of the multinational. The other advantage of using local borrowings is that it hedges local assets, reducing the need to hedge extensively.

4.6 Strategies adopted in relation to financing

In relation to the strategies adopted in relation to financing, the finance director was asked to indicate the scale of importance of various tactics, as shown in Table 4.7.

Table 4.7
Strategies in financing

Issue	US		UK	
	Mean	Standard deviation	Mean	Standard deviation
Adapt by conforming to the host government's directives	3.52	1.02	3.54	1.00
Avoid a high political risk country	3.07	1.11	3.79	1.24
Structure finances in the form of an equity joint venture	2.79	0.86	2.61	1.08
Allow host institutions to monitor the company's operations	2.36	1.13	1.89	0.94
Insure the project with a political risk insurer	2.07	1.15	1.82	1.16
Politick with the World Bank	1.64	0.78	1.26	0.60
Lobby other groups and institutions	2.07	1.09	1.82	1.04

US multinationals stressed greater importance upon adapting to the host government's directives and avoiding a high political risk country (supporting the United Nations Centre for Transnational Companies New Code of Conduct [UNCTC (1990)]). UK companies tended to place greater emphasis upon political risk avoidance than US companies. Within this context UK multinationals are displaying greater risk aversity than their

~~US counterparts.~~ US companies were more willing to engage in equity joint ventures than UK companies and to politick with the World Bank. Although politicking with the World Bank was of low priority, the institutional arrangements of the World Bank with the US are strong. The US has 17.49% of the voting rights, whereas the UK only has 5.88% of the voting rights, World Bank Annual Report (1992). Lobbying was considered to be of low priority for both UK and US multinational enterprises. The results to this question point towards different strategies adopted in countries with high political risk. In general, multinationals tend to be nationally responsive in relation to their financing strategy. Overall, US companies seemed to be placing more emphasis upon implementing strategies to "live" with political risk, rather than avoiding high risk countries (as for UK multinationals).

4.7 Policies relating to the configuration of assets and liabilities

For the general principles underlying the allocation of currencies within the multinational enterprise, the finance director was asked to indicate the scale of importance, as shown in Table 4.8

Table 4.8
The allocation of currencies

Factor	US		UK	
	Mean	Standard deviation	Mean	Standard deviation
Allocate assets and liabilities in an overall risk minimising configuration	3.53	1.36	4.18	0.78
Match values of assets and liabilities in each respective currency	3.30	1.39	4.08	1.05
Allocate debt and equity in a risk minimising configuration	3.67	1.09	3.38	1.11
Allocate liabilities in proportion to net project cash flows in each currency	2.90	1.01	2.79	1.10
Allocate assets and liabilities in an overall tax minimising configuration	3.70	0.95	3.65	0.98
Allocate assets and liabilities in a portfolio to maximise expected currency returns	2.53	1.14	2.46	1.07

US multinationals placed most emphasis upon allocating assets and liabilities in an overall tax minimising configuration and upon allocating debt and equity in a risk minimising configuration. The allocation of assets

and liabilities in a portfolio to maximise expected currency returns was of lowest priority. UK multinationals placed greater emphasis than US multinationals upon allocating assets and liabilities in an overall risk minimising configuration than US multinationals (which is related to having a currency mix goal). UK multinationals exhibited the least preference for allocating assets and liabilities in a portfolio to maximise expected currency returns. It appears that UK multinationals are adopting policies that reflect more of a general equilibrium in financial markets than US companies by not taking open positions in currencies. Again, this finding is consistent with Davis, Coates et al (1991).

4.8 Financing considerations in relation to political risk

Where multinationals raised finance in countries with a high political risk, directors were asked to indicate the scale of importance of the reasons why they raised finance from these countries.

Table 4.9**Debt financing considerations in high political risk countries**

Factor	US		UK	
	Mean	Standard deviation	Mean	Standard deviation
To obtain cheap government financing	3.48	1.23	2.93	1.27
To take advantage of higher tax shields on debt	3.46	1.06	3.44	1.25
To decrease the risk that assets may be expropriated	3.96	1.00	3.70	1.30
To lessen exchange rate risk by borrowing in a weak currency	3.72	1.21	3.30	1.56
To match assets against liabilities for the subsidiary	3.63	1.35	3.85	1.10
To reduce the incidence of exchange controls	3.87	1.12	3.74	1.13
To achieve the correct portfolio configuration of debt	2.96	1.19	2.50	1.30

The results summarised in Table 4.9 reveal that US multinationals placed the most emphasis upon reducing the risk that assets may be expropriated. It was also of great importance to reduce the incidence of exchange controls and to lessen exchange rate risk by borrowing in a weak currency. Achieving the correct portfolio configuration of debt was of lowest priority. UK multinationals emphasised matching assets against

liabilities for the overseas subsidiary in the high political-risk country. Of lowest priority was the purpose of achieving the correct configuration of debt. Tax appeared to be of modest importance for both US and UK multinationals. Again, UK companies seem to be implementing policies which reflect an equilibrium in financial markets. Thus, from this table it can be seen that debt is viewed as a hedging or governance instrument rather than solely to take advantage of any tax shields on debt ([Williamson (1988)] paper on debt as a corporate governance instrument is being supported).

4.9 Sources of finance

Further questions were asked regarding the financing of overseas subsidiaries and affiliates. The scale of importance of the various issues is indicated in Table 4.10.

Table 4.10
Financing sources

Factor	US		UK	
	Mean	Standard deviation	Mean	Standard deviation
Local debt markets of host country	3.47	1.07	3.25	1.13
Internally generated funds from the parent's reserves	3.23	1.19	2.83	1.15
Internally generated funds from the subsidiaries' reserves	3.43	1.10	3.70	0.94
Local equity markets of the host country	1.60	0.86	1.78	1.10
International equity markets	1.77	1.07	1.73	1.09
International bond markets	2.17	1.26	2.10	1.22
Host country banks	3.77	0.94	3.70	0.97
Other host country financial institutions	2.79	1.18	2.67	1.12
Host country governments	2.59	1.24	1.95	1.05
Co-financing with the World Bank	1.68	1.09	1.20	0.52

US multinationals place the most emphasis upon local sources of finance from the host country such as host country banks, more emphasis is placed upon local debt markets of the host country and internally generated funds

from the subsidiaries reserves rather than international sources such as international equity and bond markets. Finance from the local equity markets was of lowest priority. UK multinationals exhibited similar behaviour in relation to the importance of the various financing sources. The conclusion is that multinational corporations tend to prefer local sources of finance to international ones. This may be due to a variety of reasons:

- to take advantage of tax shields on local debt
- to hedge local currency assets
- or as a governance instrument

4.10 Country specific considerations

For each of the following country specific issues, the finance director was asked to indicate the scale of importance when raising finance from overseas, as shown in Table 4.11

Table 4.11
Country-specific factors

Factor	US		UK	
	Mean	Standard deviation	Mean	Standard deviation
Level of political risk of the host country	3.59	1.12	3.31	1.13
Level of money interest rates of the host country	3.83	0.80	3.69	1.10
Level of real interest rates of the host country	4.04	1.04	3.92	1.11
Host country inflation rate	3.72	1.13	3.21	1.03
Exchange rate between the home and the host country	3.61	1.07	3.05	1.12
Transaction costs	3.00	1.00	2.74	1.03
Taxation treaties signed between the home and the host country	3.79	0.90	3.36	0.96
Exchange controls	3.90	0.77	3.55	0.92
Variability of the exchange rate between home and host country	3.62	1.01	3.44	0.99
Variability of host country interest rates	3.52	1.21	3.37	0.91

The level of real interest rates in the host country is of prime importance to the US multinational, when considering to raise finance from overseas.

Of lowest priority are the transaction costs. A similar pattern was followed by UK multinationals. However, less emphasis was placed by UK multinationals upon each of the variables since they stressed matching assets against liabilities in each currency. The implementation of 'matching' tends to negate the importance of these macro-economic variables.

4.11 Project specific considerations

For each of the following project specific issues, the finance director was asked to indicate the scale of importance when raising debt finance from overseas, as shown in Table 4.12

Table 4.12
Project specific issues

Issue	US		UK	
	Mean	Standard deviation	Mean	Standard deviation
Variability of project cash flows denominated in foreign currency	3.48	1.23	3.84	0.87
Time horizon of project cash flows	3.32	1.07	3.79	0.77
Variability of project cash flows denominated in the home currency	3.36	1.04	3.00	0.94
Costs of monitoring the overseas project	2.52	1.09	2.35	1.06
Life of the project	3.12	1.13	3.45	0.83
"Bail out" options and project exit values	2.96	1.06	3.07	0.94
Costs of insolvency of the project	2.84	1.28	2.32	0.96

US and UK companies placed the most emphasis upon the variability of project cash flows denominated in foreign currency. UK companies placed lesser importance than US companies upon the costs of insolvency of the projects and the time horizon of the project, these differences are significant. The importance that UK multinationals place upon each of the variables tends to suggest a greater degree of risk aversity than US

companies, since all of variables can be quantified as some measure of project risk. Note that UK multinationals are not as concerned about the variability of project cash flows denominated in the home currency because the operation will be naturally hedged. This is evidenced by the fact that UK companies tend to stress matching assets and liabilities in each currency.

4.12 Hedging foreign exchange

The finance director was asked to indicate the importance of various financial instruments used to hedge foreign exchange exposure. The results are set out in Table 4.13.

Table 4.13
Foreign exchange hedging

Issue	US		UK	
	Mean	Standard deviation	Mean	Standard deviation
The usage of index options to hedge foreign exchange exposure	1.81	1.18	1.54	0.96
The usage of other options to hedge foreign exchange exposure	2.48	1.48	2.49	1.43
The usage of index futures to hedge foreign exchange exposure	1.67	1.07	1.46	0.73
The usage of other futures to hedge foreign exchange exposure	2.61	1.57	1.84	1.07
The usage of currency swaps to hedge foreign exchange exposure	3.93	0.98	3.44	1.12
The usage of other swaps to hedge foreign exchange exposure	2.77	1.11	2.51	1.30

Currency swaps were the most popular financial instrument used to hedge foreign exchange rate exposure for both UK and US multinationals. The importance of each of the financial instruments to hedge foreign exchange rate exposure was more pronounced for US multinationals than UK

companies which reflects the more-developed options, futures and swap markets in the US than the UK. UK multinationals tend to match assets and liabilities in each currency, therefore reducing the need to extensively hedge.

4.13 Financial instruments used to hedge interest rate risk

An examination was made of the degree of importance of the various financial instruments used to hedge foreign interest rate risk. The results are set out in Table 4.14.

Table 4.14-Interest rate hedging

Issue	US		UK	
	Mean	Standard deviation	Mean	Standard deviation
The usage of index options to hedge interest rate exposure	1.92	1.35	1.45	0.93
The usage of other options to hedge interest rate exposure	2.71	1.57	2.39	1.50
The usage of index futures to hedge interest rate exposure	1.83	1.31	1.52	0.85
The usage of other futures to hedge interest rate exposure	2.44	1.61	1.90	1.27
The usage of swaps to hedge interest rate exposure	4.32	0.95	3.56	1.37

Interest rate swaps were the most popular financial instrument used to hedge foreign exchange exposure. This result is in common with the discovery that currency swaps were used to hedge foreign exchange rate exposure. Again, US companies stressed greater importance upon the usage of each of the financial instruments reinforcing an earlier interpretation that this is consistent with the US derivative and swap markets being more developed than in the UK. The results for UK companies reinforce the earlier finding that they place a high priority upon matching the values of assets and liabilities and allocating assets and liabilities in a portfolio to minimise risk (and that the majority of UK companies tend to have a currency mix goal) , since this would result in a lesser dependency upon the need to hedge.

4.14 Trend in finance functions

In relation to the trend in centralisation, the finance director was asked to indicate the scale of importance for the following functions: financing, hedging, capital budgeting, cash management and tax planning.

Table 4.15
Trend in finance functions

Factor	US		UK	
	Mean	Standard deviation	Mean	Standard deviation
Financing	4.53	0.68	4.45	0.85
Hedging	4.33	0.80	4.51	0.72
Capital budgeting	3.40	1.22	3.42	1.15
Cash management	4.03	1.03	3.68	1.23
Tax planning	4.60	0.62	4.29	0.90

From Table 4.15, it is evident that both UK and US multinationals displayed greater decentralisation of capital budgeting and cash management than the other functions. Shifts in the decentralisation of financing, hedging and tax planning remained limited. Tax planning is thus seen as a centralised function, even more strongly in the US than in the UK. In chapter 3, it was discovered that centralisation of the finance function is associated with the capability of the multinational to take advantage of a disequilibrium situation in financial markets.

4.15 Centralisation of financing

The finance director was asked to indicate the level of centralisation of equity financing, debt financing and of the capital structure decision. The results are set out in Table 4.16

Table 4.16
Centralisation of financing

	US		UK	
	Mean	Standard deviation	Mean	Standard deviation
Debt financing	3.72	1.13	3.97	0.95
Equity financing	4.89	0.42	4.70	0.57
Capital Structure	4.51	0.63	4.68	0.52

Debt financing was the least centralised of the financing functions for both UK and US multinationals. Equity financing and the capital structure decision were the most centralised financing functions.

4.16 Centralisation of hedging functions

The finance director was asked to indicate the level of centralisation of interest rate risk of the subsidiaries, transaction risk of subsidiaries, translation risk of subsidiaries and economic exposure risk. The results are set out in Table 4.17.

Table 4.17
Centralisation of hedging functions

Issue	US		UK	
	Mean	Standard deviation	Mean	Standard deviation
Centralisation of interest rate risk hedging of subsidiaries	4.38	0.94	4.42	1.00
Centralisation of transaction risk subsidiaries	3.64	1.31	3.51	1.41
Centralisation of translation risk subsidiaries	4.42	0.79	4.13	1.38
Centralisation of economic exposure risk	4.21	1.03	4.00	1.41

Interest rate and translation risk of subsidiaries was the most centralised hedging functions for both UK and US multinationals. However, transaction risk of subsidiaries was found to be the least centralised hedging operation for UK and US companies. Economic exposure risk, although very centralised was less centralised than interest rate risk and translation rate risk.

4.17 Overseas project evaluation

An important question is whether the discount rate used to evaluate overseas projects is significantly lower, the same or significantly higher than the domestic rate. A response of one on the scale indicated that the rate is significantly lower than the domestic rate, three indicated the same

as the domestic rate and five indicated that it is significantly higher. The results are set out in Table 4.18

Table 4.18
The discount rate in overseas project evaluation

	US		UK	
	Mean	Standard deviation	Mean	Standard deviation
Scale factor for discount rate	3.61	0.69	3.12	0.48

It appears that US multinationals are using higher discount rates to evaluate overseas projects than UK companies, compared with domestic rates. The difference is significant. This result is consistent with the percentage of respondents using a lower, the same or a higher discount rate than the domestic situation as shown in Table 4.19. This may be because UK multinationals are undertaking less risky projects than their US counterparts. This is an important finding since it questions the validity of some of the early theories on the risk reduction potential of multinational corporations [Rugman (1979)]. Risk reduction would be associated with a lower discount rate than the domestic rate used in international project evaluation.

Table 4.19
Percentage of respondents using different discount rates

	US	UK
	%age	%age
Lower	0	3
The same	50	83
Higher	50	12

4.18 Adjustments to the discount rate and cash flows

The finance director was asked whether the discount rate, cash flows or both discount rate and cash flows were adjusted to take account for project risk. The results are set out in Table 4.20.

Table 4.20
Adjustments to discount rate or cash flows

	US	UK
	%age	%age
Cash flows are adjusted	17	19
Discount rate is adjusted	55	41
Both	27	40

The majority of UK and US companies preferred to adjust the discount rate to account for project risk. There was a lack of support for the exclusive adjustment of cash flows.

4.19 Techniques used in the capital budgeting process

Table 4.21 shows the percentage of companies using each of the capital budgeting evaluation techniques.

Table 4.21
Evaluation Techniques

	US	UK
	%age	%age
Accounting rate of return	13	14
Net present value	47	41
Internal rate of return	75	60
Payback	25	50
Adjusted present value method	9	21
Capital asset pricing model	13	12
Arbitrage pricing theory	3	--
Mean variance approach	0	0
Other	--	2

For US companies the internal rate of return was the most popular method with 75% of companies responding to the survey using it. This was followed by the net present value and the payback method. For UK companies, the internal rate of return was the most popular evaluation technique, but was not as popular as for US companies. The second most popular technique for UK companies was the payback technique followed by the net present value approach. Support for the capital asset pricing model and the accounting rate of return remained limited. However a

larger proportion of UK companies than US companies were using the adjusted present value method.

4.20 Multinational hierarchy and project evaluation

The multinational finance director was asked whether the capital project was evaluated by the parent, subsidiary or both. The results are set out in Table 4.22.

Table 4.22
Level at which projects are evaluated

	US	UK
	%age	%age
Subsidiary only	17	19
Parent only	55	41
Both	28	40

The majority of the respondents indicated that the project was either evaluated by the parent or the parent and the subsidiary for both UK and US multinationals. Less than a fifth of companies evaluated a project on a subsidiary basis only.

4.21 Multinational capital structure versus the domestic situation

The finance directors were asked what they believed the debt equity ratio of the multinational was in relation to if it operated solely within a domestic arena. The results are set out in Table 4.23.

Table 4.23
Multinational versus Domestic capital structure

	US	UK
	%age	%age
Lower than the domestic situation	15	6
The same as the domestic situation	58	54
Higher than the domestic situation	27	40

The majority of multinationals believed it had the same debt equity ratio than if it operated within a purely domestic situation. A greater proportion of UK companies than US companies believed that they had a higher debt equity ratio than if they operated solely within its domestic economy. This is in contrast to the econometric evidence by Lee and Kwok (1990) and Fatemi (1988) who find that US multinationals tend to have lower debt-equity ratios than their domestic counterparts.

4.22 Subsidiaries' capital structure in high political risk countries

With regard to the question that asked the finance director what the debt equity ratio of subsidiaries was in countries with high political risk relative to low risk countries, the results are set out in Table 4.24.

Table 4.24

Debt equity ratio of subsidiaries located in high political risk countries

	US	UK
	%age	%age
Lower than in low risk countries	15	13
The same as in low risk countries	35	30
Higher than in low risk countries	50	56

There is evidence to support that subsidiaries of UK and US multinationals that agree located in high political risk countries have higher debt equity ratios than subsidiaries located in low risk countries. This supports the importance that multinationals place upon local sources of finance.

4.23 Impact of debt and high tax rates upon the value of the multinational enterprise

In relation to the impact that various financing strategies had upon the multinational enterprise, the finance director were asked what they believes happens to the value of the multinational enterprise when it raises debt finance from countries with high rates of corporation tax.

Table 4.25

Effect of debt and high tax rates upon value (% of respondents)

	US	UK
	%age	%age
Value decreases	15.4	8.8
Value remains the same	50.0	58.8
Value increases	34.6	32.3

The results set out in Table 4.25 for UK and US multinationals appear to be similar. The majority of respondents believed that the value of the firm remained constant thus upholding Miller's (1977) general equilibrium theory. However, about one third of all multinationals believed raising finance in countries with high rates of corporation tax increased the value of the multinational (reflecting disequilibria).

4.24 Impact of hedging upon the value of the multinational enterprise

In relation to the impact that engaging in hedging had upon the multinational enterprise, the finance directors were asked what they believe happens to the value of the multinational enterprise when it hedges. The results are set out in Table 4.26.

Table 4.26

Hedging and the value of the multinational enterprise

	US %age	UK %age
Value of the multinational decreases	0	3
Value of the multinational remains the same	59	53
Value of the multinational increases	41	45

The majority of UK and US multinationals believed that when the multinational engages in hedging the value of the multinational remains the same (supporting an equilibrium in financial markets). However, nearly half of all multinationals believed that hedging increased the value of the multinational enterprise (reflecting a disequilibrium in financial markets).

4.25 Significant differences between UK and US Multinationals

A t-test was conducted on the data in order to find out whether there were any significant differences between UK and US multinationals to test hypothesis H2₁ which stated:

H2₁

There are no significant differences between UK and US multinationals, in relation to their capital budgeting and financing decisions.

Although the t-test is a univariate technique, and therefore the variables are considered in isolation, it does give an insight into where the differences lie. The hypothesis H2₁ was rejected. The differences are listed in Table 4.27

Table 4.27
The significance of differences between UK and US

Issue	US	UK	t-value	d.f.	signif- icance
Avoid a high political risk country	3.07	3.79	-2.53	67	0.014
Allow host institutions to monitor the company's operations	2.36	1.90	1.81	63	0.074
Politick with the World Bank	1.64	1.26	2.23	64	0.029
Allocate assets and liabilities in an overall risk minimising configuration	3.53	4.18	-2.32	43.19	0.025
Match values of assets and liabilities in each respective currency	3.30	4.08	-2.66	68	-0.010
Host country governments	2.59	1.95	2.32	67	0.024
Co-financing with the World Bank	1.67	1.20	2.16	35.54	0.038
Host country inflation rate	3.72	3.20	1.97	66	0.053
Exchange rate between the home and host country	3.60	3.05	2.04	65	0.045

(Continued)

Issue	US	UK	t-value	d.f.	significance
Taxation treaties signed between the home and host nation	3.79	3.35	1.89	66	0.063
Time horizon of project cash flows	3.32	3.79	-2.02	61	0.048
Costs of insolvency of the project	2.84	2.32	1.85	61	0.069
The usage of other futures to hedge foreign exchange exposure	2.60	1.83	2.23	45.03	0.031
The usage of currency swaps to hedge foreign exchange exposure	3.93	3.44	1.82	65	0.073
The usage of swaps to hedge interest rate exposure	4.32	3.56	2.36	55	0.022
Centralisation of tax planning	4.60	4.29	1.70	68.80	0.094

With regard to the strategies adopted in relation to financing, US companies placed greater importance than UK multinationals upon allowing host countries to monitor the company's operations and politicking with the World Bank. UK companies stressed avoidance of a high political risk country, reflecting a greater risk averse stature as supported in the literature.

~~In relation to the general policies underlying the allocation of currencies~~
within the multinational enterprise, UK multinationals placed greater importance upon allocating assets and liabilities in an overall risk minimising configuration than US multinationals. This result also supports evidence in the literature, that UK multinationals are more risk averse than their US counterpart. In addition, UK multinationals placed greater emphasis than US multinationals upon the matching values of assets and liabilities in each currency supporting an economic "close out" policy, reinforcing a general risk averse profile of UK multinationals (this is a policy which reflects a general equilibrium in financial markets). The results from the discriminant analysis confirmed this, in the order of minimising Wilk's lambda revealed in Table A.1..

US multinationals indicated greater importance of finance from host country governments and cofinancing with the World Bank than UK companies. However, the importance of the World Bank was of low priority for both UK and US multinationals. The discriminating variables between UK and US multinationals were finance from the host country governments, co-financing with the World bank, Table A.2, confirming the outcome from the univariate statistical test.

As to the importance of country specific issues involved in raising finance from overseas countries, US multinationals indicated greater emphasis upon the host country inflation rate and exchange rate than UK companies. This result is consistent with the assertion that UK companies tended to stress greater importance upon allocating assets and liabilities in a portfolio as to minimise risk than US companies, since the exchange rate would be largely irrelevant. This type of configuration of assets and liabilities is termed a zero net exposure. US multinationals stress greater

~~importance than UK multinationals upon taxation treaties signed between~~
the host and the home country. The discriminant analysis confirms this, Table A.3.

With regard to the importance of project specific issues in relation to financing from overseas, US companies placed greater importance than UK multinationals upon the time horizon of project cash flows and the costs of insolvency of the project.

In hedging foreign exchange exposure and interest rate risk, US companies emphasised greater importance of the usage of futures and swaps than UK companies reflecting the greater sophistication of the derivative and swap markets in the US. UK companies tended to allocate assets and liabilities in a portfolio to minimise risk and matching the values of assets and liabilities in each currency therefore naturally hedging rather than using the options, futures and swap products.

With regard to the trend in centralisation of tax planning, UK multinationals tended to be moving towards greater decentralisation. However the difference was fairly tenuous. However, the discriminant analysis, Table A.4 shows that taxation planning is the most discriminating variable between UK and US multinationals followed by the level of centralisation of hedging.

US multinationals tended to assess overseas projects by using a higher risk-adjusted discount rate than UK companies, who tended to use the same discount rate as in the domestic situation. This result supports evidence in the literature, which suggests that US multinationals are more sophisticated than UK companies in their capital budgeting or US multinationals are

subjected to greater risk from ~~overseas diversification~~ than UK multinationals.

4.26 Summary

In relation to the objectives of capital structure decisions, the maximisation of tax shield on debt was not the overriding concern for both UK and US multinationals. However, about one third of multinationals believed that raising finance in countries with high rates of corporation tax, increased the value of the firm (thus reflecting a disequilibrium in financial markets). Generally, however, there was much more support for Miller's general equilibrium theory of tax and capital structure. There was divided support for both UK and US multinationals as to whether an optimum capital structure existed for the parent company. There was less support for an optimum capital structure for the consolidated group than for the parent company. A majority of UK companies operated a currency mix goal. This is linked to the assertion that UK companies tend to place greater importance than US multinationals upon allocating assets and liabilities in a portfolio to minimise risk and matching the values of assets and liabilities (which was a policy predominantly implemented by the supporters of equilibrium). The capital structure decision was found to be extensively centralised in both UK and US multinational enterprises in harmony with the centralisation of equity financing. Debt financing was found to be less centralised than equity financing which supports the importance that both UK and US multinational enterprises place upon local sources of finance. In relation to the centralisation of the hedging functions, interest rate hedging of subsidiaries, translation risk of subsidiaries and economic exposure risk were extensively centralised.

~~There was evidence to suggest that transaction risk of the subsidiaries was less centralised than the other hedging functions.~~

In the management of risk, UK companies stressed greater importance than US companies upon the allocation of assets and liabilities in an overall risk minimising configuration. In addition, UK companies tended to place greater emphasis than US multinationals upon matching the values of assets and liabilities in each respective currency, which supports evidence in the literature that UK multinationals are more risk averse than their US counterparts. Overall, US multinationals believed that allocating assets and liabilities in a portfolio to minimise tax liabilities was of primary concern. This was reinforced by the finding that US companies demonstrated greater support for hedging vehicles like options, futures and swaps to hedge both foreign exchange exposure and interest rate risk, reflecting more developed capital markets in North America than in Britain. Therefore, UK companies view their allocation of currency policies as offsetting to an extent the necessity to hedge, by restricting the level of uncovered foreign exchange and interest rate exposure. Approximately an equal proportion of UK and US multinationals believed that hedging increased value of the multinational enterprise, or the value remained the same. Therefore there was equal support for the disequilibrium and general equilibrium rationale to hedging. However, there tended to be slightly more support for the general equilibrium school of thought than for the disequilibrium school by both UK and US multinational enterprises. The proportions for each academy of reasoning were similar as to whether the multinational finance director believed that by raising debt in countries with high rates of corporation tax increased the value of the multinational or whether the value remained the same.

~~US~~ US companies place greater importance on local sources of finance than UK companies. Supporting this, US companies tended to place greater emphasis upon the host country inflation rate, when raising finance from overseas than UK companies. This is consistent with financing overseas subsidiaries on a localised basis, and perhaps a more sophisticated approach to financing. Also, US companies tended to emphasise the exchange rate between the home and the host country, compared with UK companies. Remembering that UK companies believed that matching was an important policy, then under such a policy, consideration of the exchange rate would be irrelevant. A majority of US companies had operations in high political risk countries whereas as one half of UK companies had operations in high political risk countries. This finding reinforces the discovery that UK companies placed more importance than US multinationals upon avoiding high political risk countries. Companies that operated in high political risk countries tended to raise local finance. The majority UK and US multinationals believed that subsidiaries located in countries with high political risk countries had a higher debt equity ratio than subsidiaries with operations in low risk countries reinforcing the importance of localised financing arrangements.

There were significant differences between US and UK companies in relation to the discount rate used to assess the cash flows of foreign projects. The US tended to use a greater discount rate than the domestic situation. UK companies tended to use the same discount rate, to assess foreign cash flows, as the domestic situation. Discount rates on bonds in the US are traditionally lower than in the UK. The US market is perceived by US multinationals as being less risky than operating overseas. Exclusive adjustments of cash flows to compensate for the riskiness of overseas cash flow was found to be of negligible usage by both UK and US multinational

~~enterprises.~~ In relation to the evaluation techniques used in capital budgeting, there was overwhelming support for the internal rate of return by both UK and US companies. The payback method was widely used by UK companies. The net present value was widely used. There was a lack of support for sophisticated approaches to capital budgeting like the capital asset pricing model, the adjusted present value method and the arbitrage pricing theory. The simple accounting rate of return was not a popular evaluation technique for UK or US multinational enterprises. The majority of UK and US multinationals evaluated overseas projects from the perspective of both the parent and subsidiary. However, about a fifth of UK and US multinational enterprises evaluated foreign cash flow through the lens of the subsidiary only.

The literature on multinational theory has implied that risk reduction can be achieved through international portfolio diversification of operations [Rugman (1979)]. Nevertheless, the fact that, in general, multinational finance managers are using the same or higher discount rates than in the domestic situation supports a shift in paradigm towards internalisation and eclectic theories of the multinational enterprise, where the risk reduction rationale is not emphasised.

Chapter 3 has focussed upon the major theme of this thesis which was whether multinational companies are adopting financial policies which reflect a general equilibrium or disequilibrium in financial markets. Chapter 4 examined the differences between UK and US multinational capital budgeting and financing decisions within this light. This far the investigation has centred around the testing of deductive hypotheses. The purpose of the next two chapters (chapter 5 and chapter 6) is to conduct a factor analysis of the issues involved with multinational capital budgeting

~~and financing decisions, so that inductive hypotheses may be formulated~~ and tested. The reason why an inductive approach is followed is to give further insights into the financial policies adopted by the multinational, particularly within a general equilibrium (disequilibrium) context and to support the deductive hypotheses formulated in chapter 1. In chapter 5, a factor analysis is conducted on the issues relating to multinational capital budgeting and financing decisions. Initial interpretations of the extracted factors are made. The purpose of chapter 6 is to test inductive null hypotheses that there are no significant differences between companies that score high and low on a factor.

A Factor Analysis of the Main Survey

5.1 Introduction

The purpose of this chapter is to conduct a factor analysis on the combined sample of UK and US multinationals in order to discover latent relationships between issues for each group of questions. The factor analysis, utilising principal component extraction and the varimax rotation technique to augment the factor solution, resulted in the creation of new factors which were considered as new variables for subsequent analysis. The varimax rotation is an orthogonal rotational technique which means that the derived factors are uncorrelated with each other. Factor scores were also calculated for use in further analysis, in chapter 6. The aim of this chapter is to present initial interpretations of what the various extracted factors are. The limitations associated with the interpretation of the factors are outlined, which leads to the formulation of a series of inductive hypotheses. These inductive hypotheses are tested in Appendix B.

5.2 Interpretation of the Factors

In order to discover which of the variables are connected by the factor analysis, the reader may refer to the rotated factor matrix. The coefficients in this matrix represent the correlations between the issues and each factor, termed as "factor loadings". From Table II-5.2 it can be seen that factor 1 links maximising the value of the tax shield on debt, achieving the correct target configuration of debt and diversifying the investor base, since all of these variables have factor loadings above 0.5.

~~5.3~~ Issues involved with the capital structure decision

Table II-5.2 reveals the factors extracted from the analysis of the questions relating to the importance of various issues involved with the capital structure decision. The three factors extracted are responsible for 28.5%, 21% and 16.8% of the variation in responses as shown in Table II-5.1 (this is essentially the importance of each of the extracted factor). The communality is the squared multiple correlation co-efficient between an issue and all of the other variables. The communality can be viewed as an indication of the strength of the linear association among the issues. An Eigenvalue is a measure of the explained variance per dimension or factor. Larger Eigenvalues indicate the dimensions that are of more importance in the overall factor solution. This Eigenvalue is linked to the percentage of total variance figure, which represents the percentage of the total variance that can be attributed to each factor.

5.3A Factor 1-Configuration of debt

This factor relates the maximisation of the tax shield on debt to the achievement of the target currency configuration of debt and diversification of the investor base as set out in Table II-5.2. These issues can be grouped under the international configuration of debt. Factor 1 represents the international configuration of debt.

5.3B Factor 2-The minimisation of cost of capital

This factor relates minimising the cost of capital of the parent multinational, minimising the cost of the subsidiaries and minimising the

~~global cost of capital of the multinational group. These are all cost of capital issues.~~

5.3C Factor 3-Level of decentralisation of the capital structure decision

This factor relates minimising the cost of capital of the subsidiaries to conforming to the industry and cultural norms of the host nation. Evidently, factor 3 must represent the centralisation of the capital structure decision.

5.4 Political strategies in relation to financing

Table II-5.4 reveals the factors relating to the importance of political strategies in financing decisions.

5.4A Factor 4-Strategic financial management policies

This factor relates structuring finances in the form of an equity joint venture, to allowing host institutions to monitor the company's operations, insuring the project with a political risk insurer and politicking with the World Bank. These issues are related as they reflect a financial management approach to overcoming political risk. Therefore, factor 4 represents the implementation of financial management policies to diminishing political risk.

5.4B Factor 5-Politicking

This factor relates adapting to the host country government's directives, to politicking with the World Bank and lobbying groups and institutions

which reflects a more active role by the multinational in utilising political remedies to reduce political risk. Therefore, factor 5 represents political remedies to overcome political risk.

5.4C Factor 6-Political risk avoidance

This factor represented only one of the political strategies involved with financing, which was to avoid a high political risk country. Therefore, factor 6 represented political risk avoidance, and therefore would reflect a high degree of risk aversion by multinationals with a high factor score for that factor.

5.5 Risk Management Policies

Tables I-5.5 and I-5.6 reveals the factors relating to the risk management policies of the multinational, and in particular policies associated with the allocation of currencies.

5.5A Factor 7-Risk minimisation

This factor relates allocating assets and liabilities in an overall risk minimising configuration to matching values of assets and liabilities in each currency, allocating debt and equity in a risk minimising configuration. Each of these issues relate to the portfolio effects of economic risk exposure on the strategic hedging of the balance sheet. Therefore, factor 7 represents currency portfolio policies or currency "cocktails".

5.5B Factor 8-Non risk considerations

Factor 8 relates allocating liabilities in proportion to net project cash flows in each currency, allocating assets and liabilities in an overall tax minimising configuration and allocating assets and liabilities in a portfolio to maximise expected currency returns. Each of these issues deal with non-risk considerations in the allocation of currencies within the multinational enterprise. Thus factor 8 refers to non-risk policies.

5.6 Motives for raising finance in countries with high political risk

In Table II-5.8 factors are shown which concentrate upon the motives by a multinational enterprise in raising finance in countries with a high political risk.

5.6A Factor 9-Financial management policies v political risk

Factor 9 relates decreasing the risk that assets may be expropriated, to lessening exchange rate risk by borrowing in a weak currency, matching assets against liabilities for the subsidiary, reducing the incidence of exchange controls and achieving the correct portfolio configuration of debt. All of these issues can be viewed as political risk minimisation tactics. Therefore factor 9 represents political risk minimisation via financial management policies.

5.6B Factor 10-Incentives v political risk

This factor relates obtaining cheap government financing, to taking advantage of generally higher tax shields on debt and to decreasing the risk that assets may be expropriated. These issues can be seen as disequilibria, caused by inducements, by the host government of a high political risk country in order to attract foreign direct investment. Therefore factor 10 is inducements for foreign direct investment in high political risk countries. Note that decreasing the risk that assets may be expropriated is loaded on both of the factors extracted, since it is not only a risk management policy but also a reason why a multinational would raise finance from the government.

5.7 Sources of Finance

Table II-5.10 reveals the factors extracted from the analysis of the questions relating to the sources of finance for the multinational enterprise.

5.7A Factor 11-Local equity and equity joint ventures

This factor relates together finance from local equity markets, other host country financial institutions, host country governments and co-financing with the World Bank. Each of these financing sources are related to localisation of financing and is particularly relevant to equity joint ventures. Therefore factor 11 is local equity and equity joint ventures.

5.7B Factor-12-Local debt

Factor 12 relates finance from the local debt markets of the host country and host country banks. Both of these financing sources are related to a local debt financing of overseas affiliates and subsidiaries. Therefore factor 12 is local debt.

5.7C Factor 13-Internal funds

This factor relates internally generated funds from the parent's reserves, internally generated funds from the subsidiary's reserves and international equity markets. Each of these issues are concerned with financing sources that are not local and therefore factor 13 represents internal funds.

5.7D Factor 14-International funds

This factor relates together international capital markets and international bond markets as sources of finance. Both of these sources require access to international financial markets, therefore factor 14 represents international funds.

Thus it can be demonstrated that the financing sources can be classified under local joint venture, local debt, internal and international.

5.8 Country specific issues in relation to financing

Table II-5.12 reveals the factors extracted from analysis of the questions relating to the importance of country specific dimensions for the multinational enterprise.

5.8A Factor 15-Host country financial environment

This factor relates together the level of money interest rates of the host country, the level of real interest rates of the host country, the host country inflation rate, the exchange rate between the home and host country, the variability of exchange rate between home and host country and variability of host country interest rates. These issues relate to inflation, interest and exchange rates and are broadly classified under the category of financial environmental dimensions of the host country. Hence factor 15 represents host country financial environmental dimensions.

5.8B Factor 16-Transaction costs

This factor relates transaction costs and taxation treaties signed between the host country and the home country. Therefore factor 16 represents the costs of its foreign direct investment in the host country from both a taxation and transaction costs viewpoint.

5.8C Factor 17-Political risk

This factor relates the level of political risk of the host country and exchange controls. Each of these are associated with countries with a high degree of political risk. Therefore factor 17 represents the political dimension of investing in an overseas country.

5.9 Project specific issues in relation to financing

Table II-5.14 reveals the factors extracted from analysis of the questions relating to the importance of project specific dimensions for the multinational enterprise.

5.9A Factor 18-Project risk

This factor relates together the variability of project cash flows denominated in foreign currency, the time horizon of project cash flows, the variability of project cash flows denominated in the home currency and the life of the project. These issues are associated with project risk such as variability of cash flows and time horizon. Therefore factor 18 represents project risk.

5.9B Factor 19-Costs

This factor relates together the costs of monitoring the project, "bail out" options and project exit values and the costs of insolvency of the project. Each of these issues are associated with the potential costs of procurement of the overseas project. Therefore factor 19 represents costs of overseas procurement.

5.10 Instruments to hedge foreign exchange risk

Table II-5.16 reveals the factors extracted from analysis of the questions relating to the importance of various instruments to hedge foreign exchange exposure.

5.10A Factor 20-Short term derivatives

This factor relates the importance of the usage of index options and index futures as well as other futures to hedge foreign exchange exposure. Options and futures are both derivative instruments and therefore factor 20 represents the usage of derivative instruments to hedge foreign exchange rate exposure.

5.10B Factor 21-Long term swaps (exchange exposure)

This factor relates the importance of currency swaps to other swaps used to hedge foreign exchange risks. Therefore factor 21 represents swaps to hedge foreign exchange rate risk.

5.11 Instruments to hedge interest rate risk

Table II-5.18 reveals the factors extracted from analysis of the questions relating to the importance of various instruments to hedge interest rate risk.

5.11A Factor 22-Short term derivatives

Similar separation of the issues into derivative instruments and swaps to hedge interest rate risk were discovered. Factor 22 connected options and futures to hedge interest rate risk.

5.11B Factor 23-Long term swaps (interest rate exposure)

Factor 23 represented the usage of swaps to hedge interest rate risk.

5.12 Centralisation of Hedging Functions

Table II-5.20 reveals the factors extracted from analysis of the questions relating to the degree of centralisation of interest rate risk of subsidiaries, transaction risk of subsidiaries, translation risk of subsidiaries and economic exposure risk.

5.12A Factor 24-Centralisation of foreign exchange hedging

This factor relates the degree of centralisation transaction risk of subsidiaries, to translation risk of subsidiaries and economic exposure risk. These issues are associated with the hedging of foreign exchange rate risk. Therefore, factor 24 represents the degree of centralisation of foreign exchange risk management.

5.12B Factor 25-Centralisation of interest rate risk

This factor relates the degree of centralisation of interest rate risk hedging of the subsidiaries. Hence, factor 25 represents centralisation of interest rate risk.

5.13 Centralisation of Finance Functions

Table II-5.22 reveals the factors extracted from analysis of the questions relating to the degree of centralisation of financing, hedging, capital budgeting, cash management and tax planning.

5.13A Factor 26-Centralised treasury

This factor relates the degree of centralisation of financing, to hedging and tax planning. Therefore factor 26 is associated with the traditionally centralised treasury functions.

5.13B Factor 27-Centralisation of investment and working capital decisions

This factor relates the degree of centralisation of capital budgeting to cash management. These functions are primarily concerned with project management and procurement.

5.14 Tests for the Validity and Robustness of the Factor Solution

Table 5.1
Robustness and Validity of the Factor Analysis

Question	Bartletts	Signifi- cance	KMO	Factors
Q9	58.24726	0.00002	0.59276	3
Q10	77.94988	0.00000	0.61198	3
Q11	113.45503	0.00000	0.70562	2
Q12	86.53354	0.00000	0.70961	3
Q13	160.09737	0.00000	0.59293	4
Q14	259.91137	0.00000	0.63151	3
Q15	145.79371	0.00000	0.69548	2
Q16	139.80024	0.00000	0.50905	2
Q17	146.47939	0.00000	0.64654	2
Q18	34.46908	0.00001	0.57682	2
Q20	125.45377	0.00000	0.72990	2

For all the factor solution models that were generated, the Bartlett's test of sphericity revealed that all the individual correlation matrices were not configured as identity matrices. Therefore the usage of factor analysis was valid. All of the models gave KMOs of above 0.5 which reinforced the robustness of the factor model.

5.15 Summary

In this chapter, the data gathered from the main survey was subjected to a factor analysis which utilised principal component extraction methods and varimax rotation, in order to augment the factor solution. A total of twenty seven factors were extracted and initial interpretation as to the identity of the factors was attempted. Further, each respondent was assigned a factor score for each factor, which was useful in subsequent analysis in chapter 6, in order to investigate further the financial policies which reflect either a general equilibrium or disequilibrium in financial markets, to support the deductive hypotheses formulated in chapter 1 (and analysis of them in chapters 3 and 4).

Chapter 6

Tests on the Factor Groupings

6.1 Formulation of Inductive Hypotheses Derived From the Factor Analysis

The objective of this chapter is to undertake a rigorous examination as to the identity of the factors derived from the principal component analysis and varimax rotation, completed in chapter 5. The interpretation of any factor solution is subjective since it is the author's sole interpretation. Therefore, in order to acquire a greater insight into the interpretation, the author created two groups of respondents for each of the factors extracted. One group represented respondents who scored high on a factor and the other represented respondents who scored low on a factor. Since factor scores are standardised and therefore they have a mean of zero and a standard deviation of one, every member of the non-dominant factor group scored below zero and for the dominant factor group, every member scored above zero. In essence, this process converted the data from parametric to non-parametric data. The next stage was to formulate inductive hypotheses. Thus, this chapter of the research thesis concentrates upon inductive, rather than deductive hypotheses which were also the primary hypotheses given in chapter 1.

The purpose of formulating these new inductive hypotheses is to enrich the interpretation of the factors extracted from the principal component analysis and relate the outcome to a general equilibrium or disequilibrium in financial markets.

A series of t-tests were conducted for the newly created groups for each of the survey items. Although the t-test is essentially a univariate technique, and therefore considers each of the survey items in isolation, it does give an insight into where any differences lie [Refer to Appendix B].

6.2 Interpretation of the Analysis

The significant differences appear to point towards risk reduction in relation to the interpretation of the factor 1. These findings support the initial interpretation of factor 1, which was the configuration of debt in relation to the objectives of capital structure.

The factor that was interpreted as the minimisation of the cost of capital was associated with companies that placed less emphasis upon conforming to the directives of the host country, in relation to the policies associated with financing. This factor was linked to the allocation of currencies in an overall tax minimising configuration, and was associated with a high degree of centralisation of capital budgeting, debt financing of overseas subsidiaries and the capital structure decision. Therefore, this factor is associated with a disequilibrium situation in financial markets.

The impression that the interpretation of factor 3 gave was that in order to minimise the cost of capital of the subsidiary, interest rate risk of the subsidiaries, financing, hedging, capital budgeting, cash management and debt finance were less centralised than for those companies that scored low on factor 3. In addition, emphasis was placed upon conforming to the host country and maximising the tax shield on debt plus using other local sources of finance. It can be asserted that this group is driven by financial disequilibrium. In order for the subsidiary company to take advantage of

disequilibrium, in general, the finance function should be run on a decentralised basis (therefore supporting the rejection of hypothesis H16).

To adopt financial management strategies to mitigate risk was the interpretation of factor 4. This factor was associated with greater centralisation of translation risk of the subsidiaries and economic exposure risk. The companies that scored high on factor 4 believed that hedging increased the value of the firm to a greater extent than those companies that scored low on the factor. This factor was associated with the usage of local financing sources. This factor therefore reflects a disequilibrium in financial markets.

Factor 5 was interpreted as pursuing a political strategy, in relation to financing, by engaging in lobbying, politicking as well as adapting and conforming to the directives of the host country. Less emphasis was placed upon matching the values of assets and liabilities in each currency. Again, this factor was associated with a disequilibrium in financial markets.

The interpretation of factor 6 was political risk avoidance. This factor revealed some interesting differences between companies that were political risk averse and those that were not. Companies that are not political risk averse were found to place greater emphasis upon allocating liabilities in proportion to net project cash flows in each currency. Companies that were political risk averse used approximately the same discount rate as in the domestic situation, whereas companies that were not political risk averse used a higher discount rate to evaluate a project's overseas cash flow. In relation to project specific issues associated with financing, companies that placed emphasis upon avoiding a high political risk country expressed greater importance upon project exit values. It was

also deduced that companies that did not place emphasis upon avoiding a high political risk country tended to have the same debt equity ratio as they would have if they operated solely within a domestic situation. By contrast, those companies that avoided high political risk countries believed that they had a higher debt equity ratio than if they operated purely within the domestic economy. The evidence suggests that although multinational enterprises tend to raise more debt locally in high political risk countries, the risk profile does not change in reality compared with those companies that avoid high political risk countries, because the debt equity ratio of the consolidated multinational group is altered to reflect the increased risk.

Factor 7 was associated with the allocation of currency policies which resulted in risk minimisation. The companies that scored high on this factor emphasised the avoidance of a high political risk country, indicating a degree of risk aversion. Debt financing policies in countries with high political risk countries were motivated by tax and the need to mitigate the impact of exchange controls. The importance placed upon local sources of finance reinforced the matching component of this factor. This factor was associated with lesser decentralisation of the interest rate hedging of overseas subsidiaries, since, if exposure was minimised, the subsidiaries would not need to hedge interest rate risk extensively. However, capital structure decisions remained centralised. The assertion about the debt equity ratio of the multinational in relation to if the company operated purely within the domestic economy was that it was higher. There does appear to be a trade-off between risk management policies and the magnitude of the debt-equity ratio of the consolidated multinational group as discovered by the findings of factor 4. Companies that scored high on this factor believed that when the parent company raised debt finance, this had a greater impact upon lowering the weighted average cost of capital of

the parent to a greater extent than companies that scored low on the factor. There is also evidence to suggest that companies, that placed importance upon allocating currencies within the multinational in a risk minimising configuration, believed that engaging in hedging increased the value of the multinational enterprise to a greater extent. This factor reflects a disequilibrium in financial markets.

Factor 8 was associated with non-risk issues in relation to the allocation of currencies within the multinational enterprise. Lesser emphasis was placed, by companies that scored high upon this factor, upon political risk avoidance. These companies emphasised more strongly the importance of equity joint ventures. Greater attention was made towards taxation issues in relation to country-specific issues, such as the importance placed upon taxation treaties.

Factor 9 was interpreted as reducing risk in high political risk countries by adjusting its financial management policies. The companies that scored high on factor 9 placed emphasis upon conforming to the host country and matching the values of assets and liabilities in each currency. Local sources of finance were also stressed. There was evidence to suggest that there was less centralisation of the interest rate risk hedging of overseas subsidiaries.

The companies that scored high on factor 10 were associated with there being a tax advantage to debt. Political risk was more important for companies that scored high on factor 10. However, there was evidence to suggest that this factor was associated with the disequilibrium rationale to financing decisions of the multinational enterprise. This is clear evidence to support the disequilibrium approach to the financing of subsidiaries in high political risk countries.

Factor 11 was associated with local equity and sources of finance from financial institutions for sources of finance. The companies that scored high on this factor indicated greater importance upon structuring finances in the form of an equity joint venture. Equity financing was also found to be less centralised for the companies that scored high on this factor. In addition, there was generally an emphasis placed upon hedging both foreign exchange rate and interest rate risk. The companies that scored high on this factor believed that, when the subsidiary raised debt finance, this had a greater impact upon the weighted average cost of capital than companies that scored low on the factor. This factor is associated with disequilibrium.

The usage of local debt as a financing source was the interpretation of factor 12. Companies that scored high on this factor emphasised more strongly, than the companies that scored low on this factor, the need to avoid political risk. Therefore, raising debt locally is seen as a strategy to mitigate exchange controls and expropriation of assets. This factor was associated with allocating assets and liabilities in an overall risk minimising configuration, matching the values of assets and liabilities in each currency and allocating debt and equity in a risk minimising configuration. All of these currency policy allocations are consistent with raising debt finance in local currency. This factor was also associated with a lesser degree of centralisation of debt financing and transaction risk hedging. A primary motivation behind raising debt locally was found to be the ability of the subsidiary to lower its weighted average cost of capital, thus supporting a tax advantage to debt and hence a disequilibrium rationale to the financing of the multinational.

The interpretation of factor 13 was found to be consistent with internally generated funds, and of factor 14 was found to be consistent with international sources of finance.

Factor 15 was interpreted as being the host country financial climate. This factor was associated with the policy of matching the values of assets and liabilities in each currency. This factor was also associated with project specific issues, with regard to financing from overseas, and was linked to the exchange rate. The centralisation of translation was found to be less for companies that scored high on this factor.

The interpretation of factor 16 was the costs of financing overseas subsidiaries. This factor was linked to the minimisation of the global cost of capital of the multinational group. Importance was placed upon the monitoring and insolvency costs of the overseas projects. Companies that scored high on this factor tended to be more centralised in relation to capital budgeting and cash management.

Factor 17 was consistent with the political risk component of raising debt finance in countries from abroad. Emphasis was placed upon the process of politicking with the World Bank and engaging in equity joint ventures.

Factor 18 was interpreted as being project risk considerations which was linked to a local financing strategy.

Factor 19 was tenuously interpreted as project monitoring. Other factors were interpreted as:

the usage of derivatives to hedge foreign exchange exposure (factor 20), swaps used to hedge foreign exchange exposure (factor 21), the derivative instruments to hedge interest rate risk exposure (factor 22), the usage of swaps to hedge long-term interest rate exposure (factor 23), the centralisation of foreign exchange exposure (factor 24), and the centralisation of interest rate hedging of the overseas subsidiaries, (factor 25).

The interpretation of factor 26 was the centralisation of the core treasury functions. There is evidence to suggest a link between the centralisation of the finance function and whether the multinational is seeking to maximise the tax shield on debt, i.e. to take advantage of disequilibrium.

Factor 27 was interpreted as the level of centralisation of the project management functions, such as cash management and capital budgeting. There is evidence to suggest a link between decentralised project management and the ability of the multinational to increase the value of the firm when it raises debt finance from countries with high rates of corporation tax.

6.3 Summary

The purpose of this chapter was to undertake a rigorous investigation into the identity of the factors extracted in chapter 5. This exercise led to a fuller understanding of the meaning of the factors. In addition, further "latent" relationships between the factors and the survey items were uncovered which in some cases highlighted the financial policies which reflected a general equilibrium or disequilibrium in financial markets. A third aim of this research has been to investigate the relative importance of

major distortions to the financial policy of the multinational enterprise. The other main aim has been to discover whether there are significant differences between UK and US multinationals, in relation to their capital budgeting and financing decisions.

In chapter 7, a conjoint methodology is conducted in order to determine the strength of the core financial and political environmental factors that have an impact upon the investment and financing decisions of the multinational. This is considered in the light of financial policies that are adopted which reflect a general equilibrium situation in financial markets. The sample data is derived from a scenario exercise undertaken by UK and US multinational finance directors. The investigation revealed that there were few significant differences between UK and US multinationals in relation to the importance that they place upon various environmental variables that affect the foreign direct investment decision.

Chapter 7

The Relative Importance of the Distortions to the Financial Policy of the Multinational Enterprise

7.1 Introduction

The main theme of the chapters 3, 4, 5, 6 has been investigating whether multinational companies are adopting financial policies which reflect a general equilibrium in markets or not. It is distortions like exchange rates, differences in inflation rates, interest rates and tax systems, political risks, financing arrangements and degree of centralisation of decision-making which cause a multinational to adopt financial policies which either reflect a general equilibrium or disequilibrium in financial markets. The purpose of this chapter 7 is to assess the relative importance of each distortion to multinational capital budgeting and financing decisions, through the usage of conjoint analysis, by presenting the finance director with decision-making scenarios. The key issues that emerged from the survey were used as attributes in the conjoint analysis, so that their relative importance could be assessed. The great advantage of conjoint analysis is that it considers the distortions to the financing and investment decisions of the multinational, jointly, rather than separately.

7.2 Method for the Conjoint Analysis

Conjoint analysis requires the researcher to present to the respondents stimuli or scenarios that reflect predetermined attribute combinations and to ask them to make preference evaluations. An attribute is a component of a decision "package". The objective of conjoint analysis is to estimate the utility scores for each attribute level, termed part-worths considered

jointly rather than individually. Conjoint analysis achieves this by utilising the full concept or full profile method.

The key issues that emerged from the survey were-:

1. Political Risk
2. Taxation Issues
3. Exchange rate behaviour
4. Financing Source
5. Inflation rate
6. Level of interest rates in host country
7. Level of centralisation

These distortions were also addressed in the literature review (chapter 1).

These attributes were delineated into different attribute levels. For example, for the political risk attribute, the attribute levels are highly stable, somewhat stable and unstable. Once the attributes and attribute levels had been determined, a series of scenarios was generated using the SPSS PLANCARDS procedure using a random orthogonal array. The orthogonal array ensures that a representative sample of all possible scenarios is drawn upon. Eighteen scenarios were produced plus four holdout cards making twenty two scenarios out of a potential 972. The rationale underlying the production of holdout cards was to test the validity of the conjoint model at a later stage. The attribute levels can be either discrete or linear. Discrete attribute levels imply that there is no relationship between any of the levels. Linear attribute levels imply that there is a relationship between the levels. The discrete attribute levels chosen were-:

1. Political Risk

Highly stable, somewhat stable and unstable

2. Taxation System

Aggressive, neutral and favourable

3. Exchange Rate

Fairly stable, subject to fluctuations and extremely volatile

4. Financing Method

Local sources, international sources and internal sources

5. Inflation

10% or lower, between 10% and 20% and hyper inflation

6. Interest Rates of Host Country

Significantly lower than the home country or significantly higher than the home country

7. Level of centralisation of capital budgeting

Centralised or Decentralised

There are $3 \times 3 \times 3 \times 3 \times 3 \times 2 \times 2 = 972$ possible scenarios which would be virtually impossible for the finance director to evaluate due to time constraints. Therefore conjoint analysis derives a smaller subset of scenarios, termed cards that give a representative sample of the entire population of possibilities: This resulted in eighteen cards and four simulation cards being generated.

7.3 Scenario evaluation exercise

The next stage of this conjoint design methodology was to send the scenarios produced by SPSS PLANCARDS module to multinational finance directors. The scenario evaluation exercise is shown in Appendix D. The sampling framework was the same as the main survey except at a different point in time. The multinational managers were invited to indicate their preference to undertaking a project for each of the country scenarios. This preference was measured on a Likert-type scale of one to nine. A response of one indicated that the finance director was not interested in undertaking a project in the hypothetical country scenario, five indicated indifference and nine represented that the respondent was extremely interested in undertaking a project in the given country scenario.

The conjoint analysis resulted in responses from 27 US and 30 UK companies. Small sample sizes associated with conjoint analysis include Priem (1992), where the sample size was only 33. However for consumer research projects where preferences are often segmented, much larger samples are required perhaps in the region of around 1000 respondents.

7.4 Analysis

The next stage was to calculate what is termed part-worth utility scores for each of the attribute levels per respondent. This was then calculated for the entire sample as a whole, as if all the respondents were considered as just one respondent, separately for UK and US multinationals. The robustness of the conjoint model was tested using the Kendall Tau statistic and the Pearson R statistic. The robustness of the conjoint model was also tested using the holdout cards. Kendall's Tau is a non-parametric statistical test which takes tied values into account. It produces the same outcome as its counterpart parametric technique. The utility scores were converted to importance ranks through a simple transformation in order to highlight the importance of the various attributes and hence the determinants of foreign direct investment.

7.5 The differences between UK and US multinational enterprises

Although the UK and US companies were analysed separately, it is not an essential condition, since joint analysis resulted in equivalent part worth utilities. A series of t-tests were conducted on the data in order to test the null hypothesis that there was no significant difference between UK and US multinationals in relation to each of the attribute level part worth utilities.

H₂

There are no significant differences between UK and US multinationals in relation to the relative importance of the distortions in financial policy.

The hypotheses H₂₂ was not rejected because the differences between UK and US multinationals were not significant at the 10% level or less. The results are set out in Table 7.1. This univariate technique considers each of the attribute levels in isolation, therefore, in order to give greater resolution to the differences a step-wise discriminant analysis was conducted in which Wilk's lambda was minimised. Table 7.2 reveals the discriminating attribute levels between UK and US multinational enterprises

Table 7.1

Differences between UK and US multinationals

ATTRIBUTE	UK	US	t- value	D.F.	Two tailed prob..
Highly stable political environment	1.10	1.35	-1.36	55	0.179
Somewhat stable political environment	0.32	0.29	0.26	55	0.795
Unstable political environment	-1.42	-1.63	1.10	55	0.278
Aggressive taxation system	-0.74	-0.58	0.97	55	0.339
Neutral taxation system	0.20	0.01	1.62	55	0.111
Favourable taxation system	0.54	0.57	-0.22	55	0.828
Fairly stable exchange rate	0.52	0.42	0.88	55	0.385
Exchange rate fluctuates occasionally	0.33	0.50	-1.53	55	0.132
Exchange rate is extremely volatile	-0.85	-0.91	0.41	55	0.681
Local sources of finance	0.15	0.12	0.32	55	0.753
International sources of finance	-0.04	-0.12	0.99	55	0.326
Internal sources of finance	-0.11	0.002	-1.33	55	0.190
Inflation less than 10%	0.72	0.65	0.54	55	0.594
Inflation between 10% and 20%	-0.13	-0.09	-0.40	55	0.693
Hyper inflation	-0.60	-0.55	-0.31	55	0.755

Continued

ATTRIBUTE	UK	US	t-value	D.F.	Two tailed prob..
Interest rates of host country significantly less than the home country	0.23	0.13	1.07	55	0.290
Interest rates of host country significantly higher than the home country	-0.23	-0.13	-1.07	55	0.290
Centralised project management	0.0007	0.02	-0.33	55	0.742
Decentralised project management	-0.0007	-0.02	0.33	55	0.742

7.6 Relationship between attribute levels for UK and US multinational enterprises

Political Risk

Stable political environments were preferred to somewhat stable political environments which in turn were more preferable to unstable political environments. Unstable political environments resulted in negative part-worth utility scores for both UK and US multinational enterprises. Both sets of multinationals had similar utility curves for this attribute reflecting a degree of commonality between each of the attribute levels.

Taxation Systems

Aggressive taxation systems result in negative utilities for both UK and US companies.

Exchange Rate behaviour

However, for US companies there is evidence to suggest that there is a greater preference for an exchange rate, which is subject to occasional fluctuations rather than a stable one. This may reflect the assertion that US companies are less risk averse than UK companies, in relation to hedging the exchange rate, and are more willing to take positions in currencies that will result in a potential profit situation.

Financing

US and UK companies did not prefer international sources of finance, since this resulted in negative utilities. This result was stronger for US companies, although the difference was fairly tenuous. The use of internal sources of finance resulted in negative utilities. This result was greater for UK companies than US companies.

Inflation

Inflation below 10% is the most preferred situation. Slightly negative utilities are derived for inflation rates between 10% and 20% indicating that it is not of major concern. However, a hyper inflationary environment results in larger negative utilities.

Interest Rates of Host Country

Low interest rates are preferable to high rates which reinforces the importance that multinationals tend to place upon local sources of finances such as local debt.

Centralisation

There is a preference by both UK and US multinationals for projects to be run on a centralised basis. However, decentralised projects only resulted in slightly negative utilities.

7.7 Significant differences between UK and US multinationals

None of the differences was significant at the 10% level or lower. This suggests that the differences between UK and US multinationals in relation to their individual part worth utilities is of limited magnitude. However, some of the differences are significant at the 10% to 20% level. However, the nearest possible differences were identified as follows. Therefore, the hypotheses H₂ was not rejected.

US companies preferred more stable political environments than UK companies which is reinforced by the fact that they were more risk averse to unstable political environments. UK companies expressed greater utility for a neutral taxation system than US companies. US companies demonstrated greater utility for an exchange rate which was subject to occasional fluctuations than UK companies. US companies were more risk averse than their UK counterparts in relation to the exchange rate volatility attribute, however this was not significant. This can be

reconciled with the finding from chapter 4 in which a survey discovered that UK companies placed lesser importance upon the exchange rate than US companies. UK companies tended to adopt an "economic close out policy", in relation to their allocation of currencies by allocating assets and liabilities in a risk minimising portfolio and matching the value of assets and liabilities in each currency. In relation to financing choices, US companies demonstrated greater preference for the internal use of funds than UK companies. These utilities were negative, implying this was not a very favourable financing strategy. UK companies showed greater utility for the usage of local debt than US companies, although this result was not significant. However, the usage of local debt was of overriding concern for both UK and US multinationals in relation to the other financing choices. In relation to the level of interest rates in the host country compared to the home country, UK companies had higher utilities than US companies had for rates which were significantly lower than in the home country.

7.8 Discriminant Analysis

The discriminating variables in terms of their power of minimising Wilk's lambda between UK and US multinationals are a neutral taxation system, internal financing, local financing and a stable political environment. The inclusion of these variables in the discriminant model results in a classification rate of 71% (Table 7.2) with a chi-square statistic significance level of 0.1167. The discriminant analysis reinforced the results from the univariate t-tests with the exception that none of the exchange rate variables were included in the model. However, the discriminant model was based upon four variables which were decomposed

from a potential twenty variables. A neutral taxation system was the most powerful discriminant variable.

Table 7.2
Results from the Stepwise Discriminant Analysis

Summary Table

Variable	*Wilk's	
	Lambda	Significance
1 Neutral tax system	.95443	.1109
2 Internal finance	.90975	.0778
3 Local finance	.89171	.1054
4 Stable political climate	.86982	.1167

*Wilk's lambda was used as a basis for entering the discriminating variables because it considers both the extent of intra-group cohesiveness and inter-group differences, Klecka (1980). Wilk's lambda is a multivariate test of significance with a range of zero to one. A large value of the statistic indicates that the means of two variables being analysed are not significantly different whereas small values reflect significant differences between the means. Wilk's lambda is sometimes known as the U statistic.

Classification Results -

<u>Actual Group</u>	Number of Cases	<u>Predicted Group Membership</u>	
		Cluster 1	Cluster 2
Cluster 1	30	24	6
Cluster 2	27	10	17

Percent of "grouped" cases correctly classified: 71.93%

7.9 Relative Importance

The part-worth attribute scores were converted to an importance scale, since they are expressed on a common scale, i.e. a Likert-type scale of one to nine. The importance of the various attributes is revealed in Table 7.3. The relative importance is calculated by taking the utility range for a particular attribute and dividing it by the sum of the utility ranges.

Table 7.3

	US	UK
Political risks	41	35
Exchange rate	19	19
Inflation	17	18
Taxation system	16	18
Interest rate	4	6
Finance	3	3
Centralisation	1	1
	100%	100%

It can be seen from Table 7.3 that US and UK multinational enterprises follow an identical pattern for relative importance of attributes. Political risk is of primary importance for UK and US multinationals, more strongly in the US case than the UK case. This confirms previous studies that have supported political risk as a strong determinant of foreign direct investment by multinational enterprises. The exchange rate behaviour and the price level were approximately equally as important for UK multinationals and US multinationals. The interest rate was slightly more important for UK multinationals than it was for US companies. Financing sources were of low importance for both UK and US multinationals. Centralisation was of negligible importance for UK and US multinationals and the financing source was of low priority.

7.10 Segmented Conjoint Analysis using the SPSS Quick Cluster

In addition to the usage of the t-test and the reinforcement of discriminant analysis to investigate the differences between the attribute levels for UK and US multinationals, the part worth utility scores were subjected to the SPSS cluster procedure. The aim of this exercise was to discover whether there were any stratifications in the data, therefore in effect investigating whether homogeneous preferences existed across all respondents in relation to the scenario evaluation. There can often be substantial inter-respondent variation in the stimulus evaluations in many conjoint analyses since they are performed at the individual respondent level. This can be explained by heterogeneous multinational behaviour. It is a wrong assertion to assume that preferences for each scenario are homogeneous. Conjoint analysis assumes that the preference model is similar for all

respondents. The finance directors can be segmented on the basis of their individual part worth utility scores or attribute importance scores.

The cluster analysis resulted in the formation of three clusters. The first cluster contained 27, the second 26 and the third consisted of 4 companies. In order to simplify the analysis, it was realistic to focus upon cluster 1 and cluster 2. The analysis attempted to identify what each of the clusters represented. Initially a cross-tabulation was undertaken in order to determine whether there was a relationship between cluster group and nationality. This was tested using a chi-square to test for independence of variables. The null hypothesis was that cluster membership was independent of nationality. The chi-square statistic did not reject this hypothesis. Therefore companies were not clustered on the basis of nationality. If they had been clustered on the grounds of nationality, then the univariate t-tests given in Table 7.1 would have yielded greater significance levels for more of the attribute levels. In order to investigate the cluster identity, a series of t-tests were performed on the first two clusters in order to test the null hypothesis that there is no significant difference between the cluster membership and the part worth utilities for each of the attribute levels. The results of the t-tests are set out in Table 7.4.

Table 7.4
Significant differences between cluster 1 and cluster 2

ATTRIBUTE	cluster 1	cluster 2	t- value	D.F.	Two tailed prob.
Highly stable political environment	1.72	0.76	7.23	51	0.000
Somewhat stable political environment	0.36	0.24	1.20	51	0.235
Unstable political environment	-2.08	-1.00	-7.19	51	0.000
Aggressive taxation system	-0.73	-0.63	-0.57	51	0.570
Neutral taxation system	0.20	0.00	1.62	51	0.112
Favourable taxation system	0.54	0.63	-0.77	51	0.443
Fairly stable exchange rate	0.31	0.67	-3.33	51	0.002
Exchange rate fluctuates occasionally	0.33	0.49	-1.46	51	0.151
Exchange rate is extremely volatile	-0.63	-1.17	3.78	51	0.000
Local sources of finance	0.001	0.33	-3.05	51	0.004
International sources of finance	-.0021	-0.17	2.00	51	0.051
Internal sources of finance	0.001	-0.16	1.88	51	0.066
Inflation is 10% or lower	0.65	0.92	-2.24	51	0.030
Inflation is between 10% and 20%	-0.06	-0.20	1.41	51	0.166
Hyper inflation	-0.59	-0.72	1.08	51	0.283

Continued

ATTRIBUTE	cluster 1	cluster 2	t- value	D.F.	Two tailed prob.
Interest rates are significantly less than home country	0.12	0.29	-1.84	51	0.071
Interest rates are significantly higher than home country	-0.12	-0.29	1.84	51	0.071
Project is run on a centralised basis	0.022	-0.005	0.40	51	0.690
Project is run on a decentralised basis	-0.022	0.005	-0.40	51	0.690

7.11 The significant differences between cluster 1 and cluster 2

Political Risks

In relation to political risks. Cluster 2 indicated a lower utility than cluster 1 for a stable and somewhat stable political environment. This was reinforced by cluster 2 indicating a higher utility than group 1 for a unstable political environment. It can thus be inferred that cluster 1 is more risk averse than cluster 2 in relation to political risk.

Taxation System

In relation to tax, cluster 1 provided some evidence to suggest that the favourability of the tax system was of greater significance than for cluster

2. Therefore, in relation to taxation, cluster 2 is less sensitive to the taxation system than cluster 1.

Exchange Rate Behaviour

In relation to the exchange rate, cluster 2 expressed greater preference than cluster 1 upon a stable exchange rate and an exchange rate which was subject to occasional fluctuations. Cluster 2 was more risk averse to extremely volatile exchange rates. It can be inferred that cluster 2 is more risk averse than cluster 1 in relation to the exchange rate.

Financing

Cluster 2 indicated greater utility than cluster 1 in relation to local financing sources. Cluster 2 indicated lower utility for international and internal sources of finance than cluster 1.

Inflation Rate

Cluster 2 expressed greater preference than cluster 1 in relation to inflation rates below 10%. Cluster 2 expressed lesser utility than cluster 1 for inflation rates in the region 10% to 20% and even less utility for hyper inflationary environments.

Interest Rates of Host Country

Cluster 2 expressed greater utility than cluster 1 for interest rates in the host country that were significantly below the rates in the home country.

Cluster 2 expressed lower utility than cluster 1 for interest rates in the host country that were significantly lower than the rates in the home country.

Centralisation

Although not significant, cluster 2 expressed lesser utility than cluster 1 upon centralised capital budgeting. Cluster 2 expressed demonstrated greater utility for decentralised capital budgeting than cluster 1.

7.12 Relative Importance

The part worth attribute scores were converted to an importance scale using the same method used for Table 7.3. The importance of the various attributes is revealed in Table 7.5.

Table 7.5

	Cluster1	Cluster2
	%	%
Political risks	44	30
Taxation system	18	15
Inflation	16	19
Exchange rate	15	23
Interest rate	4	5
Finance	2	5
Centralisation	0.29	1.64

Cluster 1 expressed more importance than cluster 2 upon the political risk and taxation systems attributes, reinforcing the political risk averse nature of cluster 1. Political risk remained the most important factor for foreign

direct investment. However, cluster 2 found the inflation rate, the exchange rate, host country interest rates, financing and level of centralisation of capital budgeting to be more important than for cluster 1.

7.13 Robustness of the conjoint model

The robustness of the conjoint model was tested using the Pearson R coefficient and Kendall's Tau. The results are set out in Table 7.6. The holdout cards were rated by the multinational finance directors but they were not used in the conjoint model to calculate the part-worth utility scores. Instead, SPSS calculates the correlations between the observed and predicted part-worth utility scores in order to verify the validity of the conjoint model. It can be seen that all of the models are robust since they result in high coefficients, significant at least at the 3% level. This reinforces the analysis of this relatively small sample size, since the model has been demonstrated to be robust.

Table 7.6

Eighteen Cards

Model	Pearson R	Signific.	Kendall	Significance
US	0.995	0.0000	0.994	0.0000
UK	0.994	0.0000	0.986	0.0069
CLUST1	0.995	0.0000	0.928	0.0000
CLUST2	0.995	0.0000	0.941	0.0000

5

Four Holdout Cards

Model	Pearson R	Signific.	Kendall	Significance
US	0.997	0.0016	1.000	0.0208
UK	0.986	0.0069	1.000	0.0208
CLUST1	0.995	0.0023	0.997	0.0208
CLUST2	0.983	0.0014	1.000	0.0208

7.14 Non-response Bias of the Conjoint and Survey

This research thesis has investigated the capital budgeting and financing decisions of UK and US multinational enterprises by utilising a survey design methodology and a scenario evaluation exercise. In addition to some of the disadvantages of using questionnaires to gather data, this research project has the limitation of testing hypotheses and analysing data that is contained in a small sample. The researcher often has to use small samples which are often beyond their control. The generation of small samples is based upon the assertion that finance directors are inundated with requests for information from stock brokers, banks, trade agencies and governments in the form of surveys, in addition from a sizeable population of undergraduates and doctoral research students from the universities. Secondly, senior executives are extremely busy that they do not have the time capacity to respond to surveys. Inevitably company policy dictates that in order to be fair to everyone, they will refuse to complete questionnaires.

There is a possibility that respondents views may be different from non-respondents. In order to investigate this phenomena, researchers using

survey design can explore the potential differences by undertaking a non-response bias exercise. Otherwise, one can assume:-

a) the respondents and non-respondents are equivalent.

b) late respondents are equivalent to non-responders.

c) respondents are representative of the population.

Wallace and Mellor (1988).

7.15 Limitations of survey based non-response bias investigations

It must be stressed that in many surveys, response bias is investigated by the preparation of a non-response bias questionnaire which inquires into why non-respondents did not respond. This was not attempted in this project thesis because this methodology has its weaknesses in the sense that there is non-response bias in non-response bias surveys, which can become too iterative. Also, it is expensive to send out non-response surveys. Therefore it was decided to allocate potential non-response bias expenditure on conducting indepth interviews to validate and enrich the research findings from the first questionnaire survey and the scenario evaluation exercise.

7.16 Method of testing for non-response

In this research project non-response bias is investigated by comparing the sample respondents with a similar sized mutually exclusive, random

sample generated from the population, in relation to their financial characteristics. The reason why a random sample of companies was compared was because a t-test can not be conducted on data with excessively unequal group numbers. The financial characteristics selected were turnover, fixed assets employed and market value.

First, the non-response bias exercise was performed for UK and US multinationals for both the main survey and the conjoint scenario evaluation. Finally, a t-test was performed on the sample of UK and US respondent companies in relation to their financial characteristics for both the main survey and the scenario evaluation in order to ascertain whether there were any significant differences between UK and US multinationals' financial profile.

7.17 Hypotheses-Non response bias

Two main hypotheses were formulated in relation to the response bias exercise. First, UK and US multinationals responding to each of the surveys were not significantly different from the population of multinational enterprises in relation to their financial characteristics. Second, there are no significant differences between the sample of UK and US multinationals responding to each of the surveys, in relation to their financial characteristics. *Note* that US data were converted to units expressed in pounds at the ruling exchange rate. Whilst, the researcher recognises the limitations and biases involved with this conversion, it does allow insights into the differences between UK and US responding multinationals to be given. It does not however change the results from comparing responding US firms with non-respondents since the effect of the exchange rate adjustment cancels out.

7.18 Results of the non-response investigation

Appendix C shows the results from the non-response bias exercise.

Main survey-UK

The respondent sample of UK companies had greater market value, turnover and overseas tax liabilities than non-responding companies. These were significantly different at the 10% level. However, based on total assets employed there was no significant difference between the responding and non-responding multinational companies.

Main survey-US

The market value of responding companies was significantly greater than for non-responding companies. Although, turnover, total assets employed and overseas tax were also greater for responding companies, these differences were not significant.

Conjoint Analysis-UK

The market value and turnover were greater for respondent companies than for non-respondent firms. Overseas tax liabilities were significantly higher for responding firms than they were for the non-respondents. However, total assets employed were higher for the non-respondent firms than they were for the responding firms, although this result was not significant.

Conjoint Analysis-US

In relation to the four measures market value, turnover, total assets employed and overseas tax liability, the responding multinational enterprises had greater values than non-responding firms. All of the differences between these characteristics were significant at the 25% level and lower.

Sample of UK v Sample of US companies for the main survey

The sample of US multinationals tended to have greater market value, turnover, total assets employed and overseas tax liabilities than the sample of UK companies. However, none of these differences were significant below 25%, indicating that based upon the selected financial characteristics the sample of UK and US companies were fairly similar.

Sample of UK v Sample of US companies for the scenario analysis

The findings for US and UK companies in relation to the main survey were similar for the non-response investigation for the conjoint analysis. However, the differences were more narrow, indicating that the sample of UK and US companies were similar.

7.19 Summary

The purpose of this chapter was to apply conjoint analysis to the problem of ascertaining the importance of various distortions to foreign direct investment. The conjoint design centred around seven major issues of concern. These were the political dimension, the taxation system, the

exchange rate behaviour, the financing choice, the level of inflation rates, the level of the host country interest rates and the degree of centralisation of the capital budgeting decisions. There were few significant differences between UK and US multinationals. The relative importance of the attributes were calculated and political risk was found to be the strongest determinant of foreign direct investment flows, followed by the taxation system, the exchange rate, interest rates, the finance source and the degree of centralisation of capital budgeting. The discovery supports the view that political risk is a strong determinant of foreign direct investment. The combined sample of UK and US multinationals was subjected to a cluster analysis, which formed two clusters consisting of approximately equal numbers of respondents. The cluster analysis revealed that the views of the multinational finance directors for the combined sample of UK and US multinationals was not homogeneous, but in fact there were two distinct groupings of respondents. There was found to be no relationship between the home country of the multinational and its cluster membership. A series of t-tests was conducted on the two groups of multinationals in relation to the attribute level part-worth utilities. There was evidence to suggest a trade-off between political risk aversion and exchange rate, interest rate and inflation rate aversion. The group that was not averse to political risk was discovered to be averse to the exchange rate, the inflation rate and the level of the host country interest rates, whilst preferring local sources of finance. Further, with regard to this apparent trade-off between political risk aversion, companies that have experienced political risks and overcome them, may tend to negate the importance of them by perceiving the risks to be translated to an alternate source of apprehension. The validity of the conjoint model was explored and found to be robust.

For both surveys of UK and US multinational companies there was evidence to suggest that respondent companies had greater market values, turnover and overseas tax liabilities than non-respondent firms. The financial characteristics of responding UK and US multinationals was compared and although it appeared that US companies tended to be larger than UK companies, the difference was not significant.

In this chapter the relative importance of the distortions that cause a multinational to adopt either financial policies which support a general equilibrium or disequilibrium situation have been assessed. The purpose of the next chapter is to outline the results of indepth interviews which were conducted with some senior managers of UK multinationals in order to corroborate the results of the main survey and the conjoint analysis.

Chapter 8

Indepth Interviews

8.1 Introduction

In addition to the survey and conjoint research on the capital budgeting and financing decisions of the multinational enterprise, the author conducted interviews with some senior multinational finance managers. This was attempted in order to corroborate information gleaned from the main survey and conjoint analysis. Some of the multinationals from which managers were interviewed were amongst the largest companies in the world.

8.2A COMPANY A

The group tends to operate in low political risk countries. Financing is driven by the need to match assets with local currency borrowings. The company considers joint venture and leasing. Although the company considers non-recourse financing, they maintain a good profile in terms of debt repayability because they hope to raise more finance from overseas. The company does not believe that it is able to lower its weighted average cost of capital by raising money internationally because the company has a small market capitalisation implying that it has not yet attained a "critical mass" to make this desire possible. This company believes that by diversifying outside the UK is a strategy for reducing risk, however it is sceptical about taking projects on in less developed countries. The company believes that consultancy work is risky to a certain extent. The treasury is run on a centralised basis and it is unlikely that things will change in the future. Capital projects are identified from the top-down and

bottom-up. There is a formal hierarchy depending upon the size of the project. Cash flow or transaction risk is hedged. The company believes that matching assets against liabilities increases the value of the firm in instances where the firm encounters political risk. The company uses a higher discount rate than the domestic rate to evaluate overseas cash flows because it wishes to compensate for the extra risk involved with its international operations. The discount rate depends upon the nature of the project and lower discount rates may be used to encourage projects that are connected to the corporate strategy of the group.

8.2B COMPANY B

The group does not hedge extensively. It prefers to hedge its dividends in the interests of its shareholders. The balance sheet is not hedged, but careful attention is paid to maintaining the correct balance of debt and equity in the light of exchange rate movements. The company prefers to leave it to the shareholder to diversify risk. The company believes that by engaging in hedging, this does not increase the value of the multinational enterprise. The company highlights that when exchange controls were in force during the 1970's it had to borrow money locally from the host country. Money is now raised on a centralised basis with particular emphasis upon short-term sources from the multinational banks. However, in high political risk countries, raising debt locally remains of paramount importance in order to match assets against liabilities for this country. Raising money locally is viewed as a strategy to lower the weighted average cost of capital of the group. The company has a significant critical mass that it can borrow funds at 75 basis points below LIBOR. The company operates a centralised treasury in order to capitalise upon its financing advantages because of the magnitude of its market value.

However, some of the company's overseas subsidiaries have treasuries of their own. Transaction risks are not centralised. Recently, this company implemented an intra subsidiary netting system. Three quarters of the activities are denominated in dollars with the other quarter denominated in sterling. The majority of the group's turnover is in countries with low levels of political risk. Internal trade takes place, but it is relatively small compared to the total turnover of the group. The group has a decentralised capital budgeting system because there are a large number of relatively small value projects and projects are often evaluated and controlled from the subsidiary perspective. However, large capital projects are evaluated and monitored by head office. The discount rate used to evaluate an overseas cash flow relative to the domestic situation is less than that used in the UK. Risk premia are incorporated into projects in countries with high political risk. The company believes in a tax advantage to debt by raising more finance in countries with high rates of corporation tax, through a financing company. The company can also remit funds from the US to the UK for financing purposes. However, there are limits to this in the form of the US fiscal authorities and thin capitalisation rules. An ACT surplus position can also influence the overseas financing decision. The company does not like engaging in equity joint ventures unless absolute necessary. The company believes that by diversifying overseas it has been able to reduce risk partly because of the portfolio spread of risks and because it has been a multinational for a number of years.

8.2C COMPANY C

The financing is predominantly centralised. The company has a critical mass in relation to financing and tends to borrow funds from a few deep

markets, through a small number of companies. The company recognises the trade-off between borrowing at cheap rates internationally, whilst suffering withholding taxes. The financing strategy is very much tax orientated. This company's subsidiaries are virtually 100% owned. Joint ventures are discouraged within the group. The company believes that there is a tax advantage to debt. The business is largely denominated in dollars. The debt portfolio is configured as to hedge dollar inflows. The company attempts to hedge at least 90% of its exposure in each currency. Transaction risk is hedged on a centralised basis. When the company engages in hedging, it attempts to net out its exposures. In countries with high political risks, the company matches assets with local currency borrowings to reduce the risk of expropriation or nationalisation. Non-recourse financing is not considered because it carries excessive risk premia. This company predicts an increase in strategic alliances in the form of equity joint ventures as a mechanism for mitigating political risk. The nature of the oil business is such that strategic partnerships are necessary because often an oil-field is too large for a sole exploration company. The company does not believe that it has an optimum capital structure, but does have a margin of safety. The company believes that it can lower its weighted average cost of capital by having access to a wider selection of overseas financing sources. The company considers leasing. The company is relatively sophisticated in relation to financing since it has different discount rates for different projects in each country. The discount used in the US is higher than in the UK which in turn is lower than the discount rate used in Nigeria. Differences in performance measurement systems can often cause conflict between the finance function being run on a centralised basis and decentralised capital budgeting. Financial accountability in relation to financing is based upon how much tax a subsidiary pays. The company does not diversify overseas to reduce

risk. The fundamental philosophy of this company is to add value to the group. The company believes that hedging increases the value of the firm, because the company's finances are "transparent" and the investor recognises the simple structure of the business.

8.2D COMPANY D

The majority of this group's turnover is derived from the UK, however due to regulatory pressure this group is diversifying abroad. It is at the early stages of becoming a multinational. Financing decisions are tax driven. The company engages in tax arbitrage between different fiscal environments. Political risks are actively managed through the utilisation of management service contracts rather than through a financing strategy. The company is sceptical about joint ventures. The company is interested in expanding overseas through acquisitions. It recognises the oligopolistic nature of international competition. The underlying project characteristics affect financing decisions to a great extent. The corporate strategy of this group appears to be to increase market share by investing in its underlying infrastructure, a telephone network. This requires a different approach to financing. The finance function is run on a centralised basis although capital budgeting is fairly decentralised through the utilisation of strategic business units. The company considers hybrid forms of debt-equity and non-recourse financing. The company believes that it is able to reduce risk by diversifying overseas. Projects are identified and monitored from the top to the middle of the organisation. The company believes that hedging does not increase the value of the multinational since it safeguards the downside risks but limits the upside potential. The company is sceptical about the tax advantage to debt owing to the added complexities of operating internationally such as double tax conventions and the taxation of

currency losses and gains. The discount rate used to evaluate overseas project cash flow is broadly higher than that operating in the UK. The reason for that is because of lack of expertise and entry into projects that inherently are more risky. The company considers each project in isolation. The allocation of currencies within this company is not yet of major concern because of its limited overseas business, but that will change.

8.2E COMPANY E

The company is one of the few to use the capital asset pricing model to calculate an appropriate discount rate. The company is relatively sophisticated because it then adds a premium on top of the CAPM rate to account for projects which are located in high political risk countries. The premium is based on the country's ranking in the political risk assessment supplement of the Institutional Investor. In Japan or the US, the company uses a lower discount rate than for UK projects. The corporate strategy is narrowly defined. The company reduces political risk by borrowing in the local currency to offset assets. The company is tax orientated in relation to its financing decisions. The company uses a constant fixed charge ratio for each of the respective countries it operates in, in order to allocate currencies within the multinational group. This debt repayability criteria is also used to determine the company's capital structure ratio. The company recognises that some currencies are more related than others, e.g. the Canadian and US dollar, and considers them as "one currency". Therefore this company recognises the cross hedging paradigm that operating in a portfolio of currencies offers. The company does not have a currency of denomination preference. In relation to the debt-equity ratio of this company, the company believes in a tax advantage to debt. The company

believes that the company's weighted average cost of capital does not vary enormously within bounds provided that the debt-equity ratio is prudent. The company is somewhat sceptical about the tax advantage to debt due to the distortions of operating internationally. International equity issues are largely insignificant. The company considers equity joint ventures. The company uses currency and interest rate swaps to hedge long-term debt. The flow of projects is from the lower levels of the organisation up. The trend in the finance function is towards greater centralisation.

8.2F COMPANY F

In relation to financing, tax is a major driving force. The company matches assets with local borrowings. This policy is particularly implemented where political risk is high. The company uses swaps to hedge long-term debt but not in high political risk countries. The company is not enthusiastic about the tax advantage to debt. The company has an ACT surplus. It needs to generate UK income in order to offset the surplus. The company recognises an efficient way of generating UK income is through a subsidiary loan from the parent. This enables the company to hedge and offset the ACT surplus. The company does not believe it can lower its weighted average cost of capital by financing from a wider selection of sources. The company uses local borrowing rates as hurdle rates for overseas projects. If the project is termed a marginal project, then the company uses its marginal cost of capital to discount its cash flow. The company evaluates projects on a subsidiary and parent basis. The company is doubtful about the risk reduction potential of being a multinational company. The finance function is run on a centralised basis.

8.2G COMPANY G

Financing decisions are driven primarily by tax issues with the need to hedge assets with local currency borrowings. However the company prefers to match cash flows rather than balance sheet positions. The company applies portfolio theory to a certain extent. Swaps are used to hedge long-term debt. The rationale behind the allocation of currencies within this multinational is to repay debt, i.e. debt serviceability. This company tends to support the interest rate parity theorem for freely tradeable currencies. However, in segmented markets, where there are restrictions, the company believes that the interest rate differentials are greater. Although this company only operates in a couple of high political risk countries, the gearing of these subsidiaries tends to be high. The company is sceptical about whether being a multinational company enables it to lower its weighted average cost of capital. The company believes in a tax advantage to debt. The company operates an inter-company loans system. The finance function is run on a centralised basis. Projects are identified at all levels, monitored at the operating and head office level. Projects are evaluated on a subsidiary and parent basis. The company believes that by hedging it is able to increase the value of the multinational, especially by hedging long-term assets. The discount rate used to evaluate overseas projects is variable depending upon the country where the project is located. Adjustments are made for this rate to account for political risk. The company believes that by diversifying overseas reduces risk. However, it was slow to move business out of the UK before the recession became apparent.

8.2H COMPANY H

This company evaluates overseas projects based on a predetermined hurdle. In the past, this company has used a discount rate based upon local borrowing. The company has a target debt-equity ratio for the consolidated group. The company believes in a tax advantage to debt within limits. The company attempts to match assets with local currency borrowings. The company has attempted to use portfolio theory in the past but finds that the location of oil and gas often determines the portfolio of currencies it needs to operate in. The company is not politically risk averse because the company's corporate strategy is driven by the availability and location of natural resources. Indeed, the majority of this group's turnover is in countries with high political risk. In instances where political risk is encountered, the company mitigates this risk by matching assets against local currency borrowings and selling the oil and gas in hard currency. The company believes it has a higher weighted average cost of capital than if it operated purely within a UK domestic market because of the political risk distortions. However this increase in WACC is marginal when considered in relation to the change in risk profile that the multinational undergoes in high political risk countries by raising debt locally. The financing strategy of this company is driven by the need to balance out political risks rather than attempting to maximise the tax shield on debt. This company is doubtful if engaging in hedging can increase the value of the multinational except in certain instances such as hedging political risk with issues of local debt. The company views international portfolio diversification of real assets as reducing regulation risk at home. The company is not driven by risk reduction, rather by the requirement to acquire suppliers and distributors on a global scale.

8.2I COMPANY I

This company's financing policy is not tax driven. Most of the projects are financed centrally or out of the subsidiaries reserves. Local debt is often taken in the form of bank overdrafts. The parent will inject new share capital if it feels that the subsidiary is under capitalised. The underlying businesses tend to generate a lot of cash. Borrowing funds locally is often a strategy for mitigating political risk. Political risk is not analysed in a sophisticated manner. Generally, the company tends to have large capital projects in countries which are relatively stable. In countries that are unstable, the company prefers to sell its products through distributors or partake in equity joint ventures. The company does not calculate its weighted average cost of capital since it feels it is not relevant to its capital budgeting decisions. In relation to capital structure decisions, the company does not take on debt. The company perceives that it does have a psychological problem in the sense that it is cash rich because subsidiaries feel that the board will accept any project they propose. There is no formal hurdle rate as such. The payback and internal rate of return are used widely. The company tends to use the local cost of borrowing in relation to net present value calculations. The company supports the risk reduction rationale of the international involvement phenomena. The company would like to get a foothold in some of the emerging developing markets such as China and Eastern Europe. The company does not actively engage in hedging. The finance function is run on a centralised basis whereas operating managers have a great deal of flexibility in capital budgeting.

8.2J COMPANY J

The financing of overseas subsidiaries is driven by taxation concerns with the need to cover foreign interest rate costs. Subsidiaries tend to be highly geared. The matching of assets with local currency borrowings is an important policy. The company has recently been demerged. Therefore the company is reconsidering its debt denomination preferences. The company attempts to cover both balance sheet and cash flow exposure. In relation to political risk, this company considers matching to be an important strategy. However, the company prefers to finance projects with high political risks from the centre rather than operating them on a stand alone basis. Equity joint ventures are considered as a mechanism for mitigating political risks. The company prefers to keep gearing at a low level especially now that it is effectively a new company. The debt-equity ratio is down from a maximum of 35% to within the range of 10% to 20%. The company is willing to keep gearing low despite its belief that there is a tax, advantage to debt. The company is moving to greater decentralisation of all the finance functions such as financial reporting, compliance reporting and tax with the centre supporting these functions. Capital budgeting is run on a fairly decentralised basis. The company uses one single discount rate for the whole of the organisation. The company will raise debt in countries with high rates of corporation tax and locate it elsewhere in the group. The gearing of subsidiaries in countries with high rates of corporation tax tends to be higher than for subsidiaries located in low tax regimes. The company believes that engaging in hedging increases the value of the its multinational.

8.2K COMPANY K

The nature of this company's operations dictates its financing strategy. The financing is largely dependent upon the underlying project's characteristics. The financing takes on the form of being secured, for property, or unsecured. The company maintains a good relationship with host country banks and prefers local sources of finance to match assets. The company likes each of its subsidiaries to be responsible for the debt and there is no cross subsidiary subsidising in relation to finance. This company subscribes to there being a tax advantage to debt. The company is politically risk averse and bases operations in low risk countries such as Canada and Australia. The company has a target range where it believes its capital structure ratio should lie. Overseas subsidiaries are largely autonomous in relation to capital budgeting with the finance function being run on a centralised basis. The company does believe it can lower its weighted average cost of capital by operating internationally. Projects are identified, evaluated and monitored by both the subsidiary and parent. In terms of the discount rate used to evaluate an overseas project's cash flow, the company adjusts the discount rate to incorporate the exchange rate. This adjustment can be either up or down depending upon the volatility of the exchange rate. This company does not believe that hedging increases the value of the multinational because its effect is symmetrical, protecting the company against occasional shocks whilst placing bounds around the upside potential.

8.2L COMPANY L

The group separates its financing and investment decisions. Taxation considerations are a primary motivator in relation to the group's financing

decisions. The company has an ACT surplus and enjoys a low marginal rate of taxation in the UK. The company seeks to exploit imperfections in the global tax system by engaging in international tax system arbitrage. The company believes that there is a tax advantage to debt. The company allows its debt equity ratio to rise and fall in harmony with its strategic goal which is to acquire businesses. The company is averse to using quasi debt-equity instruments such as convertibles because too much value is given to the investor. The company tends to engage in extensive discussion with the governments of high political risk countries. It engages in environmentally enhancing projects in order to be responsive to the host country needs. Financing arrangements include equity joint ventures, political risk insurance and local debt. The company is sophisticated in relation to its financing by using portfolio theory, which is linked to commodity sales revenue. Currencies are allocated in proportion to net project cash flows, whilst maintaining an overall basket of currencies in which sales are denominated. A problem for the company is the time lag in its information system which causes forecast errors. The company tends to use one discount rate across the board. For gold projects, a lower discount rate may be used because this more closely resembles money. This company is sceptical as to whether hedging increases the value of the multinational.

8.2M COMPANY M

This company prefers to borrow locally and contribute a minimum share capital into an overseas subsidiary. This strategy was initially driven by taxation. The company believes that there is a tax advantage to debt. Earnings for the group are broadly in sterling and therefore the company does not have a surplus ACT position. This type of multinational is termed

as polycentric. The company prefers to cover at least 50% of its exposure by matching assets with local currency borrowings. This company does not have a currency of debt denomination preference. The company tends to operate in countries with low levels of political risk. The company is risk averse by the nature of the underlying business. The capital structure of the business tends to be a crystallisation of historic events within the company rather than a predetermined or target capital structure ratio. The company does not believe that the weighted average cost of capital of the group is significantly higher than if it operated solely within the UK context. The company believes that it can exploit differentials between different countries' interest rates in defiance of the interest rate parity theorem. The company is reluctant to engage in equity joint ventures. The finance function is moving towards greater centralisation. Projects are identified at the divisional level and approved by the board of directors. The company uses the same discount rate throughout the organisation. The company is unsure as to whether international diversification results in risk reduction. The company has encountered difficulties with operating overseas due to the use of local managers. The company engages in hedging to protect the downside risk. The company utilises interest rate swaps to hedge long-term debt.

8.2N COMPANY N

The company concentrates upon acquisition as a vehicle for international diversification. Much of the financing for this company is through the syndicated loan market in London. The company is not very sophisticated in relation to capital budgeting. Taxation is a vital consideration in relation to this company's financing policy. The taxation function and the treasury are well integrated. The company trades in virtually every currency in the

world. Its hedging strategy is sophisticated with the company taking positions on the expected movement of currencies, which is tightly controlled. The company matches assets with local currency borrowings as a general guide-line. The US is the largest market for this company and UK investors are vulnerable to fluctuations. Capital budgeting is comprised mainly of acquisitions identified at head office level. However, the company acquires many small sized enterprises based on "word of mouth" from people outside the company approaching head office or upon historic business relationships. The company's view at the moment is that projects must conform to very rigid criteria through the usage of discounted net present value evaluation models. The company considers equity joint ventures. The company limits its assets in countries with high political risk. The company merely maintains a presence in countries with high political risk based upon goodwill and historic business relationships. The company has been moving away from an over dependency on the London insurance market. The company believes that this can reduce risks. However, right from the company's inception it has always been a globally orientated company. This company believes that in the short-term hedging increases the value of the firm. However, long-term, this company believes that it is unlikely that hedging increases the value of the firm.

8.3 Activities of the Groups

In order to maintain confidentiality, it is not possible to link the identity of the above companies with their main activities, which are:

A group which has interests in metals and energy. The company is involved with mining and metals processing.

A group whose principal activities are the operation of sea transport bulk carriers, ferries, cruise-liners and property investment.

A group of companies which manufactures a wide range of chemicals and pharmaceuticals.

A group of companies engaged in the business of insurance and reinsurance as well as acting as underwriting agents for a number of British and overseas insurance brokers and for Lloyd's of London.

A group that is in the business of provision and management of airport facilities in the UK and overseas. The group also has interests in the ownership and development of property and hotels.

A group which manufactures cigarettes. In addition to the tobacco business the group provides insurance and other financial services.

A group responsible for distribution, hire, storage and transport.

A company involved in oil and gas exploration and the refining and manufacture of both chemical and agricultural products.

A group of companies which conducts research into, develops, manufactures and markets ethical pharmaceuticals around the world.

A group which is in the business of telecommunications. It provides international services such as satellite, submarine and radio links.

A company engaged in the manufacture and sale of branded confectionery and beverages supplied through wholesale and retail outlets in many countries world-wide.

A company which manufactures security products including currency as well as the supply of payment systems.

A company in the business of operating hotels, the provision of catering and sundry services.

A company which sells hydrocarbon gas to UK domestic and commercial customers. The company is also involved in oil and gas exploration and production both in the UK and abroad.

8.4 Summary

The majority of the interviewees tended to emphasise the matching of assets and liabilities in each currency as a natural hedge against adverse exchange rate movements. The respondents were divided about the actual tax advantage to debt which tended to complement the findings from the main survey of UK and US multinationals (where the companies were found to be equally divided between equilibrium and disequilibrium). Many companies were sceptical as to whether they could lower their weighted average cost of capital by sourcing debt finance from a greater number of international sources. Those companies that claimed that they could lower their weighted average cost of capital, tended to be the larger multinationals and therefore had greater financial 'muscle'. The overriding purpose of local debt appeared to be to match local currency assets, or to allocate debt in proportion to revenue flows in each respective currency.

Also, local debt was viewed as being the most flexible instrument to overcome political risks, as an offset to assets in a high risk country. Joint ventures were entered into by a number of the respondents as a strategy to overcome political uncertainties. However, there was a general preference for wholly owned subsidiaries. This reinforces the finding from chapter 3 where joint ventures were viewed by UK and US multinationals as a distortion to the capital structure position of the firm. In relation to the question of whether hedging increased the value of the multinational, only companies that had a large 'critical mass' felt that they were able to take advantage of lower borrowing rates. However, there was a general assertion that by hedging through matching assets with local currency borrowings, the company was able to increase its market value. The debt financing decision tended to be centralised in the majority of companies interviewed. In contrast, capital budgeting decisions tended to be less centralised.

The majority of respondents believed that by becoming a multinational they were subject to greater risks than if they were operating purely within a domestic context. This perception was reflected in the discount rate used to evaluate a project's overseas cash flow. In general, where companies were adjusting the discount rate to incorporate risk, then most companies were using a higher discount rate to evaluate overseas projects, which tended to incorporate some type of risk premium into the analysis by operating within an international setting. A few companies indicated that by being a multinational they were able to lower risk, and hence were using a lower discount rate to appraise overseas countries. However, these multinationals tended to be long established with a greater proportion of overseas business than domestic operations with a highly diversified set of

projects of relatively small capital allocations. Some companies could be classified as sophisticated by adding a risk premium, to the rate used to evaluate domestic projects for operations, in high political risk countries. The explanation for the corresponding increase in risk when a company becomes multinational tended to be explained by the inability of the multinational to implement management systems that were nationally responsive to the host country. The risk reduction myth tends to support the existing eclectic and internalisation theory of the multinational where reduction in risk is not stressed. This discovery from the indepth interviews supports Thompson (1985), who applied Rugman's (1979) methodology to a sample of UK multinationals, where he discovered that marginal reductions in risk materialised by being a multinational. International acquisitions by interviewees were conceptualised as a shift towards greater market share within an framework of oligopolistic competition.

This chapter has summarised some of the indepth interviews conducted with finance directors of UK multinational comapnies. The results corroborate some the findings from the analysis of the main survey (especially chapters 3 and 4). The purpose of the next chapter is to draw the thesis to a conclusion and provide recommendations to academics who wish to conduct future research in the area. Also in chapter 9, hints are given to practitioners, i.e. finance directors on the action they might like to take in view of whether they are supporters of a general equilibrium or disequilibrium in financial markets.

Chapter 9

Conclusions

9.1 Conclusions

The research focused upon the financing and capital budgeting practices of UK and US multinationals as it is deemed that more multinationals are based in these two countries than any other combination of countries. Also, multinationals from these two countries are members of the European and North American triad markets. A questionnaire was sent out to finance directors of multinational enterprises, selected from Datastream, in order to test deductive hypotheses in relation their capital budgeting and financing practices. The statistical analysis was based upon univariate and multivariate testing. The tests were conducted for the combined sample and separately for UK and US companies in order to establish whether there is a distinctive difference between US and UK multinationals. Advanced statistical methods such as principal component factor analysis were utilised in order to uncover latent relationships between issues involved with the capital budgeting and financing decisions of the multinational enterprise, as a response to the changing nature of the research literature and for research methodologies in finance to become more sophisticated and sensitive. A conjoint style methodology was also adopted in order to assess the relative importance and utility of various determinants upon the foreign direct investment decision with particular focus upon the multinational's capital budgeting decision. Indepth interviews were conducted with UK companies in order to corroborate some of the findings of the main survey and the conjoint scenario approach. The research design was therefore based around the collection of both complementary quantitative and qualitative information.

The primary aim of this research thesis was to discover whether multinational companies adopt financial policies which reflect a disequilibrium situation in financial markets, or whether their policies support a general equilibrium framework. The findings indicate that the majority of UK and US multinational companies surveyed supported a general equilibrium approach to the financing of overseas subsidiaries and affiliates in relation to whether they believed that firm value increases by raising debt finance in countries with high rates of corporation tax. Over half of the companies surveyed implied that they supported Miller's (1977) capital structure irrelevancy proposition. About one third of companies lended support to Modigliani and Miller's (1963) tax advantage to debt. Added complexity that is induced into the financial policy decisions of the international firm may be one possible explanation as to why the multinational company tends to favour Miller's general equilibrium approach to debt financing. Nevertheless, there was a high degree of uniformity amongst multinationals as to the importance that local debt had in relation to the financing arrangements of overseas subsidiaries. Multinational enterprises that operated in high political risk countries tended to raise local finance, as a hedge against political uncertainties. The majority of UK and US multinationals asserted that subsidiaries located in countries with high political risk countries had a higher debt equity ratio than subsidiaries with operations in low risk countries reinforcing the importance of localised financing arrangements. It was stressed by the UK companies that took part in the indepth interviews that debt was viewed as offsetting assets in each currency as a natural hedging mechanism through matching, in addition to taking advantage of the tax advantage to debt. This finding was reinforced by the significant difference found in the main survey between UK and US multinationals which highlighted that UK

companies placed more emphasis upon matching the values of assets and liabilities in each currency.

There was nearly an equal proportion of UK and US multinationals that believed that hedging increased the value of the multinational enterprise, as those who believed that the value of the company remained the same. Therefore there was implied equivalent support for the disequilibrium and general equilibrium approaches to hedging.

The concept of matching assets with local borrowings was identified as a belief by the finance director in a general equilibrium in financial markets. Therefore, companies who do not believe in a tax advantage to debt, i.e. do not support general equilibrium models should follow the matching principle, since will reduce hedging costs. Matching assets and liabilities in each currency leads to a zero net exposure to fluctuations in currencies. This is why the general equilibrium group did not stress the importance of the exchange rate (which is synonymous with belief in general equilibrium models).

The combined sample of UK and US multinational companies was divided into whether their beliefs on debt financing increased the value of the firm. Those companies that believed that debt financing from countries with high rates of corporation tax increased the value of the firm formed one group (disequilibrium). The alternate group consisted of companies that believed that when the multinational enterprise raised debt finance from countries with high rates of corporation tax, the value of the firm remained the same (equilibrium). The differences between the companies classified under the two schools of thought articulated the existence of different underlying financial rationales being formulated in relation to

debt financing decisions of overseas subsidiaries and affiliates. Supporters of disequilibrium placed greater importance upon maximising the tax shield on debt, in relation to the objectives of the capital structure decision. This finding was reinforced by the result that the general equilibrium group stressed more emphasis than the disequilibrium group upon matching the values of assets and liabilities in high political risk countries. Under this policy, political risk would distort the debt financing decision, since the finance director would allocate assets and liabilities in a matching position to mitigate the risk of expropriation of assets. The disequilibrium group placed greater emphasis than the general equilibrium group upon local sources of finance, such as host country banks.

The disequilibrium group tended to have more centralised debt financing functions than those companies that upheld the general equilibrium school of reasoning. This is a major finding of this research thesis. Companies who support general equilibrium models do not need their finance functions to be as centralised as in the disequilibrium case, whereas supporters of disequilibrium need to have centralised finance functions in order to take advantage of market imperfections.

Within the general equilibrium context, the combined sample of UK and US multinationals was divided according to whether or not the finance director believed that the multinational group had a global optimum capital structure. There appeared to be a greater level of centralisation of debt financing for companies that believed that the multinational group had a global optimum capital structure than those that did not. Multinationals that believed that the multinational group had an optimum capital structure placed lesser importance upon achieving the correct currency configuration of debt and upon matching the values of assets and liabilities

in each currency. This result was reinforced by the finding that multinationals that believed that the group had an optimum capital structure placed greater relative importance upon the variability of the exchange rate, in relation to country and project specific issues involved with the overseas financing decision. The importance that exchange controls had upon the debt financing arrangements in high political risk countries was less for companies, that believed that the multinational group had a global optimum capital structure, than it was for the counterpart group. This result reflects the lesser relative importance that companies, that believe the multinational group has a global optimum capital structure, place upon the matching of assets against liabilities, since matching is viewed as a policy that can mitigate the risk of expropriation of assets in high political risk countries. Multinationals that believed the group had a global optimum capital structure did not believe as strongly as their counterparts that when the parent company raised debt finance this lowered the weighted average cost of capital of the parent company.

Multinationals with a currency mix goal believed that when the parent or subsidiary company raised debt finance this resulted in a relatively greater impact upon lowering the weighted average cost of capital of the parent and subsidiary company, respectively (this is synonymous with a disequilibrium in financial markets). Multinationals with a currency mix goal reflect a portfolio approach to the financing of the multinational and a desire by the multinational enterprise to exploit differences in currency asset prices.

A secondary aim of this research thesis was to investigate the degree of centralisation in the decision making of the financing and capital budgeting functions in relation to the financial policy of the multinational enterprise.

The analysis of the main survey indicated that debt financing was the least centralised of the finance functions for both UK and US multinational enterprises. The majority of UK and US multinationals evaluated overseas projects from the perspective of both the parent and subsidiary. However, about a fifth of UK and US multinational enterprises evaluated foreign cash flow through the lens of the subsidiary only. When the combined sample of UK and US multinationals were divided according to the implied school of thought (i.e. either general equilibrium or disequilibrium), it appears from the findings of the main survey that belief in disequilibrium is inherently linked to a coherent organisational structure, capable of implementing a strategy to capitalise upon these distortions. The finance function is largely run on a centralised basis within multinational corporations. There is evidence to suggest that companies whose debt financing strategy is driven by taxation considerations have more centralised debt financing functions than those companies where taxation is not a priority. The disequilibrium group believed to a greater extent than the general equilibrium group of companies that when the parent or subsidiary raised debt finance this had a significant impact upon lowering the weighted average cost of capital of the parent and subsidiary, respectively. This finding is consistent with the effect of debt raising the value of the multinational because there is an inverse relationship between the value of the firm and the weighted average cost of capital.

In relation to the centralisation of translation risk, companies that operated a currency mix goal tended to be less centralised than those companies that did not have a currency mix goal. This is reinforced by the discovery that companies with a currency mix goal emphasised allocating assets and liabilities in an overall risk minimising configuration, since this would reduce the degree of translation risk exposure of the overseas subsidiaries.

A third aim of the research was to investigate the differences between UK and US multinationals. There were significant differences between US and UK companies in relation to the discount rate used to assess the cash flows of foreign projects. The US tended to use a greater discount rate than in the domestic situation, which would reflect a higher risk profile than UK companies. UK companies tend to use the same discount rate, to assess foreign cash flows, as the domestic situation. In addition, a greater proportion of US companies tended to be using a higher discount rate than within a purely domestic situation to evaluate a project's overseas cash flow. This result can be explained by three underlying phenomena. First, US companies are more sophisticated than UK multinationals and reflect the increased risk of operating internationally than UK companies. Second, discount rates on government bonds are significantly lower in the United States than most other countries and so the discount rate is adjusted upwards to account for the increased cost of local borrowings. Thirdly, the benefits of international portfolio diversification of real assets as demonstrated theoretically by international finance scholars is not matched by the real world diversification strategy of UK and US multinationals, since they perceive international operations to be more risky by using a higher discount rate. This research finding implies that the multinational finance director does not perceive benefits as previously believed from international diversification.

In the use of evaluation techniques in capital budgeting, there was overwhelming support for the internal rate of return by both UK and US companies. The payback method was widely used by UK companies. The net present value was widely used. There was a lack of support for more sophisticated approaches to capital budgeting such as the capital asset

pricing model, the adjusted present value method and the arbitrage pricing theory. The simple accounting rate of return was not a popular evaluation technique for UK or US multinational enterprises.

In addition, the researcher tested for significant differences between UK and US multinationals, with respect to:

(i) whether the multinational enterprise was adopting financial policies, that reflected a general equilibrium framework or disequilibrium rationale, (ii) the degree of centralisation of financial policy decision-making, and (iii) the relative importance of the distortions to the financial policy of the multinational enterprise. In capital structure decisions, the maximisation of the tax shield on debt was not the overriding concern for both UK and US multinationals. There was divided support for both UK and US multinationals as to whether an optimum capital structure existed for the parent company. There was less support for an optimum capital structure for the consolidated group than for the parent company. A majority of UK companies operated a currency mix goal, which was less marked for US multinationals. There was found to be a trade-off between allocating assets and liabilities in a portfolio to minimise risk, and matching the values of assets and liabilities, and the importance placed upon financial instruments, to hedge foreign exchange exposure and interest rate risk. This discovery was more apparent for UK companies since they emphasised the allocation of currencies in a risk minimising configuration. US companies placed greater emphasis upon the financial state of a host country in relation to raising finance from the host country. This result reinforced the finding that US companies did not rely so heavily as UK companies upon matching the values of assets and liabilities, because under such a policy consideration of the exchange rate would not

be as vital. US companies also placed greater importance on local sources of finance than UK companies. The capital structure decision was found to be extensively centralised in both UK and US multinational enterprises in harmony with the centralisation of equity financing. Debt financing was found to be less centralised than equity financing, which supports the importance that both UK and US multinational enterprises place upon local sources of finance. In relation to the centralisation of the hedging functions, interest rate hedging of subsidiaries, translation risk of subsidiaries and economic exposure risk were extensively centralised. There was evidence to suggest that transaction risk of the subsidiaries was less centralised than the other hedging functions which supports evidence in the literature on UK and US hedging practices. A majority of US companies had operations in high political risk countries whereas one half of UK companies had operations in high political risk countries. This finding reinforces the discovery that UK companies placed more importance than US multinationals upon avoiding high political risk countries.

The logical positivist approach to the research in which deductive hypotheses were formulated metamorphosised towards a more inductive style of reasoning generated by the principal component analysis of the issues involved with the financing and capital budgeting decisions of the multinational enterprise. Twenty seven factors were created which represented latent relationships between the elements of the financial policy of the multinational enterprise. Initial interpretations were made in order to discover the identity of these newly created dimensions of the company's capital budgeting and financing decisions. These factors were in effect new variables and allowed the data generated from the main survey to be reduced to smaller dimensions. The factors were quantified on a

score basis. Companies that scored high on a factor were assigned to a "dominant factor group", whereas those companies that had a low factor score were designated to a "non-dominant factor group", effectively transforming parametric data to categorical data. Subsequent testing of the null hypotheses, that there were no significant differences between companies that scored high or low on each respective factor, was conducted in relation to the survey items. This rigorous "forensic" examination of the factor solution resulted in greater understanding and clarified issues that required greater resolution. The interpretation of the factors was centred around the general equilibrium theory-disequilibrium axis, the degree of centralisation in relation to financial policy of the multinational enterprise and risk within a portfolio framework. Therefore the inductive approach was congruent with the overall objectives of the research thesis and the specification of the primary deductive hypotheses. The validity of the usage of factor analysis was investigated by examining the structure of the correlation matrix to investigate whether or not it was an identity matrix. In order to demonstrate the robustness of the factor solution, a Kaiser-Meyer-Olkin statistic was computed, this was found to be well above the threshold of safety, implying that the factor models were a 'good fit' in relation to the information supplied by the finance directors in the main survey.

Factors relating to the objectives of the capital structure decision were: the importance of the configuration of debt, the minimisation of the cost of capital and the degree of centralisation of the subsidiary's capital structure. Minimisation of the cost of capital was associated with the centralisation of capital budgeting, the financing of debt and the capital structure decision. Where there was a lower level of centralisation of the subsidiary's capital structure, interest rate risk hedging of the subsidiaries, financing, hedging,

capital budgeting, cash management and debt finance were also less centralised.

With regard to the dimensions that were derived for the political strategies adopted in relation to financing, three factors were extracted. One was interpreted as financial management strategies to mitigate risk. The second was interpreted as engaging in politicking to reduce political risk and the third dimension was interpreted as avoiding a high political risk country. The political risk avoidance dimension revealed some interesting differences between companies that were political risk averse and those that were not. Multinationals that were political risk averse used approximately the same discount rate as in the domestic situation, whereas companies that were not political risk averse used a higher discount rate to evaluate a project's overseas cash flow, supporting a political risk-return framework. It was also gleaned that companies that did not place emphasis upon avoiding a high political risk country tended to have the same debt equity ratio as if it operated solely within a domestic situation. By contrast, those companies that avoided high political risk countries believed that they had a higher debt equity ratio than if they operated purely within the domestic economy. There is evidence to suggest that although multinational enterprises tend to raise more debt locally in high political risk countries, the risk profile does not change in reality compared to those companies that avoid high political risk countries. This is because the debt equity ratio of the consolidated multinational group is altered to reflect the increased risk.

As to the allocation of currencies within the multinational enterprise, two dimensions were ascertained. One of the dimensions was associated with the allocation of currency policies, which resulted in risk minimisation,

and the other was not related to risk. The companies that scored high on the risk minimisation dimension emphasised the avoidance of a high political risk country indicating a degree of risk aversion.

The rationale beneath raising debt finance from a high political risk country was investigated, revealing two dimensions. One of the dimensions reflected the usage of debt to offset political risks in the form of the instability of the host country exchange rate. Therefore active financial management policies were viewed as negating the effects of political risk upon the value of the firm. The second dimension reflected the incentives that the usage of debt finance offered, in the sense of cheaper finance and the additional value accruing to the multinational enterprise in the form of a tax shield on debt.

From an analysis of the sources of finance from which the multinational enterprise was able to access, four dimensions were derived. The dimensions represented local equity, local debt, internal resources and access to international capital markets. Companies that scored high on the local equity factor indicated a relatively less centralised equity financing function. Insights were generated as to the purposes of using local debt to finance overseas subsidiaries and affiliates. The local debt dimension was associated with allocating assets and liabilities in an overall risk minimising configuration, matching the values of assets and liabilities in each currency and allocating debt and equity in a risk minimising configuration. All of these currency policy allocations are consistent with raising debt finance in local currency. This factor was also associated with a lesser degree of centralisation of debt financing and transaction risk hedging. A primary motivation behind raising debt locally also was found to be the ability of the subsidiary to lower its weighted average cost of capital, thus

supporting a tax advantage to debt and hence a disequilibrium rationale to the financing of the multinational. These findings tend to suggest that local debt has multiple purposes from nullifying a currency asset position to lowering the weighted average cost of capital of the multinational, implying value enhancement of the firm, therefore supporting the Modigliani and Miller (1963) hypothesis.

In relation to the country specific attributes with regard to financing from the host country, three major dimensions were extracted. One of the dimensions represented the host country financial environment. The second dimension represented the costs of financing from the host country and the third angle reflected the level of political risk associated with a host country. The financial environment dimension was associated with the policy of matching the values of assets with liabilities in each currency. This finding is consistent with the effect that matching has upon reducing the effects of the exchange rate and that host country interest rates have upon the value of the multinational enterprise, since a perfectly matched position would render the exchange rate, and the other environmental conditions, irrelevant. The cost dimension was linked to the minimisation of the global cost of capital of the multinational group. Importance was placed upon the monitoring and insolvency costs of the overseas projects. Companies that scored high on this factor tended to be more centralised in the capital budgeting and cash management functions.

The hedging of foreign exchange exposure and interest rate risk were considered. Dimensions were generated which dissected the exchange rate and interest rate exposures into short-term and long-term financial instruments.

There was evidence to suggest a link between the centralisation of the finance function and whether the multinational is seeking to maximise the tax shield on debt, therefore taking advantage of disequilibrium. With regard to the dimension that represented the level of centralisation of the project management functions, such as cash management and capital budgeting, there was evidence to suggest a link between decentralised project management and the ability of the multinational to increase the value of the firm, when it raises debt finance from countries with high rates of corporation tax. Companies that indicated a higher centralisation of capital budgeting and cash management believed that the value of the multinational marginally increased, when it raised debt finance. However, the companies that scored low on this dimension, who advocated greater decentralisation of cash management and capital budgeting, believed that they were able to increase the value of the multinational to a greater extent.

A conjoint scenario analysis was applied to the problem of discovering the importance of various distortions to foreign direct investment and financing decisions of UK and US multinationals. The conjoint analysis enabled the researcher to place the finance directors in a decision-making situation and express the level of interest they would show for a project proposal in different country scenarios. From this information, part-worth utility scores were calculated for each attribute level of the issues involved in the foreign direct investment decision. The issues did not focus upon strategic perspectives of the foreign direct investment, since these would be entirely different for every multinational surveyed. The selected attributes of the foreign direct investment decision were the level of political risk, exchange rate behaviour, host country inflation, the level of host country interest rates, financing arrangements, the level of

centralisation of the project and the host country taxation system. The robustness and predictability of the conjoint model was tested using hold-out scenarios, or cards, and using the Pearson and Kendall regression coefficients. These coefficients reflected a 'good fit' conjoint model. Because the conjoint analysis included both UK and US companies, differences between them were investigated. The null hypothesis was that there were no significant differences between UK and US multinationals in relation to the part-worth utility scores for each attribute level. There were found to be few significant differences between UK and US multinationals. The relative importance of the attributes were calculated and political risk was found to be the strongest determinant of foreign direct investment flows followed by the taxation system, the exchange rate, interest rates, the source of finance and the centralisation of capital budgeting. The discovery resolves the conflicting evidence in the literature and demonstrates that political risk is a strong determinant of the foreign direct investment. The combined sample of UK and US multinationals was subjected to an analysis which formed two clusters, consisting of approximately equal numbers of respondents. The cluster analysis revealed that the views of the multinational finance directors for the combined sample of UK and US multinationals was not homogeneous, but in fact there were two distinct groupings of respondents. There was found to be no relationship between the home country of the multinational and its cluster membership. There was evidence to suggest a trade-off between political risk aversion and exchange rate, interest rate and inflation rate aversion. The group that was not averse to political risk was discovered to be averse to the exchange rate, inflation rate and level of host country interest rates, whilst preferring finance from local sources.

The indepth interview exercise strengthened the discoveries of the main survey and the conjoint scenario analysis. In particular, the UK companies tended to stress matching local assets with local borrowings. Parallel to the findings of the main survey, it was also discovered that the interviewees were divided equally between the general equilibrium and disequilibrium schools of thought. Additionally, there was a general consensus that operating within an international context did not give rise to any significant reductions in risk, as compared with operating solely within a domestic arena.

A non-response bias was conducted in order to test the null hypothesis that there are no significant differences between the respondents and non-respondents for UK and US multinationals in relation to the main survey and the conjoint analysis. The criteria that were used to test the null hypothesis were the financial characteristics of the multinational from Datastream. In addition, the financial characteristics of responding UK multinationals were compared to the characteristics of responding US firms in order to test the null hypothesis that there were no significant differences between them. The findings of this exercise for both UK and US multinationals in relation to the main survey and the conjoint-scenario evaluation exercise suggested that respondent companies had greater market values, turnover and overseas tax liabilities than non-respondent firms. Therefore it can be inferred that the respondent companies were more 'multinational' than the non-respondents since the sample companies had greater market value, turnover and overseas tax liabilities than the non-respondents. Further, the results from comparing the financial characteristics of responding UK and US multinationals denominated in sterling was compared and although it appeared that US companies tended to be larger than UK companies, the differences were not significant.

Therefore it can be concluded there was a high degree of commonality between the response pattern of UK and US multinationals and the financial characteristics for the samples from both the main survey and the conjoint analysis were comparable.

Finally, further research by academics may help uncover whether there are any substantial differences between companies that believe in a general equilibrium or disequilibrium in financial markets in terms of their financial performance and risk characteristics, over a period of time. Additional data could be gathered from Datastream (a secondary source of information). One possible hypothesis of additional research could be that companies that support a general equilibrium in financial markets do not perform as well as companies that support a disequilibrium in financial markets. Also, another hypothesis could be that companies that support a general equilibrium in financial markets tend to be more risky (within a risk-return framework) than companies that reflect a disequilibrium in financial markets. Perhaps the capital asset pricing model or arbitrage pricing model could be used to test this hypothesis. Another extension to the research could be to investigate multinationals from other countries. It would be advantageous to study multinationals from Japan and the Asia Pacific region, since this trading area is the third cornerstone in the 'triad' group of markets. The theory of the multinational was essentially developed by UK and US academics and therefore any research carried out on multinationals from other countries would help develop the paradigm further. The research could be projected to see if the shareholders in the two groups of companies (supporters of general equilibrium or disequilibrium) differ in their attitudes to risk reduction, capital structure and tax effects. It could be hypothesised that companies that support a general equilibrium in financial markets attract a different tax clientele

than companies that believe in disequilibrium. Answers to the these extended lines of enquiry would add value to this complex and worthwhile area of multinational finance.

APPENDIX I

Table I-3.1

**Significant differences between those companies that supported
Modigliani and Miller (1958) / Miller (1977) and Modigliani
and Miller (1963)**

General equilibrium group=G.E. Grp

Disequilibrium group=M.I Grp

Question	G.E. Grp	M.I. Grp	t- Value	Degrees of freedom	Two tailed Prob.
Maximise the value of the tax shield on debt	3.48	4.15	-2.10	48.99	0.041
To match assets against liabilities for subsidiary	4.09	3.35	2.06	37	0.047
Host country banks	3.53	4.00	-1.84	50	0.072
Variability of project cash flows denominated in the home currency	2.92	3.70	-2.78	45	0.008
The usage of currency swaps to hedge foreign exchange exposure	3.54	4.06	-1.76	47	0.086
Centralisation of debt financing	3.72	4.21	-1.76	50	0.085
Impact upon the parent's WACC when the parent raises debt finance	2.57	3.36	-2.69	43	0.020

Question	G.E. Grp	M.I. Grp	t- Value	Degrees of freedom	Two tailed Prob.
Impact upon the subsidiary's WACC when the subsidiary raises debt finance	2.23	3.11	-2.86	42	0.007
Debt equity ratio of subsidiaries in high political risk countries in relation to low risk countries	3.19	3.82	-2.21	36	0.033

Table I-3.2

Disequilibrium v general equilibrium approach to hedging

General equilibrium group=G.E. Grp

Disequilibrium group=M.I. Grp

Question	G.E. Grp	M.I. Grp	T-Value	Degrees of freedom	Two tailed prob.
Achieve the target currency configuration of debt	2.72	3.58	-2.86	63	0.006
Minimise the global cost of capital of the multinational group	3.69	4.27	-1.84	63	0.071
Insure the project with a political risk insurer	1.51	2.30	-2.60	60	0.012
To take advantage of generally higher tax shields on debt	3.24	3.86	-1.89	45	0.065
Host country governments	1.97	2.50	-1.80	62	0.077
Centralisation of economic exposure risk	3.76	4.52	-2.36	59	0.022
Centralisation of debt financing	3.67	4.17	-2.01	63	0.049
Centralisation of equity financing	4.69	4.92	-1.80	59	0.077

Question	G.E. Grp	M.I. Grp	T-Value	Degrees of freedom	Two tailed prob.
Insurance of projects in high political risk countries	4.14	3.38	2.25	52	0.029
Impact upon the subsidiary's WACC when the subsidiary raises debt finance	2.33	2.88	-1.93	54	0.059
Centralisation of the capital structure decision	4.51	4.75	-1.74	64	0.086

Table I-3.3**Comparing Group C with Group D: global optimal structure**

Question	Group C (No) Mean	Group D (Yes) Mean	t- Value	Degrees of freedom	Two tailed Prob.
Achieve the target currency configuration of debt	3.34	2.75	1.87	64	0.067
Structure finances in the form of an equity joint venture	3.00	2.37	2.62	61	0.011
Match values of assets and liabilities in each respective currency	4.00	3.46	1.71	64	0.092
To reduce the incidence of exchange controls	4.08	3.55	1.70	46	0.095
Variability of exchange rate between the home and the host country	3.32	3.81	-2.07	62	0.042
Variability of host country interest rates	3.18	3.77	-2.32	61	0.024
Variability of project cash flows denominated in the home currency	2.97	3.42	-1.82	57	0.075
Centralisation of debt financing	4.13	3.68	1.93	63	0.059

Question	Group C (No) Mean	Group D (Yes) Mean	t- Value	Degrees of freedom	Two tailed Prob.
Impact upon the parent's WACC when the parent raises debt finance	3.21	2.75	1.77	55	0.082

Table I-3.4
Comparing Group E with Group F: Currency mix goal

Question	Group E (No) Mean	Group F (Yes) Mean	t-Value	Degrees of Freedom	Two- tailed prob.
Maximise the value of the tax shield on debt	3.23	4.11	-2.95	64	0.004
Achieve the target currency configuration of debt	2.42	3.62	-4.11	66	0.000
Diversify the investor base	2.00	2.58	-2.46	65	0.016
Allocate assets and liabilities in an overall risk minimising configuration	3.52	4.22	-2.72	66	0.008

Question	Group E (No) Mean	Group F (Yes) Mean	t-Value	Degrees of Freedom	Two- tailed prob.
Allocate assets and liabilities in a portfolio to maximise expected currency returns	2.10	2.78	-2.66	65	0.010
To take advantage of generally higher tax shields on debt	3.09	3.67	-1.78	47	0.082
To reduce the incidence of exchange controls	3.41	4.04	-1.91	29.55	0.066
The usage of index options to hedge interest rate exposure	1.87	1.34	1.78	51	0.080
Centralisation of translation risk subsidiaries	4.57	4.00	2.12	53.24	0.039
Impact upon the subsidiary's WACC when the subsidiary raises debt finance	2.23	2.87	-2.29	54	0.026
Debt equity ratio of subsidiaries in high political risk countries in relation to low risk countries	3.17	3.62	-1.71	45	0.095

Table I-3.5
Comparing Group G with Group H: Financing from countries
with high political risk

Question	Group G (No) Mean	Group H (Yes) Mean	t-Value	Degrees of Freedom	Two tailed Prob
Conform to the industry and cultural norms of the host nation	2.38	3.04	-2.20	63	0.031
Avoid a high political risk country	3.75	2.91	2.76	65	0.007
To lessen exchange rate risk by borrowing in a weak currency	3.00	4.08	-3.02	49.96	0.004
Local debt markets of the host country	3.18	3.71	-1.91	66	0.060
Host country banks	3.60	4.04	-1.85	66	0.069
Host country governments	1.93	2.73	-2.88	65	0.005
Host country inflation rate	3.23	3.79	-2.03	65	0.046
Costs of monitoring the overseas project	2.52	2.00	1.85	58	0.069
"Bail out" options and project exit values	3.19	2.63	2.10	59	0.040

Question	Group G (No) Mean	Group H (Yes) Mean	t-Value	Degrees of Freedom	Two tailed Prob
Costs of insolvency of the project	2.76	1.95	2.73	59	0.008
The usage of other swaps to hedge foreign exchange exposure	2.43	3.10	-1.97	60	0.053
Centralisation of hedging	4.56	4.16	2.07	65	0.043
Debt equity ratio of multinational in relation to if it operated purely within a domestic situation	3.47	3.04	1.91	57	0.061

APPENDIX II
A Factor Analysis of the Main Survey

Table II-5.1

Final Statistics:

Issue	Commun -ality	Factor	Eigen Value	Percentage of Variance
Minimise cost of capital of the parent multinational	.65203	1	1.99472	28.5
Minimise cost of capital of the subsidiaries	.67572	2	1.47083	21.0
Maximise the value of the tax shield on debt	.61769	3	1.17653	16.8
Conform to the industry and cultural norms of the host nation	.84354			
Achieve the target currency configuration of debt	.70540			
Minimise the global cost of capital of the multinational group	.64323			
Diversify the investor base	.50448			

Table II-5.2*Rotated Factor Matrix:*

	Factor 1	Factor 2	Factor 3
Minimise cost of capital of the parent multinational	.24520	.75282	-.15863
Minimise cost of capital of the subsidiaries	-.22466	.53247	.58457
Maximise the value of the tax shield on debt	.67133	.29192	.28599
Conform to the industry and cultural norms of the host nation	.14911	-.16346	.89139
Achieve the target currency configuration of debt	.83401	.09782	-.01588
Minimise the global cost of capital of the multinational group	-.00922	.79975	.05958
Diversify the investor base	.70034	-.10023	-.06291

Table II-5.3
Final Statistics:

Issue	Commun -ality	Factor	Eigen Value	Percentage of Variance
Adapt by conforming to the host government's directives	.57668	4	2.36456	33.8
Avoid a high political risk country	.87603	5	1.29150	18.4
Structure finances in the form of an equity joint venture	.54409	6	1.02238	14.6
Allow host institutions to monitor the company's operations	.55605			
Insure the project with a political risk insurer	.67554			
Politick with the World Bank	.68783			
Lobby other groups and institutions	.76222			

Table II-5.4
Rotated Factor Matrix:

	Factor 4	Factor 5	Factor 6
Adapt by conforming to the host government's directives	.00835	.75927	-.01109
Avoid a high political risk country	.04657	-.05996	.93288
Structure finances in the form of an equity joint venture	.55708	-.15783	-.45699
Allow host institutions to monitor the company's operations	.69359	.19558	.19164
Insure the project with a political risk insurer	.81931	.03263	-.05660
Politick with the World Bank	.65018	.49963	-.12438
Lobby other groups and institutions	.17784	.85409	.03354

Table II-5.5
Final Statistics:

Issue	Commun -ality	Factor	Eigen Value	Percentage of Variance
Allocate assets and liabilities in an overall risk minimising configuration	.75802	7	2.78492	46.4
Match values of assets and liabilities in each respective currency	.66028	8	1.22515	20.4
Allocate debt and equity in a risk minimising configuration	.68267			
Allocate liabilities in proportion to net project cash flows in each currency	.81485			
Allocate assets and liabilities in an overall tax minimising configuration	.64336			
Allocate assets and liabilities in a portfolio to maximise expected currency returns	.45088			

Table II-5.6*Rotated Factor Matrix:*

	Factor 7	Factor 8
Allocate assets and liabilities in an overall risk minimising configuration	.86389	.10828
Match values of assets and liabilities in each respective currency	.80761	.08971
Allocate debt and equity in a risk minimising configuration	.73401	.37935
Allocate liabilities in proportion to net project cash flows in each currency	-.00714	.90266
Allocate assets and liabilities in an overall tax minimising configuration	.21097	.77386
Allocate assets and liabilities in a portfolio to maximise expected currency returns	.29122	.60504

Table II-5.7*Final Statistics:*

Issue	Commun -ality	Factor	Eigen Value	Percentage of Variance
To obtain cheap government financing	.76528	9	2.94143	42.0
To take advantage of generally higher tax shields on debt	.80928	10	1.16546	16.6
To decrease the risk that assets may be expropriated	.55665			
To lessen exchange rate risk by borrowing in a weak currency	.48389			
To match assets against liabilities for subsidiary	.51871			
To reduce the incidence of exchange controls	.59316			
To achieve the correct portfolio configuration of debt	.37993			

Table II-5.8
Rotated Factor Matrix:

	Factor 9	Factor 10
To obtain cheap government financing	.14029	.86348
To take advantage of generally higher tax shields on debt	.11634	.89204
To decrease the risk that assets may be expropriated	.54778	.50654
To lessen exchange rate risk by borrowing in a weak currency	.69237	.06724
To match assets against liabilities for subsidiary	.72020	.00470
To reduce the incidence of exchange controls	.72745	.25293
To achieve the correct portfolio configuration of debt	.56099	.25539

Table II-5.9*Final Statistics:*

Issue	Commun -ality	Factor	Eigen Value	Percentage of Variance
Local debt markets of the host country	.74579	11	2.57944	25.8
Internally generated funds from the parent's reserves	.66714	12	1.76206	17.6
Internally generated funds from the subsidiary's reserves	.56674	13	1.62320	16.2
Local equity markets of the host country	.52310	14	1.02211	10.2
International equity markets	.75506			
International bond markets	.78908			
Host country banks	.57017			
Host country financial institutions	.77422			
Host country governments	.83672			
Co-financing with the World Bank	.75879			

Table II-5.10
Rotated Factor Matrix:

Issue	Factor 11	Factor 12	Factor 13	Factor 14
Local debt markets of the host country	.09328	.83291	-.05482	.20084
Internally generated funds from the parent's reserves	.05160	-.41467	.69632	.08757
Internally generated funds from the subsidiary's reserves	-.09173	.26024	.69611	-.07764
Local equity markets of the host country	.51047	.29775	.36024	.20997
International equity markets	.03540	-.02264	.56268	.66082
International bond markets	.09418	.04860	-.05557	.88021
Host country banks	.28470	.65485	.11502	-.21693
Host country financial institutions	.80043	.33733	-.12579	.06257
Host country governments	.91348	.03413	.03185	-.00993
Co-financing with the World Bank	.56401	-.39776	-.31902	.42507

Table II-5.11*Final Statistics:*

Issue	Commun -ality	Factor	Eigen Value	Percentage of Variance
Level of political risk of the host country	.64684	15	3.81216	38.1
Level of money interest rates of the host country	.48549	16	1.46251	14.6
Level of real interest rates of the host country	.46692	17	1.09627	11.0
Host country inflation rate	.86238			
Exchange rate between the home and host country	.52802			
Transaction costs	.66455			
Taxation treaties signed between the home and host nation	.54107			
Exchange controls	.67453			
Variability of exchange rate between the home and the host country	.71941			
Variability of host country interest rates	.78172			

Table II-5.12*Rotated Factor Matrix:*

	Factor 15	Factor16	Factor 17
Level of political risk of the host country	.27039	-.02889	.75690
Level of money interest rates of the host country	.68741	-.01787	.11242
Level of real interest rates of the host country	.66500	-.11341	.10879
Host country inflation rate	.85735	.08727	.34600
Exchange rate between the home and host country	.69486	.09796	.18865
Transaction costs	.06553	.81250	.00949
Taxation treaties signed between the home and host nation	.08048	.71230	.16501
Exchange controls	.00164	.46210	.67896
Variability of exchange rate between the home and the host country	.73741	.41879	-.01582
Variability of host country interest rates	.75623	.37668	-.26068

Table II-5.13

Final Statistics:

Issue	Commun -ality	Factor	Eigen Value	Percentage of Variance
Variability of project cash flows denominated in foreign currency	.66839	18	2.99694	42.8
Time horizon of project cash flows	.80882	19	1.60731	23.0
Variability of project cash flows denominated in the home currency	.47013			
Costs of monitoring the overseas project	.59249			
Life of the project	.61552			
"Bail out" options and project exit values	.75665			
Costs of insolvency of the project	.69225			

Table II-5.14*Rotated Factor Matrix:*

Issue	Factor 18	Factor 19
Variability of project cash flows denominated in foreign currency	.81543	.05889
Time horizon of project cash flows	.89768	-.05474
Variability of project cash flows denominated in the home currency	.65620	.19881
Costs of monitoring the overseas project	.32806	.69632
Life of the project	.72844	.29138
"Bail out" options and project exit values	.11405	.86234
Costs of insolvency of the project	-.02468	.83165

Table II-5.15*Final Statistics:*

Issue	Commun -ality	Factor	Eigen Value	Percentage of Variance
The usage of index options to hedge foreign exchange exposure	.78030	20	2.55508	42.6
The usage of other options to hedge foreign exchange exposure	.29743	21	1.34299	22.4
The usage of index futures to hedge foreign exchange exposure	.87730			
The usage of other futures to hedge foreign exchange exposure	.55953			
The usage of currency swaps to hedge foreign exchange exposure	.78244			
The usage of other swaps to hedge foreign exchange exposure	.60107			

Table II-5.16*Rotated Factor Matrix:*

Issue	Factor 20	Factor 21
The usage of index options to hedge foreign exchange exposure	.88335	-.00041
The usage of other options to hedge foreign exchange exposure	.41246	.35680
The usage of index futures to hedge foreign exchange exposure	.93662	-.00618
The usage of other futures to hedge foreign exchange exposure	.73212	.15338
The usage of currency swaps to hedge foreign exchange exposure	-.19491	.86282
The usage of other swaps to hedge foreign exchange exposure	.28272	.72190

Table II-5.17*Final Statistics:*

Issue	Commun -ality	Factor	Eigen Value	Percentage of Variance
The usage of index options to hedge interest rate exposure	.84539	22	2.97701	59.5
The usage of other options to hedge interest rate exposure	.67660	23	1.02930	20.6
The usage of index futures to hedge interest rate exposure	.86585			
The usage of other futures to hedge interest rate exposure	.73405			
The usage of swaps to hedge interest rate exposure	.88441			

Table II-5.18*Rotated Factor Matrix:*

Issue	Factor 22	Factor 23
The usage of index options to hedge interest rate exposure	.91746	-.06051
The usage of other options to hedge interest rate exposure	.70876	.41744
The usage of index futures to hedge interest rate exposure	.93041	-.01390
The usage of other futures to hedge interest rate exposure	.76973	.37626
The usage of swaps to hedge interest rate exposure	.03978	.93959

Table II-5.19*Final Statistics:*

Issue	Commun -ality	Factor	Eigen Value	Percentage of Variance
Centralisation of interest rate risk hedging of subsidiaries	.89231	24	1.84246	46.1
Centralisation of transaction risk subsidiaries	.64463	25	1.07980	27.0
Centralisation of translation risk subsidiaries	.62519			
Centralisation of economic exposure risk	.76013			

Table II-5.20

Rotated Factor Matrix:

Issue	Factor 24	Factor 25
Centralisation of interest rate risk hedging of subsidiaries	-.06506	.94238
Centralisation of transaction risk subsidiaries	.80173	-.04314
Centralisation of translation risk subsidiaries	.63985	.46452
Centralisation of economic exposure risk	.86966	-.06176

Table II-5.21*Final Statistics:*

Issue	Commun -ality	Factor	Eigen Value	Percentage of Variance
Centralisation of financing	.81376	26	2.75899	55.2
Centralisation of hedging	.82942	27	1.11640	22.3
Centralisation of capital budgeting	.81772			
Centralisation of cash management	.70638			
Centralisation of tax planning	.70812			

Table II-5.22*Rotated Factor Matrix:*

Issue	Factor 26	Factor 27
Centralisation of financing	.89710	.09472
Centralisation of hedging	.90792	.07145
Centralisation of capital budgeting	-.00998	.90422
Centralisation of cash management	.38613	.74651
Centralisation of tax planning	.74881	.38394

APPENDIX A
DISCRIMINANT FUNCTIONS

Groups: UK and US Companies

ALLOCATION OF CURRENCIES

Table A.1-Summary Table

Step	Wilk's	Chi-square
Entered	Lambda	Significance
Issue		
1 Match values of assets and liabilities in each respective currency	1 .89719	.0077
2 Allocate debt and equity in a risk minimising configuration	2 .80801	.0010
3 Allocate assets and liabilities in an overall risk minimising configuration	3 .70541	.0001
4 Allocate assets and liabilities in an overall tax minimising configuration	4 .69256	.0001
5 Allocate liabilities in proportion to net project cash flows in each currency	5 .67503	.0001
Percent of "grouped" cases correctly classified: 79.41%		

Groups: UK and US Companies

SOURCES OF FINANCE

Table A.2-Summary Table

Step		Wilk's	Chi-square
Entered	Issue	Lambda	Significance
1	Host country governments	.92226	.0234
2	Local equity markets of the host country	.88619	.0222
3	Internally generated funds from the parent's reserves	.86299	.0266
4	Local debt markets of the host country	.83882	.0278
5	Co-financing with the World Bank	.80376	.0197
6	Host country financial institutions	.78396	.0216
7	Internally generated funds from the subsidiary's reserves	.76442	.0231

Percent of "grouped" cases correctly classified: 69.70%

Groups: UK and US Companies

COUNTRY-SPECIFIC CONSIDERATIONS

Table A.3-Summary Table

Step		Wilk's	Chi-square
Entered	Issue	Lambda	Significance
1	Host country inflation rate	.92269	.0249
2	Taxation treaties signed between the home and host nation	.88972	.0267
3	Level of real interest rates of the host country	.85070	.0191
4	Variability of exchange rate between the home and the host country	.82675	.0206

Percent of "grouped" cases correctly classified: 70.15%

Groups: UK and US Companies

CENTRALISATION OF FINANCE FUNCTIONS

Table A.4-Summary Table

Step		Wilk's	Chi-square
Entered	Issue	Lambda	Significance
1	Centralisation of tax planning	.95723	.0906
2	Centralisation of hedging	.86096	.0077
3	Centralisation of financing	.83714	.0095
4	Centralisation of cash management	.81983	.0128
5	Centralisation of capital budgeting	.79962	.0144

Percent of "grouped" cases correctly classified: 75.00%

Groups: A and B

CAPITAL STRUCTURE

Table A.5-Summary Table

Step		Wilk's	Chi-square
Entered	Issue	Lambda	Significance
1	Maximise the value of the tax shield on debt	.90024	.0117
2	Conform to the industry and cultural norms of the host nation	.85255	.0083

Percent of "grouped" cases correctly classified: 66.67%

Groups: A and B

FINANCING STRATEGY

Table A.6-Summary Table

Step		Wilk's	Chi-square
Entered	Issue	Lambda	Significance
1	Structure finances in the form of an equity joint venture	.88849	.0097
2	Insure the project with a political risk insurer	.83537	.0065
3	Allow host institutions to monitor the company's operations	.78893	.0043

Percent of "grouped" cases correctly classified: 68.85%

Groups: A and B

ALLOCATION OF CURRENCIES

Table A.7-Summary Table

Step		Wilk's	Chi-square
Entered	Issue	Lambda	Significance
1	Match values of assets and liabilities in each respective currency	.91605	.0192
2	Allocate assets and liabilities in a portfolio to maximise expected currency returns	.90002	.0382

Percent of "grouped" cases correctly classified: 64.62%

Groups: A and B

FOREIGN EXCHANGE HEDGING

Table A.8-Summary Table

Step		Wilk's	Chi-square
Entered	Issue	Lambda	Significance
1	The usage of other futures to hedge foreign exchange exposure	.93469	.0488
2	The usage of other swaps to hedge foreign exchange exposure	.90658	.0611

Percent of "grouped" cases correctly classified: 58.33%

Groups: C and D

FINANCING STRATEGY

Table A.9-Summary Table

Step		Wilk's	Chi-square
Entered	Issue	Lambda	Significance
1	Structure finances in the form of an equity joint venture	.88916	.0100
2	Avoid a high political risk country	.86827	.0192
3	Politick with the World Bank	.85149	.0304
4	Insure the project with a political risk insurer	.80601	.0185
5	Adapt by conforming to the host government's directives	.78018	.0190

Percent of "grouped" cases correctly classified: 76.67%

Groups: E and F

CAPITAL STRUCTURE

Table A.10-Summary Table

Step		Wilk's	Chi-square
Entered	Issue	Lambda	Significance
1	Achieve the target currency configuration of debt	.80196	.0002
2	Maximise the value of the tax shield on debt	.78286	.0006
3	Conform to the industry and cultural norms of the host nation	.76069	.0009
4	Minimise cost of capital of the parent multinational	.74712	.0016

Percent of "grouped" cases correctly classified: 65.63%

Groups: E and F

ALLOCATION OF CURRENCIES

Table A.11-Summary Table

Step		Wilk's	Chi-square
Entered	Issue	Lambda	Significance
1	Allocate assets and liabilities in a portfolio to maximise expected currency returns	.86275	.0022
2	Allocate assets and liabilities in an overall risk minimising configuration	.81228	.0014
3	Allocate debt and equity in a risk minimising configuration	.77857	.0013
4	Allocate assets and liabilities in an overall tax minimising configuration	.75734	.0017
5	Allocate liabilities in proportion to net project cash flows in each currency	.74364	.0027

Percent of "grouped" cases correctly classified: 72.73%

Groups: E and F

DEBT FINANCING STRATEGY IN HIGH POLITICAL RISK COUNTRIES

Table A.12-Summary Table

Step		Wilk's	Chi-square
Entered	Issue	Lambda	Significance
1	To take advantage of generally higher tax shields on debt	.93235	.0774
2	To reduce the incidence of exchange controls	.89181	.0805

Percent of "grouped" cases correctly classified: 67.35%

Groups: E and F

INTEREST RATE RISK HEDGING

Table A.13-Summary Table

Step		Wilk's	Chi-square
Entered	Issue	Lambda	Significance
1	The usage of index options to hedge interest rate exposure	.94129	.0804
2	The usage of other options to hedge interest rate exposure	.86617	.0275

Percent of "grouped" cases correctly classified: 64.15%

Groups: E and F

CENTRALISATION OF HEDGING FUNCTIONS

Table A.14-Summary Table

Step		Wilk's	Chi-square
Entered	Issue	Lambda	Significance
1	Centralisation of translation risk subsidiaries	.94665	.0784
2	Centralisation of economic exposure risk	.89191	.0406
3	Centralisation of interest rate risk hedging of subsidiaries	.86789	.0489

Percent of "grouped" cases correctly classified: 59.32%

Groups: G and H

FINANCING STRATEGY

Table A.15-Summary Table

Step		Wilk's	Chi-square
Entered	Issue	Lambda	Significance
1	Avoid a high political risk country	.63129	.0000
2	Insure the project with a political risk insurer	.56689	.0000
3	Allow host institutions to monitor the company's operations	.53484	.0000
4	Lobby other groups and institutions	.48925	.0000

Percent of "grouped" cases correctly classified: 84.13%

Groups: G and H

ALLOCATION OF CURRENCIES

Table A.16-Summary Table

Step		Wilk's	Chi-square
Entered	Issue	Lambda	Significance
1	Match values of assets and liabilities in each respective currency	.91435	.0154
2	Allocate debt and equity in a risk minimising configuration	.89238	.0247

Percent of "grouped" cases correctly classified: 59.42%

Groups: G and H

SOURCES OF FINANCE

Table A.17-Summary Table

Step		Wilk's	Chi-square
Entered	Issue	Lambda	Significance
1	Host country governments	.86950	.0029
2	Internally generated funds from the parent's reserves	.83483	.0034
3	Internally generated funds from the subsidiary's reserves	.81964	.0061

Percent of "grouped" cases correctly classified: 79.71%

Groups: G and H

PROJECT-SPECIFIC CONSIDERATIONS

Table A.18-Summary Table

Step		Wilk's	Chi-square
Entered	Issue	Lambda	Significance
1	"Bail out" options and project exit values	.90495	.0156
2	Variability of project cash flows denominated in the home currency	.87723	.0224
3	Costs of monitoring the overseas project	.81123	.0073

Percent of "grouped" cases correctly classified: 70.49%

Groups: G and H

INTEREST RATE RISK HEDGING

Table A.19-Summary Table

Step		Wilk's	Chi-square
Entered	Issue	Lambda	Significance
1	The usage of other options to hedge interest rate exposure	.92485	.0449

Percent of "grouped" cases correctly classified: 60.00%

Groups: G and H

CAPITAL STRUCTURE

Table A.20-Summary Table

Step		Wilk's	Chi-square
Entered	Issue	Lambda	Significance

1	Conform to the industry and cultural norms of the host nation	1	.93814 .0475
---	---	---	--------------

Percent of "grouped" cases correctly classified: 60.00%

Groups: G and H

FINANCING STRATEGY

Table A.21-Summary Table

Step		Wilk's	Chi-square
Entered	Issue	Lambda	Significance

1	Avoid a high political risk country	1	.89912 .0126
2	Allow host institutions to monitor the company's operations	2	.85488 .0106
3	Insure the project with a political risk insurer	3	.80095 .0052
4	Adapt by conforming to the host government's directives	4	.75278 .0028

Percent of "grouped" cases correctly classified: 70.97%

Groups: G and H

DEBT FINANCING STRATEGY IN HIGH POLITICAL RISK COUNTRIES

Table A.22-Summary Table

Step		Wilk's	Chi-square
Entered	Issue	Lambda	Significance
1	To lessen exchange rate risk by borrowing in a weak currency	.81563	.0021
2	To achieve the correct portfolio configuration of debt	.79423	.0050

Percent of "grouped" cases correctly classified: 69.39%

Groups: G and H

SOURCES OF FINANCE

Table A.23-Summary Table

Step		Wilk's	Chi-square
Entered	Issue	Lambda	Significance
1	Host country governments	.90244	.0120
2	Local debt markets of the host country	.88284	.0224
3	Host country financial institutions	.85843	.0263
4	International bond markets	.83897	.0324

Percent of "grouped" cases correctly classified: 67.69%

Groups: G and H

COUNTRY-SPECIFIC CONSIDERATIONS

Table A.24-Summary Table

Step		Wilk's	Chi-square
Entered	Issue	Lambda	Significance
1	Host country inflation rate	.96077	.1167
2	Taxation treaties signed between the home and host nation	.93146	.1147
3	Exchange rate between the home and host country	.91284	.1377

Percent of "grouped" cases correctly classified: 60.61%

Groups: G and H

PROJECT-SPECIFIC CONSIDERATIONS

Table A.25-Summary Table

Step		Wilk's	Chi-square
Entered	Issue	Lambda	Significance
1	Costs of insolvency of the project	.88829	.0097
2	Variability of project cash flows denominated in the home currency	.86611	.0179
3	Costs of monitoring the overseas project	.81716	.0107
4	Variability of project cash flows denominated in foreign currency	.78102	.0087
5	Time horizon of project cash flows	.76473	.0122

Percent of "grouped" cases correctly classified: 76.27%

Groups: I and J

FOREIGN EXCHANGE HEDGING

Table A.26-Summary Table

Step		Wilk's	Chi-square
Entered	Issue	Lambda	Significance
1	The usage of other swaps to hedge foreign exchange exposure	1 .93904	.0530
2	The usage of index options to hedge foreign exchange exposure	2 .88179	.0244
3	The usage of other futures to hedge foreign exchange exposure	3 .81438	.0074

Percent of "grouped" cases correctly classified: 75.81%

Groups: Disequilibrium and General Equilibrium Approach (Debt Financing)

CAPITAL STRUCTURE

Table A.27-Summary Table

Step		Wilk's	Chi-square
Entered	Issue	Lambda	Significance
1	Maximise the value of the tax shield on debt	1 .90551	.0317
2	Minimise cost of capital of the subsidiaries	2 .86905	.0396

Percent of "grouped" cases correctly classified: 68.00%

Groups: Disequilibrium and General Equilibrium Approach (Debt Financing) -DEBT FINANCING STRATEGY IN HIGH POLITICAL RISK COUNTRIES

Table A.28-Summary Table

Step		Wilk's	Chi-square
Entered	Issue	Lambda	Significance
1	To match assets against liabilities for subsidiary	1 .89824	.0509
2	To obtain cheap government financing	2 .81082	.0255
3	To decrease the risk that assets may be expropriated	3 .78257	.0375

Percent of "grouped" cases correctly classified: 66.67%

Groups: Disequilibrium and General Equilibrium Approach (Debt Financing)

SOURCES OF FINANCE

Table A.29-Summary Table

Step		Wilk's	Chi-square
Entered	Issue	Lambda	Significance
1	Host country banks	.91684	.0423
2	Internally generated funds from the parent's reserves	.89303	.0700
3	International equity markets	.85677	.0662
4	Internally generated funds from the subsidiary's reserves	.82770	.0692
5	Host country governments	.80677	.0823
Percent of "grouped" cases correctly classified: 70.59%			

Groups: Disequilibrium and General Equilibrium Approach (Debt Financing)

INTEREST RATE RISK HEDGING

Table A.30-Summary Table

Step		Wilk's	Chi-square
Entered	Issue	Lambda	Significance
1	The usage of other options to hedge interest rate exposure	1 .96184	.2271
2	The usage of index futures to hedge interest rate exposure	2 .91606	.1975
Percent of "grouped" cases correctly classified: 60.00%			

Groups: Disequilibrium and General Equilibrium Approach (Hedging)

CAPITAL STRUCTURE

Table A.31-Summary Table

Step		Wilk's	Chi-square
Entered	Issue	Lambda	Significance
1	Achieve the target currency configuration of debt	.90466	.0155
2	Minimise the global cost of capital of the multinational group	.87746	.0226
3	Diversify the investor base	.86138	.0355

Percent of "grouped" cases correctly classified: 68.75%

Groups: Disequilibrium and General Equilibrium Approach (Hedging)

FINANCING STRATEGY

Table A.32-Summary Table

Step		Wilk's	Chi-square
Entered	Issue	Lambda	Significance
1	Insure the project with a political risk insurer	.85704	.0034
2	Politick with the World Bank	.83230	.0064
3	Lobby other groups and institutions	.80784	.0088
4	Structure finances in the form of an equity joint venture	.77369	.0078

Percent of "grouped" cases correctly classified: 68.33%

Groups: Disequilibrium and General Equilibrium Approach (Hedging)
**DEBT FINANCING STRATEGY IN HIGH POLITICAL RISK
 COUNTRIES**

Table A.33-Summary Table

Step		Wilk's	Chi-square
Entered	Issue	Lambda	Significance
1	To take advantage of generally higher tax shields on debt	.92302	.0650
2	To achieve the correct portfolio configuration of debt	.85921	.0413

Percent of "grouped" cases correctly classified: 62.22%

Groups: Disequilibrium and General Equilibrium Approach (Hedging)
SOURCES OF FINANCE

Table A.34-Summary Table

Step		Wilk's	Chi-square
Entered	Issue	Lambda	Significance
1	Host country governments	.95534	.1021
2	International bond markets	.93403	.1382

Percent of "grouped" cases correctly classified: 60.32%

APPENDIX B
Tests on the Factor Groups

B.2 Issues involved in the capital structure decision

B.2A Inductive Hypothesis 1-Configuration of debt

There are no significant differences between the survey responses from those who scored low on the factor, configuration of debt.

T-tests were performed on the survey items in relation to the groupings formed for factor 1. The significant differences are listed in Table B.1.

Table B.1

Question	Mean NDF Grp	Mean DFG Grp	Value of 't'	D.F.	Two tailed prob
Minimise cost of capital of the parent multinational	3.68	4.31	-2.02	64	0.047
Maximise the value of the tax shield on debt	3.06	4.20	-4.08	64	0.000
Achieve the target currency configuration of debt	2.16	3.89	-7.36	64	0.000
Diversify the investor base	1.61	2.86	-6.58	64	0.000
Allocate assets and liabilities in an overall risk minimising configuration	3.43	4.37	-3.83	40.66	0.000
Allocate debt and equity in a risk minimising configuration	3.17	3.83	-2.54	61.30	0.014

To decrease the risk that assets may be expropriated	3.43	4.22	-2.36	44	0.023
(To lessen exchange rate risk by borrowing in a weak currency	3.08	3.92	-2.01	45	0.050
To reduce the incidence of exchange controls	3.34	4.17	-2.61	44	0.012
Internally generated funds from the subsidiary's reserves	3.25	3.94	-3.09	64	0.003
The usage of currency swaps to hedge foreign exchange exposure	3.33	3.94	-2.27	60	0.027
The usage of other swaps to hedge foreign exchange exposure	2.33	2.97	-1.97	57	0.054
The usage of swaps to hedge interest rate exposure	3.45	4.23	-2.36	50	0.022

Capital Structure

The dominant factor group (DFG 1) placed greater emphasis than the non-dominant factor group (NDFG 1) upon minimising the cost of capital of the parent multinational, maximising the value of the tax shield on debt, achieving the target configuration of debt and diversification of the investor base. These are consistent with the interpretation of factor 1 which was the configuration of debt.

Allocation of currencies

The dominant factor group (DFG 1) placed greater importance than the non-dominant factor group (NDFG 1) upon the allocation of assets and liabilities in an overall risk minimising configuration and the allocation of

debt and equity in a risk minimising configuration. Both of these policies are consistent with the interpretation of factor 1, the configuration of debt.

Financing considerations in relation to high political risk countries

In relation to the importance of various issues related to raising finance from high political risk countries. The dominant factor group (DFG 1) placed greater emphasis than the non-dominant factor group (NDFG 1) upon decreasing the risk that assets may be expropriated, to lessen exchange rate risk by borrowing in a weak currency and reducing the incidence of exchange controls. All these issues relate to borrowing locally which are consistent with the interpretation of the factor, the configuration of debt.

Sources of Finance

The dominant factor group (DFG 1) placed greater emphasis than the non-dominant factor group (NDFG 1) upon internally generated funds from the subsidiary's reserves.

Hedging

The dominant factor group (DFG 1) placed greater emphasis than the non-dominant factor group (NDFG 1) upon the usage of swaps in relation to hedging exchange rate and interest rate risk.

B.2B Inductive Hypothesis 2-The minimisation of cost of capital

There are no significant differences between the survey responses from those who scored low on the factor, cost of capital.

T-tests were performed on the survey items in relation to the groupings formed for factor 2. The significant differences are listed in Table B.2.

Table B.2

Question	Mean NDF Grp	Mean DF Grp	Value of 't'	D.F.	Two tailed prob
Minimise cost of capital of the parent multinational	2.96	4.79	-6.93	33.41	0.000
Minimise cost of capital of the subsidiaries	2.46	3.26	-2.59	64	0.012
Minimise the global cost of capital of the multinational group	3.03	4.79	-7.08	31.29	0.000
Adapt by conforming to the host government's directives	3.78	3.30	1.90	61	0.063
Insure the project with a political risk insurer	1.66	2.22	-2.18	59.69	0.033
Allocate assets and liabilities in an overall tax minimising configuration	3.43	3.86	-1.97	63	0.053
International equity markets	1.35	2.00	-2.78	57.90	0.007
Level of real interest rates of the host country	3.70	4.29	-2.09	36.12	0.044

The usage of index options to hedge interest rate exposure	1.96	1.33	2.06	31.26	0.048
Centralisation of capital budgeting	3.03	3.63	-2.07	64	0.043
Centralisation of debt financing	3.50	4.13	-2.51	62	0.015
Centralisation of the capital structure decision	4.36	4.78	-3.13	63	0.003

Capital structure

In relation to the importance of the issues involved in the multinational's capital structure decision, the dominant factor group (DFG 2) emphasised more strongly than the non-dominant factor group (NDFG 2) the minimisation of the cost of the capital of the parent, subsidiaries and the global cost of capital. The differences were large, indicating a strong difference between the non-dominant factor group (NDFG 2) and dominant factor group (DFG 2). They are consistent with the interpretation of factor 2, the minimisation of the cost of capital.

Strategies adopted in relation to financing

In relation to the political strategies adopted in relation to financing choices, the dominant factor group (DFG 2) stressed lesser importance than the non-dominant factor group (NDFG 2) upon adapting by conforming to the host government's directives. This is consistent with minimising the cost of capital factor, since companies will be reluctant to adapt by conforming to the host government's directives, if they believe that they are able to attain an optimal debt equity mix, which minimises the cost of capital and simultaneously maximises the value of the firm. The dominant factor group (DFG 2) placed greater emphasis than the non-

dominant factor group (NDFG 2) upon insuring the project with a political risk insurer. However, overall insurance of projects with a political risk insurer was of low priority.

Allocation of currencies

In relation to the allocation of resources within the multinational enterprise, the dominant factor group (DFG 2) tended to place greater importance than the non-dominant factor group (NDFG 2) upon the allocation of assets and liabilities in a tax minimising configuration. This is consistent with the interpretation of the factor of minimising the cost of capital since the multinational needs to minimise the tax liability.

Sources of finance

The dominant factor group (DFG 2) placed greater importance upon international equity markets as a source of finance than the non-dominant factor group (NDFG 2). However this was of generally low importance for the entire sample.

Country-specific considerations in relation to financing

The dominant factor group (DFG 2) placed greater importance upon the level of real interest rates than the non-dominant factor group (NDFG 2).

Hedging

The non-dominant factor group (NDFG 2) placed greater importance upon the usage of index options to hedge interest rate risk than the dominant factor group (DFG 2).

Centralisation

The dominant factor group (DFG 2) indicated greater centralisation of capital budgeting decisions than the non-dominant factor group (NDFG 2). With regard to the centralisation of debt financing of overseas subsidiaries, the dominant factor group (DFG 2) indicated a higher level of centralisation than the non-dominant factor group (NDFG 2). Capital structure decisions were more centralised in the dominant factor group (DFG 2) than they were in the non-dominant factor group (NDFG 2). Therefore, the factor which was interpreted as minimising the cost of capital is not only associated with the centralisation of the finance function but also with capital budgeting.

B.2C Inductive Hypothesis 3-The subsidiary decision

There are no significant differences between the survey responses from those who scored low on the factor, the subsidiary decision.

T-tests were performed on the survey items in relation to the groupings formed for factor 3. The significant differences are listed in Table B.3.

Table B.3

Question	Mean NDF Grp	Mean DF Grp	Value of 't'	D.F.	Two tailed prob
Minimise cost of capital of the parent multinational	4.33	3.69	2.02	64	0.047
Minimise cost of capital of the subsidiaries	2.36	3.48	-3.89	64	0.000
Maximise the value of the tax shield on debt	3.30	4.03	-2.44	64	0.018
Conform to the industry and cultural norms of the host nation	1.72	3.45	-8.80	64	0.000
Adapt by conforming to the host government's directives	3.10	3.88	-3.28	50.26	0.002
Politick with the World Bank	1.23	1.63	-2.32	61	0.024
To obtain cheap government financing	2.76	3.48	-2.06	46	0.045
To take advantage of generally higher tax shields on debt	2.80	3.85	-3.35	44	0.002
To lessen exchange rate risk by borrowing in a weak currency	2.86	4.03	-2.99	45	0.004
To reduce the incidence of exchange controls	3.40	4.03	-1.94	44	0.059
Host country banks	3.54	4.00	-2.09	64	0.041
Host country financial institutions	2.31	3.09	-2.98	63	0.004
Host country governments	1.69	2.66	-3.72	63	0.000
Variability of project cash flows denominated in the home currency	2.86	3.47	-2.39	56	0.020

Centralisation of interest rate risk hedging of subsidiaries	4.67	4.16	2.07	44.42	0.045
Centralisation of financing	4.69	4.33	1.96	64	0.054
Centralisation of hedging	4.70	4.24	2.58	62	0.012
Centralisation of capital budgeting	3.75	3.00	2.72	64	0.008
Centralisation of debt financing	4.19	3.55	2.57	62	0.013
Centralisation of the capital structure decision	4.81	4.39	3.11	52.79	0.003

Capital Structure

The dominant factor group (DFG 3) placed lesser emphasis upon the minimisation of the cost of capital of the parent multinational. However the dominant factor group (DFG 3) placed greater emphasis upon the minimisation of the cost of capital of the subsidiaries, which is consistent with the interpretation of the factor, the subsidiary decision. This implies a degree of decentralisation of the capital structure decision. The dominant factor group (DFG 3) placed more importance than the non-dominant factor group (NDFG 3) upon the maximisation of the tax shield on debt and conforming to the industry and cultural norms of the host country which are consistent with the interpretation of the factor.

Strategies adopted in relation to financing

The dominant factor group (DFG 3) placed greater emphasis than the non-dominant factor group (NDFG 3) upon adapting by conforming to the host government's directives, politicking with the World Bank. These are consistent with the subsidiary needing to be more autonomous and proactive in relation to its financing choices.

Financing considerations in relation to high political risk countries

In relation to raising debt finance from a high political risk country, the dominant factor group (DFG 3) placed greater emphasis than the non-dominant factor group (NDFG 3) upon obtaining cheap government finance, to reducing exchange rate risk by borrowing in a weak currency and taking advantage of generally higher tax shields on debt. These policies are consistent with the subsidiary decision.

Sources of finance

There were also significant differences in relation to the sources of finance. The dominant factor group (DFG 3) stressed greater importance than the non-dominant factor group (NDFG 3) upon finance from host country banks, government financing and other host country financial institutions. This is consistent with greater autonomy of the subsidiary since it would need to obtain finance locally.

Project-specific considerations

The dominant factor group (DFG 3) found the variability of project cash flows denominated in the home currency to be of greater importance than for the non-dominant factor group (NDFG 3).

Centralisation

In relation to the centralisation of interest rate risk of subsidiaries, the dominant factor group (DFG 3) tended to be less centralised than the non-

dominant factor group (NDFG 3). Further, the dominant factor group (DFG 3) was less centralised than the non-dominant factor group (NDFG 3) in financing, hedging, capital budgeting, cash management and debt financing of overseas subsidiaries. All these are consistent with the implied decentralisation of decision-making.

B.3 Strategies adopted in relation to financing

B.3A Inductive Hypothesis 4-Financial management policies to mitigate political risk

There are no significant differences between the survey responses from those who scored low on the factor, utilising financial management policies to mitigate political risk.

T-tests were performed on the survey items in relation to the groupings formed for factor 4. The significant differences are listed in Table B.4.

Table B.4

Question	Mean NDF Grp	Mean DF Grp	Value of 't'	D.F.	Two tailed prob
Achieve the target currency configuration of debt	2.65	3.58	-3.12	56.72	0.003
Structure finances in the form of an equity joint venture	2.30	3.19	-3.71	60	0.000
Allow host institutions to monitor the company's operations	1.53	2.77	-5.79	60	0.000

Insure the project with a political risk insurer	1.25	2.77	-6.11	33.05	0.000
Politick with the World Bank	1.11	1.81	-3.98	30.12	0.000
Host country banks	3.61	4.08	-2.18	60	0.040
Co-financing with the World Bank	1.13	1.56	-2.29	29.47	0.029
Exchange controls	3.54	3.92	-1.73	59	0.089
Variability of project cash flows denominated in the home currency	3.00	3.48	-1.95	52	0.056
Costs of insolvency of the project	2.23	2.96	-2.56	53	0.013
Centralisation of translation risk subsidiaries	3.97	4.65	-2.60	52.12	0.012
Centralisation of economic exposure risk	3.84	4.38	-1.73	49.09	0.089
Insurance of projects in high political risk countries	4.03	3.25	2.14	47	0.038
The impact of raising debt finance from countries with high rates of corporation tax upon the value of the multinational enterprise	3.37	3.75	-2.26	57	0.027

Capital structure

The dominant factor group (DFG 4) placed greater importance than the non-dominant factor group (NDFG 4) upon achieving a target configuration of debt, in relation to the issues involved in the capital structure decision.

Strategies adopted in relation to financing

The dominant factor group (DFG 4) placed more importance than the non-dominant factor group (NDFG 4) upon structuring finances in the form of an equity joint venture, allowing host country institutions to monitor the company's operations and insuring the project with a political risk insurer. As a test of consistency, the dominant factor group (DFG 4) indicated that they insured projects more often than the non-dominant factor group (NDFG 4).

Financing considerations in relation to high political risk countries

The dominant factor group (DFG 4) placed more importance than the non-dominant factor group (NDFG 4) upon the importance that exchange controls had in raising finance from overseas.

Sources of finance

The dominant factor group (DFG 4) placed greater importance than the non-dominant factor group (NDFG 4) upon host country banks and cofinancing from the world bank. This would reflect the greater importance of local sources of finance associated with an active financial management policy in high political risk countries.

Project-specific considerations

The dominant factor group (DFG 4) placed greater importance than the non-dominant factor group (NDFG 4) upon the variability of project cash

flows denominated in home currency and the costs of insolvency of the project.

Centralisation

In relation to the issue on the centralisation of the types of risks hedged, the dominant factor group (DFG 4) was more centralised than the non-dominant factor group (NDFG 4) in the translation and economic exposure risk of its subsidiaries.

Hedging

Companies in the dominant factor group (DFG 4) believed that engaging in hedging increased the value of the firm to a greater extent than the non-dominant factor group (NDFG 4). This would support a disequilibrium rationale behind pursuing an active financial management policy in high political risk countries.

B.3B Inductive Hypothesis 5-Politicking in relation to financing choices

There are no significant differences between the survey responses from those who scored low on the factor, engaging in politicking.

T-tests were performed on the survey items in relation to the groupings formed for factor 5. The significant differences are listed in Table B.5.

Table B.5

Question	Mean NDF Grp	Mean DF Grp	Value of 't'	D.F.	Two tailed prob
Conform to the industry and cultural norms of the host nation	2.17	3.09	-3.38	58	0.001
Diversify the investor base	2.03	2.52	-1.99	59	0.051
Adapt by conforming to the host government's directives	2.90	4.06	-5.70	60	0.000
Politick with the World Bank	1.10	1.69	-3.69	60	0.000
Lobby other groups and institutions	1.16	2.56	-7.70	41.19	0.000
Match values of assets and liabilities in each respective currency	4.13	3.59	1.90	60	0.063
Allocate debt and equity in a risk minimising configuration	3.80	3.21	2.11	60	0.039
Internally generated funds from the subsidiary's reserves	3.43	3.88	-2.06	60	0.044
Transaction costs	3.50	3.16	-2.16	59	0.011
The usage of other futures to hedge interest rate exposure	1.67	2.38	-1.86	48	0.069

Capital structure

In relation to the elements involved in the capital structure decision, the dominant factor group (DFG 5) placed greater importance than the non-dominant factor group (NDFG 5) upon the conforming to industry and cultural norms of host country and diversifying the investor base. This is consistent with the interpretation of the factor, adapting through politicking.

Strategies adopted in relation to financing

The dominant factor group (DFG 5) placed greater importance than the non-dominant factor group (NDFG 5) upon adapting by conforming to the host government's directives, politicking with the World Bank and lobbying groups and institutions. This is consistent with the interpretation of the factor, engaging in politicking in relation to financing choices.

The allocation of currencies

The dominant factor group (DFG 5) placed lesser emphasis than the non-dominant factor group (NDFG 5) upon matching the values of assets and liabilities in each respective currency and the allocation of debt and equity in a risk minimising portfolio. These policies are financial management policies and would therefore not apply as strongly to companies engaged solely in political lobbying.

Sources of finance

The dominant factor group (DFG 5) placed greater emphasis than the non-dominant factor group (NDFG 5) upon the utilisation of internally generated funds from the subsidiary reserves.

Country-specific considerations in relation to financing

The dominant factor group (DFG 5) placed greater importance than the non-dominant factor group (NDFG 5) upon transaction costs involved in raising finance from overseas.

Hedging

The dominant factor group (DFG 5) placed greater emphasis upon the non-dominant factor group (NDFG 5) upon the usage of other futures for hedging interest rate risk.

B.3C Inductive Hypothesis 6-Political risk avoidance

There are no significant differences between the survey responses from those who scored low on the factor, avoiding a high political risk country.

T-tests were performed on the survey items in relation to the groupings formed for factor 6. The significant differences are listed in Table B.6.

Table B.6

Question	Mean NDF Grp	Mean DF Grp	Value of 't'	D.F.	Two tailed prob
Avoid a high political risk country	2.65	4.55	-11.22	60	0.000
Allocate liabilities in proportion to net project cash flows in each currency	3.06	2.48	2.33	60	0.023
Internally generated funds from the parent's reserves	3.39	2.65	2.59	60	0.012
"Bail out" options and project exit values	2.81	3.36	-2.25	53	0.029

The discount rate used to assess a project's overseas cash flow in relation to the domestic situation	3.51	3.14	2.26	53	0.028
Debt equity ratio of multinational in relation to if it operated purely within a domestic situation	3.10	3.61	-2.27	53	0.027

Strategies adopted in relation to financing

The dominant factor group (DFG 6) placed greater emphasis than the non-dominant factor group (NDFG 6) upon the avoidance of a high political risk country. This is consistent with the interpretation of the factor.

The allocation of currencies

The dominant factor group (DFG 6) represents respondents who avoid political risk countries, therefore the non-dominant factor group (NDFG 6) are those respondents who are not risk averse to high political risk countries. The dominant factor group (DFG 6) placed less importance than the non-dominant factor group (NDFG 6) upon allocating assets and liabilities in proportion to net project cash flows in each currency. This policy is associated with companies who operate in countries with high political risk, since it is similar to matching values of assets with liabilities, but is more cash flow orientated.

Sources of finance

The dominant factor group (DFG 6) placed less importance than the non-dominant factor group (NDFG 6) upon internally generated funds from

parent reserves as a financing source. This could be related to the issue of risk aversion, since when a multinational operates in a high political risk countries it may need to inject share capital from its own reserves. However, despite this, it was found that multinationals prefer to borrow locally.

Project-specific considerations in relation to financing

The dominant factor group (DFG 6) placed more importance than the non-dominant factor group (NDFG 6) upon bail out options and project exit values, indicating a risk averse stature associated with risk avoidance. Further, the dominant factor group (DFG 6) used approximately the same discount rate to discount international projects as the domestic situation, reinforcing the risk averse/risk neutral profile, whereas the non-dominant factor group (NDFG 6) tended to use a slightly higher discount rate than the domestic situation. Perhaps, this supports a political risk framework in relation to capital budgeting decisions where a higher discount rate is used than the domestic situation, to compensate for the higher risks involved.

Debt equity ratio of multinational v domestic situation

The dominant factor group (DFG 6) believed it had a higher debt equity ratio than if it operated within a purely domestic situation, whereas the non-dominant factor group (NDFG 6) believed they had the same debt equity ratio as the domestic situation. Therefore it can be deduced that multinationals that operate in countries with high political risks tend to have a lower debt equity relative to the domestic situation, than companies that do not operate in high political risk countries. Thus since multinationals with operations in high political risk countries are exposed

to greater risks, they are forced to lower their gearing to safeguard against the increased uncertainty they encounter.

B.4 The allocation of currencies

B.4A Inductive Hypothesis 7-Risk minimising configurations

There are no significant differences between the survey responses from those who scored low on the factor, currency risk minimising configurations ("currency cocktails").

T-tests were performed on the survey items in relation to the groupings formed for factor 7. The significant differences are listed in Table B.7.

Table B.7

Question	Mean NDF Grp	Mean DF Grp	Value of 't'	D.F.	Two tailed prob
Minimise cost of capital of the parent multinational	3.52	4.29	-2.43	65	0.018
Maximise the value of the tax shield on debt	3.30	3.95	-2.08	63	0.041
Achieve the target currency configuration of debt	2.56	3.33	-2.45	65	0.017
Avoid a high political risk country	2.92	3.81	-3.04	66	0.003
Lobby other groups and institutions	2.30	1.71	1.96	32.98	0.058
Allocate assets and liabilities in an overall risk minimising configuration	2.88	4.44	-6.48	30.68	0.000

Match values of assets and liabilities in each respective currency	2.44	4.44	-8.53	32.43	0.000
Allocate debt and equity in a risk minimising configuration	2.64	3.97	-5.95	66	0.000
To take advantage of generally higher tax shields on debt	3.04	3.72	-2.10	48	0.041
To decrease the risk that assets may be expropriated	3.38	4.14	-2.36	48	0.023
To lessen exchange rate risk by borrowing in a weak currency	2.90	3.86	-2.48	48	0.017
To match assets against liabilities for subsidiary	2.95	4.24	-4.21	47	0.000
To reduce the incidence of exchange controls	3.38	4.10	-2.17	30.35	0.038
To achieve the correct portfolio configuration of debt	2.10	3.14	-3.08	47	0.003
Internally generated funds from the subsidiary's reserves	3.16	3.81	-2.41	36.16	0.021
Host country banks	3.32	3.93	2.68	66	0.009
Centralisation of interest rate risk hedging of subsidiaries	4.71	4.24	1.82	57.97	0.025
Debt equity ratio of multinational in relation to if it operated purely within a domestic situation	3.05	3.47	-1.91	57	0.061
Impact upon the parent's WACC when the parent raises debt finance	2.65	3.22	-2.16	56	0.035
Centralisation of the capital structure decision	4.40	4.74	-2.15	35.49	0.038

The impact of raising debt finance from countries with high rates of corporation tax upon the value of the multinational enterprise	3.29	3.60	-1.90	62	0.062
---	------	------	-------	----	-------

Capital structure

The dominant factor group (DFG 7) placed greater emphasis than the non-dominant factor group (NDFG 7) upon the elements involved in the capital structure decision relating to the minimisation of the cost of capital of the parent multinational, maximising the value of tax shield on debt and achieving the target currency configuration. These are consistent with the interpretation of the factor, risk minimisation.

Strategies adopted in relation to financing

The dominant factor group (DFG 7) placed greater emphasis than the non-dominant factor group (NDFG 7) upon avoiding a high political risk country and lobbying in relation to financing strategies .

The allocation of currencies

The dominant factor group (DFG 7) place greater emphasis than the non-dominant factor group (NDFG 7) upon the allocation of assets and liabilities in an overall risk minimising configuration, matching values of assets and liabilities in each currency, allocating debt and equity in a risk minimising configuration. These support the interpretation of the factor, risk minimising policies.

Financing considerations in relation to high political risk countries

In relation to the importance of elements involved in raising debt finance from a high political risk country, the dominant factor group (DFG 7) placed more emphasis than the non-dominant factor group (NDFG 7) upon taking advantage of generally higher tax shields on debt, to decrease the risk that assets may be expropriated, to lessen the risk of exchange rate risk by borrowing in a weak currency, to match assets against liabilities for subsidiary, to reduce the incidence of exchange controls and to achieve the correct portfolio configuration of debt. These are consistent with portfolio and matching policies which support risk minimisation.

Sources of finance

The dominant factor group (DFG 7) placed greater emphasis than the non-dominant factor group (NDFG 7) upon the usage of internally generated funds from the subsidiary reserves and host country banks. This is consistent with matching and hence risk minimisation. As demonstrated earlier, multinationals prefer local debt finance above all other financing sources.

Centralisation

In relation to centralisation, the dominant factor group (DFG 7) was less centralised than the non-dominant factor group (NDFG 7) in the hedging of interest rate risk. In contrast, the dominant factor group (DFG 7) made capital structure decisions on a greater centralised basis than the non-dominant factor group (NDFG 7). Interest rate risk is thus managed on a greater decentralised basis for the dominant factor group (DFG 7).

Debt equity ratio of multinational v domestic situation

The dominant factor group (DFG 7) believed that it had a slightly higher debt equity ratio than if it operated within a purely domestic situation, as opposed to the non-dominant factor group (NDFG 7) which believed it had the same debt equity ratio as if it operated within a purely domestic situation. This supports the interpretation of the risk minimisation factor since those companies that operated risk minimising policies allowed themselves to have higher debt equity ratios than if they were operating within the purely domestic situation.

Impact of parent raising debt finance upon the weighted average cost of capital of the parent multinational

There were also significant differences between the groups in relation to whether they believed the parent multinational is able to lower the weighted average cost of capital when it raises debt finance. The dominant factor group (DFG 7) believed it could lower its parent's weighted average cost of capital to a greater extent than the non-dominant factor group (NDFG 7).

Hedging

In relation to what the finance manager believed when the multinational engages in hedging, the dominant factor group (DFG 7) believed hedging increased the value of the firm to a greater extent than the non-dominant factor group (NDFG 7). The factor's interpretation is related to hedging since "currency cocktails" are viewed as a form of hedging. Therefore in

this context, multinational finance directors believe that hedging in this fashion increases the value of the multinational enterprise.

B.4B Inductive Hypothesis 8-Non-risk minimising policies

There are no significant differences between the survey responses from those who scored low on the factor, non-risk minimising policies.

T-tests were performed on the survey items in relation to the groupings formed for factor 8. The significant differences are listed in Table B.8.

Table B.8

Question	Mean NDF Grp	Mean DF Grp	Value of 't'	D.F.	Two tailed prob
Conform to the industry and cultural norms of the host nation	2.25	3.13	-3.24	63	0.002
Minimise the global cost of capital of the multinational group	3.72	4.39	-2.33	62.52	0.023
Avoid a high political risk country	3.81	3.12	2.33	66	0.023
Structure finances in the form of an equity joint venture	2.38	3.03	-2.79	65	0.007
Politick with the World Bank	1.28	1.62	-1.99	63	0.051
Allocate debt and equity in a risk minimising configuration	3.11	3.90	-3.17	66	0.002
Allocate liabilities in proportion to net project cash flows in each currency	2.06	3.72	-10.44	66	0.000

Allocate assets and liabilities in an overall tax minimising configuration	3.08	4.31	-6.89	66	0.000
Allocate assets and liabilities in a portfolio to maximise expected currency returns	2.00	2.97	-4.22	66	0.000
To obtain cheap government financing	2.85	3.54	-1.96	49	0.056
To take advantage of generally higher tax shields on debt	2.92	4.00	-3.66	48	0.001
To achieve the correct portfolio configuration of debt	2.19	3.30	-3.41	47	0.001
Local equity markets of the host country	1.44	2.00	-2.34	66	0.022
International equity markets	1.42	2.16	-2.98	66	0.004
Host country governments	1.88	2.61	-2.65	65	0.010
Taxation treaties signed between the home and host nation	3.26	3.80	-2.33	63	0.023
Costs of monitoring the overseas project	2.13	2.70	-2.09	58	0.041
Life of the project	3.06	3.60	-2.20	59	0.031
Impact upon the subsidiary's WACC when the subsidiary raises debt finance	2.31	2.89	-2.09	55	0.041

Capital structure

A higher degree of importance was associated with the dominant factor group (DFG 8) than the non-dominant factor group (NDFG 8) in relation

to conforming to the cultural and industry norms of the host country and minimising the global cost of capital of the multinational group.

Strategies adopted in relation to financing

The dominant factor group (DFG 8) stressed lesser importance than the non dominant group upon avoiding a high political risk country, which supports the interpretation of the non-risk considerations in the allocation of currencies within the multinational. However, the dominant factor group (DFG 8) placed greater importance than the non-dominant factor group (NDFG 8) upon structuring finances in the form of an equity joint venture and politicking with the World Bank.

The allocation of currencies

The dominant factor group (DFG 8) placed greater importance than the non-dominant factor group (NDFG 8) upon the allocation of debt and equity in a risk minimising configuration, the allocation of liabilities in proportion to net project cash flows, the allocation of assets and liabilities in an overall tax minimising configuration and the allocation of assets and liabilities in a portfolio to maximise expected currency returns. These reinforce the interpretation of the factor, non-risk allocation policies.

Financing considerations in relation to high political risk countries

In relation to the issues involved in raising finance from a high political risk country, the dominant factor group (DFG 8) stressed greater importance than the non-dominant factor group (NDFG 8) upon obtaining cheap government financing, taking advantage of generally higher tax

shields on debt and to achieve the correct currency configuration of debt. This is indicative of non-risk considerations with greater emphasis placed upon disequilibrium such as taxation and cheap government finance.

Sources of finance

There was a tendency for the dominant factor group (DFG 8) to put more emphasis than the non-dominant factor group (NDFG 8) upon local equity markets of host country, international equity markets and host country governments. The usage of local equity is consistent with the greater importance placed upon equity joint ventures. The utilisation of host country governments as a source of finance is synonymous with "cheap finance" as highlighted in the above section.

Country-specific considerations in relation to financing

The dominant factor group (DFG 8) placed greater emphasis than the non-dominant factor group (NDFG 8) upon the importance of taxation treaties signed with their home country.

Project-specific considerations in relation to financing

The dominant factor group (DFG 8) was more concerned than the non-dominant factor group (NDFG 8) about the costs of monitoring the project and the life of the project.

Impact of the subsidiary raising debt finance upon the weighted average cost of capital of the subsidiary

There were also significant differences between the non-dominant factor group (NDFG 8) and the dominant factor group (DFG 8) in relation to whether the finance manager believed that when the subsidiary raised debt finance, this altered the weighted average cost of capital of the subsidiary. The dominant factor group (DFG 8) believed that this strategy had a greater effect upon lowering the weighted average cost of capital, than the alternate non-dominant factor group (NDFG 8). This result is consistent with the non-risk considerations and also attempting to maximise the tax shield on debt and obtaining cheap government finance.

B.5 Raising debt from high political risk countries

B.5A Inductive Hypothesis 9-Financial management policies to mitigate risk in high political risk countries

There are no significant differences between the survey responses from those who scored low on the factor, political risk minimisation via financial management policies.

T-tests were performed on the survey items in relation to the groupings formed for factor 9. The significant differences are listed in Table B.9.

Table B.9

Question	Mean NDF Grp	Mean DF Grp	Value of 't'	D.F.	Two tailed prob
Conform to the industry and cultural norms of the host nation	2.27	3.12	-2.54	44	0.015
Achieve the target currency configuration of debt	2.58	3.29	-1.95	46	0.057
Match values of assets and liabilities in each respective currency	3.04	4.16	-3.13	38.65	0.003
Allocate debt and equity in a risk minimising configuration	3.04	3.92	-3.08	47	0.003
Allocate assets and liabilities in a portfolio to maximise expected currency returns	2.17	2.72	-1.99	47	0.052
To decrease the risk that assets may be expropriated	3.45	4.24	-2.49	47	0.016
To lessen exchange rate risk by borrowing in a weak currency	2.63	4.36	-5.59	47	0.000
To match assets against liabilities for subsidiary	3.00	4.40	-4.85	47	0.000
To reduce the incidence of exchange controls	3.25	4.40	-4.19	37.90	0.000
To achieve the correct portfolio configuration of debt	2.00	3.40	-4.66	47	0.000
Local debt markets of the host country	3.08	3.72	-2.18	39.35	0.036
Host country banks	3.38	4.16	-3.10	47	0.003
Host country governments	1.96	2.88	-3.12	46	0.003

Host country inflation rate	3.00	3.92	-3.26	46	0.002
Variability of project cash flows denominated in the home currency	2.87	3.59	-2.58	43	0.014
Costs of monitoring the overseas project	2.00	2.67	-2.24	42	0.030
The usage of currency swaps to hedge foreign exchange exposure	3.25	4.04	-2.53	32.57	0.016
The usage of other swaps to hedge foreign exchange exposure	1.95	3.26	-4.09	44	0.000
Centralisation of interest rate risk hedging of subsidiaries	4.68	4.08	2.13	34.69	0.040

Capital structure

The dominant factor group (DFG 9) indicated a higher level of importance than the non-dominant factor group (NDFG 9) in conforming to the industry and the cultural norms of the host country and achieving the target currency configuration of debt. This is consistent with the interpretation of the factor, financial management policies implemented to overcome political risk.

The allocation of currencies

The dominant factor group (DFG 9) placed more importance than the non-dominant factor group (NDFG 9) upon matching the multinational's assets and liabilities in each currency, allocating debt and equity in a risk minimising portfolio and allocating assets and liabilities in a portfolio to maximise expected currency returns.

Financing considerations in relation to high political risk countries

The dominant factor group (DFG 9) placed greater emphasis than the non-dominant factor group (NDFG 9) upon decreasing the risk that assets may be expropriated, to lessen the exchange rate risk by borrowing in a weak currency, to match assets against liabilities for the subsidiary, to reduce the incidence of exchange controls and to achieve the correct portfolio configuration on debt. All these issues are consistent with the interpretation of the factor.

Sources of finance

In relation to financing sources, the dominant factor group (DFG 9) indicated greater importance of local debt markets of the host country, host country banks and governments. This is consistent with the matching concept, and the financial management policy factor to overcome political risk.

Country-specific considerations in relation to financing

In relation to country specific elements, the dominant factor group (DFG 9) stressed greater importance than the non-dominant factor group (NDFG 9) of the host country inflation rate. This is consistent with the local borrowing issue outlined above.

Project-specific considerations in relation to financing

In relation to project specific issues, the variability of project cash flows denominated in the home currency and costs of monitoring the project,

was of greater importance to the dominant factor group (DFG 9) than it was for the non-dominant factor group (NDFG 9).

Hedging

The usage of swaps in the hedging of foreign exchange rate risk and interest rate risk, was more important for the dominant factor group (DFG 9) than it was for the non-dominant factor group (NDFG 9). This connects the greater usage of local borrowings by the dominant factor group (DFG 9) than the non-dominant factor group (NDFG 9).

Centralisation

The degree of centralisation of interest rate risk of subsidiaries was less importance to the dominant factor group (DFG 9) than it was for the non-dominant factor group (NDFG 9).

B.5B Inductive Hypothesis 10-Disequilibrium rationale for financing subsidiaries in a high political risk country

There are no significant differences between the survey responses from those who scored low on the factor, financial inducements in order to attract foreign direct investment, i.e. disequilibrium created by the host country government.

T-tests were performed on the survey items in relation to the groupings formed for factor 10. The significant differences are listed in Table B.10.

Table B.10

Question	Mean NDF Grp	Mean DF Grp	Value of 't'	D.F.	Two tailed prob
Maximise the value of the tax shield on debt	3.30	4.04	-2.04	44	0.047
Politick with the World Bank	1.20	1.65	-2.39	37.97	0.022
Allocate assets and liabilities in an overall risk minimising configuration	3.45	4.29	-2.99	47	0.004
To obtain cheap government financing	2.31	3.92	-5.62	47	0.000
To take advantage of generally higher tax shields on debt	2.40	4.25	-8.92	47	0.000
To decrease the risk that assets may be expropriated	3.32	4.30	-3.23	47	0.002
International equity markets	1.41	2.25	-2.95	37.14	0.005
International bond markets	1.63	2.55	-2.71	47	0.009
Level of political risk of the host country	3.13	3.81	-2.41	46	0.020
Life of the project	2.89	3.62	-2.54	43	0.015
Centralisation of translation risk subsidiaries	4.71	4.22	1.94	39.44	0.060
Centralisation of debt financing	3.42	4.19	-2.57	46	0.014
Impact upon the subsidiary's WACC when the subsidiary raises debt finance	2.18	3.00	-2.38	38	0.022

The impact of raising debt finance from countries with high rates of corporation tax upon the value of the multinational enterprise	3.26	3.66	-2.13	44	0.039
---	------	------	-------	----	-------

Capital structure

The dominant factor group (DFG 10) found it more important than the non-dominant factor group (NDFG 10) to maximise the value of tax shield on debt which is in line with the interpretation of the factor of disequilibrium.

Political strategies adopted in relation to financing

The dominant factor group (DFG 10) found it more important than the non-dominant factor group (NDFG 10) to politick with the World Bank, however this was of low importance for the combined sample.

The allocation of currencies

The dominant factor group (DFG 10) placed greater importance than the non-dominant group upon allocating assets and liabilities in an overall risk minimising configuration.

Sources of finance

In relation to financing sources, the dominant factor group (DFG 10) emphasised greater importance than the non-dominant factor group (NDFG 10) upon international equity and bond markets.

Country-specific considerations in relation to financing

The dominant factor group (DFG 10) placed greater importance than the non-dominant factor group (NDFG 10) upon level of political risk of the host country. This result suggests that the dominant factor group (DFG 10) are more risk averse than the non-dominant risk group in relation to political risk. The dominant factor group (DFG 10) require government incentives through taxation incentives and cheap government finance in order to procure investment.

Project-specific considerations in relation to financing

The importance that the life of the project had upon the financing of overseas was greater for the dominant factor group (DFG 10) than it was the non-dominant factor group (NDFG 10).

Centralisation

On the issue of centralisation, the dominant factor group (DFG 10) stressed less centralisation than the non-dominant factor group (NDFG 10) of the translation risk of the subsidiaries. The dominant factor group (DFG 10) had greater debt financing centralisation than for the non-dominant factor group (NDFG 10).

Impact of the subsidiary raising debt finance upon the weighted average cost of capital of the subsidiary

The dominant factor group (DFG 10) believed that when the subsidiary raises debt finance it has a greater impact upon lowering the subsidiary's weighted average cost of capital than the non-dominant factor group (NDFG 10).

Hedging

The dominant factor group (DFG 10) believed that hedging increased the value of the firm to a greater extent than for the non-dominant factor group (NDFG 10).

B.6 Sources of finance

B.6A Inductive Hypothesis 11-Equity joint ventures

There are no significant differences between the survey responses from those who scored low on the factor, local equity and equity joint ventures.

T-tests were performed on the survey items in relation to the groupings formed for factor 11. The significant differences are listed in Table B.11.

Table B.11

Question	Mean NDF Grp	Mean DF Grp	Value of 't'	D.F.	Two tailed prob
Conform to the industry and cultural norms of the host nation	2.09	3.20	-4.38	61	0.000
Structure finances in the form of an equity joint venture	2.38	3.00	-2.59	62	0.012
Insure the project with a political risk insurer	1.61	2.24	-2.20	60	0.032
Politick with the World Bank	1.15	1.68	-3.20	42.15	0.003
To lessen exchange rate risk by borrowing in a weak currency	2.95	3.92	-2.43	46	0.019
To achieve the correct portfolio configuration of debt	2.09	3.28	-3.68	45	0.001
Local equity markets of the host country	1.20	2.25	-4.74	36.24	0.000
Host country banks	3.43	4.06	-2.96	64	0.004
Host country financial institutions	2.14	3.42	-5.35	64	0.000
Host country governments	1.40	3.19	-9.53	48.28	0.000
Co-financing with the World Bank	1.09	1.74	-3.26	36.53	0.000
The usage of index options to hedge foreign exchange exposure	1.39	1.90	-1.97	60	0.054
The usage of index futures to hedge foreign exchange exposure	1.29	1.77	-2.23	60	0.030
The usage of other swaps to hedge foreign exchange exposure	2.33	2.97	-1.97	59	0.054

Centralisation of equity financing	4.91	4.62	2.12	46.23	0.039
Impact upon the subsidiary's WACC when the subsidiary raises debt finance	2.24	2.96	-2.54	53	0.014

Capital structure

The dominant factor group (DFG 11) put greater importance than the non-dominant factor group (NDFG 11) upon conforming to the industry and cultural norms of the host country. This is synonymous with local financing.

Political strategies adopted in relation to financing

The dominant factor group (DFG 11) placed greater emphasis than the non-dominant factor group (NDFG 11) upon structuring finances in an equity joint venture, insuring the project with a political risk insurer and politicking with the World Bank. Again, this is synonymous with equity joint venture activity.

Financing considerations in relation to high political risk countries

The dominant factor group (DFG 11) emphasised greater importance than the non-dominant factor group (NDFG 11) upon lessening exchange rate risk by borrowing in a weak currency and achieving the correct portfolio configuration of debt.

Sources of finance

The dominant factor group (DFG 11) stressed greater importance of local equity markets of the host country, host country banks, host country financial institutions, host country government finance and cofinancing with the World Bank. This is consistent with the interpretation of this factor, equity joint ventures.

Hedging

In relation to hedging, the dominant factor group (DFG 11) placed greater emphasis than the non-dominant factor group (NDFG 11) upon the use of index options, other options and other swaps to hedge foreign exchange risk.

Centralisation

The centralisation of equity financing of overseas subsidiaries was greater for the non-dominant factor group (NDFG 11) than it was for the dominant factor group (DFG 11). Equity joint ventures are thus associated with a lesser degree of centralisation of equity financing.

Impact of the subsidiary raising debt finance upon the weighted average cost of capital of the subsidiary

When the dominant factor group (DFG 11) companies raised debt finance, they believed this had a greater impact upon lowering the weighted average cost of capital of the subsidiary, than the non-dominant factor group (NDFG 11).

B.6B Inductive Hypothesis 12-Local debt finance

There are no significant differences between the survey responses from those who scored low on the factor, local debt.

T-tests were performed on the survey items in relation to the groupings formed for factor 12. The significant differences are listed in Table B.12.

Table B.12

Question	Mean NDF Grp	Mean DF Grp	Value of 't'	D.F.	Two tailed prob
Avoid a high political risk country	3.12	3.75	-2.02	63	0.047
Allocate assets and liabilities in an overall risk minimising configuration	3.36	4.20	-2.80	35.36	0.008
Match values of assets and liabilities in each respective currency	3.28	4.00	-2.38	63	0.021
Allocate debt and equity in a risk minimising configuration	3.12	3.70	-2.08	63	0.041
To obtain cheap government financing	2.70	3.45	-2.01	46	0.050
To reduce the incidence of exchange controls	2.40	4.06	-3.92	22.66	0.001
Local debt markets of the host country	2.38	3.90	-8.28	64	0.000
Internally generated funds from the parent's reserves	3.58	2.60	3.47	64	0.001

Local equity markets of the host country	1.38	1.90	-2.25	63.82	0.028
Host country banks	3.11	4.12	-5.13	64	0.000
Host country financial institutions	2.31	3.02	-2.57	64	0.012
Level of political risk of the host country	2.91	3.66	-2.48	36.52	0.018
Host country inflation rate	3.04	3.63	-1.89	33.54	0.068
Centralisation of transaction risk subsidiaries	4.13	3.23	2.63	60	0.011
Centralisation of debt financing	4.24	3.64	2.35	62	0.022
Impact upon the subsidiary's WACC when the subsidiary raises debt finance	2.22	2.82	-2.00	53	0.050

Political strategies adopted in relation to financing

The dominant factor group (DFG 12) found it more important than the non-dominant factor group (NDFG 12) to avoid high political risk countries. This is compatible with raising local debt as this is often viewed as a mechanism for mitigating political risk.

The allocation of currencies

The dominant factor group (DFG 12) stressed greater importance than the non-dominant factor group (NDFG 12) on allocating assets and liabilities in an overall risk minimising configuration, matching the values of assets and liabilities in each respective currency and allocating debt and equity in a risk minimising portfolio. These are policies that allow exchange rate risks to be mitigated.

Financing considerations in relation to high political risk countries

The dominant factor group (DFG 12) placed greater importance than the non-dominant factor group (NDFG 12) upon obtaining cheap government financing and reducing the incidence of exchange controls, in relation to raising debt finance from a high political risk country. Again these policies are related to prudent risk management in relation to financing choices in countries with high political risks.

Country-specific issues in relation to financing

The dominant factor group (DFG 12) placed greater emphasis than the non-dominant factor group (NDFG 12) upon the level of political risk of the host country and the host country inflation rate. This concern is connected to the avoidance of political risk in the above section.

Centralisation

On the issue of centralisation, the dominant factor group (DFG 12) operated less centralised transaction risk hedging operations than the non-dominant factor group (NDFG 12). Similarly, debt financing was more decentralised for the dominant factor group (DFG 12).

Impact of the subsidiary raising debt finance upon the weighted average cost of capital of the subsidiary

When the dominant factor group (DFG 12) companies raised debt finance, they believed this had a greater impact upon lowering the weighted

average cost of capital of the subsidiary, than the non-dominant factor group (NDFG 12). This is consistent with the tax advantage of debt when raising debt finance from countries with high rates of corporation tax.

B.6C Inductive Hypothesis 13-Internally generated finance

There are no significant differences between the survey responses from those who scored low on the factor, internally generated funds.

T-tests were performed on the survey items in relation to the groupings formed for factor 13. The significant differences are listed in Table B.13.

Table B.13

Question	Mean NDF Grp	Mean DF Grp	Value of 't'	D.F.	Two tailed prob
Conform to the industry and cultural norms of the host nation	2.34	2.96	-2.21	61	0.031
To achieve the correct portfolio configuration of debt	2.36	3.13	-2.16	34.28	0.038
Internally generated funds from the parent's reserves	2.35	3.79	-5.95	64	0.000
Internally generated funds from the subsidiary's reserves	3.22	4.10	-4.09	64	0.000
Local equity markets of the host country	1.40	2.07	-2.64	43.70	0.012
International equity markets	1.32	2.34	-3.94	40.18	0.000
Time horizon of project cash flows	3.34	3.92	-2.59	46.58	0.013

The usage of swaps to hedge interest rate exposure 4.19 3.47 2.00 32.47 0.054

Capital structure

The dominant factor group (DFG 13) placed greater emphasis than the non-dominant factor group (NDFG 13) upon conforming to industry and the cultural norms of the host nation.

Financing considerations in relation to high political risk countries

The dominant factor group (DFG 13) stressed greater importance than the non-dominant factor upon achieving the correct portfolio configuration of debt, when raising debt finance from a high political risk country.

Sources of finance

The dominant factor group (DFG 13) placed greater importance than the non-dominant factor group (NDFG 13) upon internally generated funds from the parent's reserves, internally generated funds from the subsidiary's reserves, and upon local and international equity markets. This is consistent with the interpretation of the factor, since most multinational companies only infrequently issue international equity.

Project-specific considerations in relation to financing

The dominant factor group (DFG 13) placed greater importance than the non-dominant factor group (NDFG 13) upon the time horizon of the project cash flows.

Hedging

On the issue of hedging, the importance of swaps was stressed more by the non-dominant factor group (NDFG 13) than it was by the dominant factor group (DFG 13). This seems consistent with funds being found from internal sources.

B.6D Inductive Hypothesis 14-International sources of finance

There are no significant differences between the survey responses from those who scored low on the factor, international capital markets.

T-tests were performed on the survey items in relation to the groupings formed for factor 14. The significant differences are listed in Table B.14.

Table B.14

Question	Mean NDF Grp	Mean DF Grp	Value of 't'	D.F.	Two tailed prob
Politick with the World Bank	1.19	1.61	-2.50	48.85	0.016
Allocate liabilities in proportion to net project cash flows in each currency	2.56	3.12	-2.28	63	0.026
To obtain cheap government financing	2.78	3.56	-2.21	46	0.032
To take advantage of generally higher tax shields on debt	2.91	3.92	-3.23	46	0.002

Local debt markets of the host country	3.00	3.59	-2.38	64	0.020
International equity markets	1.31	2.20	-3.69	44.46	0.001
International bond markets	1.25	3.00	-8.39	43.32	0.000
Co-financing with the World Bank	1.12	1.65	-2.68	52.68	0.010
Capital budgeting	4.50	3.93	2.03	54.27	0.048

Political strategies adopted in relation to financing

The dominant factor group (DFG 14) found it more important than the non-dominant factor group (NDFG 14) to politick with the World Bank. This is consistent with funds from international sources.

The allocation of currencies

The dominant factor group (DFG 14) placed greater emphasis upon allocating liabilities in proportion to net project cash flows in each currency.

Financing considerations in relation to high political risk countries

The dominant factor group (DFG 14) placed greater emphasis than the non-dominant factor group (NDFG 14) upon obtaining cheap government financing and taking advantage of higher tax shields on debt.

Sources of finance

The dominant factor group (DFG 14) placed greater importance than the non-dominant factor group (NDFG 14) upon local debt markets,

international equity markets, international bond markets and co-financing with the World bank. This is consistent with the interpretation of the factor.

B.7 Country-specific issues

B.7A Inductive Hypothesis 15-Host country financial environmental factors

There are no significant differences between the survey responses from those who scored low on the factor, host country financial environment.

T-tests were performed on the survey items in relation to the groupings formed for factor 15. The significant differences are listed in Table B.15.

Table B.15

Question	Mean NDF Grp	Mean DF Grp	Value of 't'	D.F.	Two tailed prob
To obtain cheap government financing	2.83	4.08	-3.33	38.98	0.002
To match assets against liabilities for subsidiary	3.35	4.16	-2.48	34.85	0.018
Local debt markets of the host country	3.14	3.66	-2.19	62	0.032
International bond markets	2.60	1.86	2.45	47.82	0.018
Level of political risk of the host country	3.17	3.71	-2.04	63	0.046

Level of money interest rates of the host country	3.27	4.20	-4.16	45.20	0.000
Level of real interest rates of the host country	3.43	4.40	-3.83	44.36	0.000
Host country inflation rate	2.67	4.09	-7.21	63	0.000
Exchange rate between the home and host country	2.53	3.91	-6.10	63	0.000
Variability of exchange rate between the home and the host country	2.93	4.00	-4.77	48.61	0.000
Variability of host country interest rates	2.93	3.89	-4.32	63	0.000
Variability of project cash flows denominated in the home currency	2.79	3.40	-2.44	57	0.018
Centralisation of translation risk subsidiaries	4.64	4.09	2.28	50.47	0.027
Impact upon the subsidiary's WACC when the subsidiary raises debt finance	2.24	2.93	-2.48	53	0.016

Political strategies adopted in relation to financing

The dominant factor group (DFG 15) placed greater emphasis than the non-dominant factor group (NDFG 15) upon obtaining cheap government financing and matching assets against liabilities for the subsidiary. This is consistent with the factor interpretation, the host country financial environment, since matching can offset some of the effects upon the value of the multinational enterprise of the exchange rate, host country interest rates and inflation.

Sources of finance

In relation to the importance of financing sources, the dominant factor group (DFG 15) indicated greater emphasis than the non-dominant factor group (NDFG 15) upon the local debt markets of the host country. However, the dominant factor group (DFG 15) placed less importance than the non-dominant factor group (NDFG 15) upon international bond markets. This is consistent with the concern about the host country financial environment.

Country-specific considerations in relation to financing

The dominant factor group (DFG 15) stressed greater emphasis than the non-dominant factor group (NDFG 15) upon the level of political risk of the host country, level of money interest rates of the host country, level of real interest rates of the host country, the host country inflation rate, the exchange rate, the variability of the exchange rate and the variability of host country interest rates. These considerations are all related to the host country financial environment.

Project-specific considerations in relation to financing

The dominant factor group (DFG 15) placed greater emphasis than the non-dominant factor group (NDFG 15) upon the variability of project cash flows denominated in the home currency. Again, this is consistent with the host country financial environment.

Hedging

In relation to hedging, the dominant factor group (DFG 15) indicated less centralisation than the non-dominant factor group (NDFG 15) of translation risk of subsidiaries.

Impact of the subsidiary raising debt finance upon the weighted average cost of capital of the subsidiary

When the dominant factor group (DFG 15) subsidiaries raised debt finance, they believed this had a greater impact upon lowering the weighted average cost of capital of the subsidiary, than the non-dominant factor group (NDFG 15).

B.7B Inductive Hypothesis 16-Costs of financing

There are no significant differences between the survey responses from those who scored low on the factor, costs of financing from the host country government.

T-tests were performed on the survey items in relation to the groupings formed for factor 16. The significant differences are listed in Table B.16.

Table B.16

Question	Mean NDF Grp	Mean DF Grp	Value of 't'	D.F.	Two tailed prob
Minimise the global cost of capital of the multinational group	3.71	4.45	-2.58	58.10	0.012
Lobby other groups and institutions	1.73	2.25	-1.93	59	0.059
Allocate liabilities in proportion to net project cash flows in each currency	2.66	3.14	-1.89	62	0.063
Allocate assets and liabilities in a portfolio to maximise expected currency returns	2.23	2.76	-2.16	62	0.035
Transaction costs	2.17	3.67	-9.40	57.30	0.000
Taxation treaties signed between the home and host nation	3.00	4.13	-5.97	57.19	0.000
Exchange controls	3.40	4.03	-3.07	63	0.003
Variability of exchange rate between the home and the host country	3.17	3.90	-3.06	63	0.003
Variability of host country interest rates	3.17	3.77	-2.49	63	0.016
Variability of project cash flows denominated in foreign currency	3.39	3.96	-2.29	53.16	0.026
Time horizon of project cash flows	3.30	3.89	-2.72	46.78	0.009
Costs of monitoring the overseas project	2.09	2.70	-2.35	57	0.022
Costs of insolvency of the project	2.27	2.85	-2.00	58	0.050
Centralisation of capital budgeting	3.06	3.833	-2.73	63	0.008

Centralisation of cash management 3.54 4.10 -1.82 63 0.074

Capital structure

The dominant factor group (DFG 16) placed greater emphasis than the non-dominant factor group (NDFG 16) upon minimising the global cost of capital for the multinational group.

Political strategies adopted in relation to financing

In relation to political strategies used in financing, the dominant factor group (DFG 16) placed greater importance than the non-dominant factor group (NDFG 16) upon lobbying with groups and institutions.

The allocation of currencies

In relation to the policies relating to the allocation of currencies, the dominant factor group (DFG 16) placed more emphasis than the non-dominant factor group (NDFG 16) upon allocating liabilities in proportion to net project cash flows in each currency and allocating assets and liabilities in a portfolio to maximise expected currency returns.

Country-specific considerations in relation to financing

The dominant factor group (DFG 16) placed greater importance than the non-dominant factor group (NDFG 16) upon transaction costs, taxation treaties, exchange controls, variability of the exchange rate and the variability of host country interest rates.

Project-specific considerations in relation to financing

The dominant factor group (DFG 16) stressed greater importance than the non-dominant factor group (NDFG 16) in relation to the variability of project cash flows denominated in foreign currency, the time horizon of project cash flows, the costs of monitoring the project and the costs of insolvency of the project. It is interesting to note that all of these are related to the cost perspectives of project management and therefore are directly connected to the interpretation of the factor.

Centralisation

In relation to the centralisation of cash management and capital budgeting, the dominant factor group (DFG 16) was more centralised than the non-dominant factor group (NDFG 16)

B.7C Inductive Hypothesis 17-Political risk

There are no significant differences between the survey responses from those who scored low on the factor, political risk considerations when financing from the host country.

T-tests were performed on the survey items in relation to the groupings formed for factor 17. The significant differences are listed in Table B.17.

Table B.17

Question	Mean NDF Grp	Mean DF Grp	Value of 't'	D.F.	Two tailed prob
Achieve the target currency configuration of debt	2.66	3.28	-2.01	62	0.049
Structure finances in the form of an equity joint venture	2.33	3.03	-2.95	61	0.005
Politick with the World Bank	1.17	1.66	-2.90	52.72	0.005
Internally generated funds from the subsidiary's reserves	3.34	3.82	-2.03	63	0.047
Level of political risk of the host country	2.75	4.15	-6.54	49.98	0.000
Host country inflation rate	3.15	3.70	-2.11	63	0.039
Exchange controls	3.18	4.18	-5.43	49.90	0.000
Costs of insolvency of the project	2.17	2.90	-2.61	58	0.012
The usage of other options to hedge foreign exchange exposure	2.17	2.90	-2.04	59	0.045

Capital structure

The dominant factor group (DFG 17) placed greater importance upon achieving a target configuration of debt, in relation to the issues involved in the capital structure decision.

Political strategies adopted in relation to financing

The dominant factor group (DFG 17) also placed more importance than the non-dominant factor group (NDFG 17) upon structuring finances in the form of an equity joint venture and politicking with the World Bank.

The allocation of currencies

The dominant factor group (DFG 17) placed greater emphasis than the non-dominant factor group (NDFG 17) upon the using internally generated funds from the subsidiaries reserves.

Country-specific considerations in relation to financing

The dominant factor group (DFG 17) placed greater importance than the non-dominant factor group (NDFG 17) upon the level of political risk of the host country, the host country inflation rate and exchange controls. All of these issues are inherently linked to political risk.

Project-specific considerations in relation to financing

In relation to project specific factors involved with financing from overseas, the dominant factor group (DFG 17) stressed greater importance than the non-dominant factor group (NDFG 17) upon the costs of insolvency of the project.

Hedging

On the issue of hedging, the dominant factor group (DFG 17) expressed greater importance than the non-dominant factor group (NDFG 17) upon the usage of other options in hedging foreign exchange rate exposure.

B.8 Project-specific Issues

B.8A Inductive Hypothesis 18-Project risk considerations

There are no significant differences between the survey responses from those who scored low on the factor, project risk considerations.

T-tests were performed on the survey items in relation to the groupings formed for factor 18. The significant differences are listed in Table B.18.

Table B.18

Question	Mean NDF Grp	Mean DF Grp	Value of 't'	D.F.	Two tailed prob
Diversify the investor base	2.13	2.63	-1.93	58	0.059
Allocate liabilities in proportion to net project cash flows in each currency	2.55	3.36	-3.18	57	0.002
Allocate assets and liabilities in a portfolio to maximise expected currency returns	2.16	2.90	-2.78	58	0.007

Internally generated funds from the parent's reserves	2.61	3.50	-3.41	59	0.001
Local equity markets of the host country	1.48	2.00	-2.00	59	0.050
International equity markets	2.13	1.48	-2.35	42.26	0.023
Transaction costs	2.61	3.17	-2.28	57	0.026
Taxation treaties signed between the home and host nation	3.16	3.92	-3.60	49.98	0.001
Variability of host country interest rates	3.16	3.75	-2.38	57	0.021
Variability of project cash flows denominated in foreign currency	3.03	4.40	-6.71	43.96	0.000
Time horizon of project cash flows	3.00	4.17	-6.43	45.21	0.000
Variability of project cash flows denominated in the home currency	2.68	3.63	-4.24	59	0.000
Costs of monitoring the overseas project	2.06	2.83	-3.03	59	0.004
Life of the project	2.77	3.87	-5.25	59	0.000

Capital structure

The dominant factor group (DFG 18) placed greater importance than the non-dominant factor group (NDFG 18) upon the diversification of the investor base.

The allocation of currencies

The dominant factor group (DFG 18) placed greater emphasis than the non-dominant factor group (NDFG 18) upon the allocation of liabilities in

proportion to the net project cash flows in each respective currency and allocating assets and liabilities in a portfolio to maximise expected currency returns.

Sources of finance

In relation to financing sources, the dominant factor group (DFG 18) placed greater emphasis than the non-dominant factor group (NDFG 18) upon local equity markets of the host country and internally generated funds from the parent reserves. However, the non-dominant factor group (NDFG 18) placed greater importance than the dominant factor group (DFG 18) upon international equity markets.

Country-specific considerations in relation to financing

The dominant factor group (DFG 18) placed greater importance than the non-dominant factor group (NDFG 18) upon transaction costs, variability of host country interest rates and taxation treaties signed between the home and host country

Project-specific considerations in relation to financing

The dominant factor group (DFG 18) placed greater importance than the non-dominant factor group (NDFG 18) upon the variability of project cash flows denominated in foreign currency, the time horizon of project cash flows, the variability of project cash flows denominated in the home currency, costs of monitoring the project, the life of the project, bail out options and project exit values and the insolvency costs of the project.

B.8B Inductive Hypothesis 19-Project costs

There are no significant differences between the survey responses from those who scored low on the factor, project cost considerations.

T-tests were performed on the survey items in relation to the groupings formed for factor 19. The significant differences are listed in Table B.19.

Table B.19

Question	Mean NDF Grp	Mean DF Grp	Value of 't'	D.F.	Two tailed prob
Avoid a high political risk country	3.03	3.81	-2.52	58	0.015
International equity markets	1.53	2.06	-1.91	59	0.061
Costs of monitoring the overseas project	1.90	2.97	-4.54	59	0.000
"Bail out" options and project exit values	2.43	3.65	-6.38	59	0.000
Costs of insolvency of the project	1.73	3.38	-8.88	59	0.000

Political strategies adopted in relation to financing

The dominant factor group (DFG 19) placed greater importance than the non-dominant factor group (NDFG 19) upon avoiding a high political risk country. This a policy which is related to risk aversion.

Sources of finance

The dominant factor group (DFG 19) placed greater emphasis than the non-dominant factor group (NDFG 19) upon financing overseas subsidiaries through international equity markets.

Project-specific factors in relation to financing

The dominant factor group (DFG 19) stressed greater importance than the non-dominant factor group (NDFG 19) upon the costs of monitoring the project, "bail out" and project exit values and the costs of insolvency of the project. All of these issues are consistent with the interpretation of the factor: project costs.

B.9 Hedging foreign exchange

B.9A Inductive Hypothesis 20-Short-term derivatives to hedge foreign exchange exposure

There are no significant differences between the survey responses from those who scored low on the factor, the usage of options and futures (derivative instruments) to hedge foreign exchange exposure.

T-tests were performed on the survey items in relation to the groupings formed for factor 20. The significant differences are listed in Table B.20.

Table B.20

Question	Mean NDF Grp	Mean DF Grp	Value of 't'	D.F.	Two tailed prob
Allow host institutions to monitor the company's operations	1.71	2.61	-3.75	60	0.000
Insure the project with a political risk insurer	1.61	2.32	-2.46	59	0.020
Host country governments	1.97	2.77	-2.83	61	0.010
Exchange controls	3.47	3.96	-2.45	58.80	0.017
Costs of insolvency of the project	2.29	2.95	-2.27	55	0.027
The usage of index options to hedge foreign exchange exposure	1.03	2.58	-6.90	25.74	0.000
The usage of other options to hedge foreign exchange exposure	2.10	3.07	-2.78	61	0.007
The usage of other futures to hedge foreign exchange exposure	1.43	3.19	-6.66	61	0.000
The usage of other swaps to hedge foreign exchange exposure	2.32	3.03	-2.24	61	0.029
The usage of index options to hedge interest rate exposure	1.06	2.63	-5.06	18.64	0.000
The usage of other futures to hedge interest rate exposure	1.53	3.16	-4.63	51	0.000
Debt equity ratio of subsidiaries in high political risk countries in relation to low risk countries	3.68	3.00	2.50	42	0.016

Political strategies adopted in relation to financing

The dominant factor group (DFG 20) placed greater emphasis than the non-dominant factor group (NDFG 20) upon allowing host country institutions to monitor the company's operations and insuring the project with a political risk insurer.

Sources of finance

The dominant factor group (DFG 20) placed greater importance than the non-dominant factor group (NDFG 20) upon financing from host country governments.

Country-specific considerations in relation to financing

The dominant factor group (DFG 20) also placed greater importance than the non-dominant factor group (NDFG 20) upon exchange controls.

Hedging

The dominant factor group (DFG 20) stressed greater importance than the non-dominant factor group (NDFG 20) to the use of a range of options and futures to hedge foreign exchange and interest rate exposure.

Debt-equity ratio of subsidiaries in countries with high political risk

The dominant factor group (DFG 20) believed that subsidiaries in low risk countries had the same debt equity ratio as subsidiaries in high risk countries, whereas the non-dominant factor group (NDFG 20) believed

that subsidiaries in high risk countries had a higher debt equity ratio than in countries with low political risk.

B.9B Inductive Hypothesis 21-Swaps used to hedge foreign exchange rate exposure

There are no significant differences between the survey responses from those who scored low on the factor, usage of swaps to hedge foreign exchange exposure.

T-tests were performed on the survey items in relation to the groupings formed for factor 21. The significant differences are listed in Table B.21.

Table B.21

Question	Mean NDF Grp	Mean DF Grp	Value of 't'	D.F.	Two tailed prob
Allow host institutions to monitor the company's operations	2.42	1.86	2.21	60	0.031
Allocate liabilities in proportion to net project cash flows in each currency	2.44	2.97	-2.13	61	0.037
To obtain cheap government financing	2.71	3.56	-2.36	46	0.022
To decrease the risk that assets may be expropriated	3.40	4.11	-2.10	46	0.042
To match assets against liabilities for subsidiary	3.30	4.07	-2.19	44	0.036

The usage of other options to hedge foreign exchange exposure	2.07	2.83	-2.14	61	0.037
The usage of currency swaps to hedge foreign exchange exposure	2.66	4.28	-7.62	41.51	0.000
The usage of other swaps to hedge foreign exchange exposure	1.74	3.28	-6.22	57.69	0.000
The usage of other options to hedge interest rate exposure	2.00	2.90	-2.17	51	0.035
The usage of swaps to hedge interest rate exposure	2.95	4.42	-4.34	26.92	0.000
Centralisation of financing	4.22	4.63	-2.03	41.30	0.049
Centralisation of equity financing	4.58	4.88	-1.98	35.59	0.055

Political strategies adopted in relation to financing

The dominant factor group (DFG 21) thought it less important than the non-dominant factor group (NDFG 21) to allow host country institutions to monitor the company's operations. This is in contrast to the previous section (see earlier).

The allocation of currencies

The dominant factor group (DFG 21) placed greater emphasis than the non-dominant factor group (NDFG 21) on allocating liabilities in proportion to the net project cash flows in each currency.

Financing considerations in relation to high political risk countries

In relation to financing from a high political risk country, the dominant factor group (DFG 21) placed greater emphasis than the non-dominant factor group (NDFG 21) upon obtaining cheap government financing, decreasing the risk that assets may be expropriated and matching assets against liabilities of the subsidiary.

Hedging

The dominant factor group (DFG 21) also stressed more importance than the non-dominant factor group (NDFG 21) in the usage of options and swaps to hedge foreign exchange interest rate risk.

Centralisation

The centralisation of financing, and in particular equity financing was greater for the dominant factor group (DFG 21) than it was for the non-dominant factor group (NDFG 21).

B.10 Hedging interest rate risk

B.10A Inductive Hypothesis 22-Short-term instruments to interest rate risk

There are no significant differences between the survey responses from those who scored low on the factor, the usage of options and futures (derivative instruments) to hedge interest rate risk.

T-tests were performed on the survey items in relation to the groupings formed for factor 22. The significant differences are listed in Table B.22.

Table B.22

Question	Mean NDF Grp	Mean DF Grp	Value of 't'	D.F.	Two tailed prob
Allow host institutions to monitor the company's operations	1.83	2.63	-2.77	50	0.008
Host country governments	1.90	2.62	-2.31	51	0.025
The usage of index options to hedge foreign exchange exposure	1.06	2.19	-3.96	20.96	0.001
The usage of other options to hedge foreign exchange exposure	1.86	3.38	-4.12	51	0.000
The usage of index futures to hedge foreign exchange exposure	1.06	2.10	-4.10	21.24	0.000
The usage of other futures to hedge foreign exchange exposure	1.44	2.95	-4.71	51	0.000
The usage of index options to hedge interest rate exposure	1.03	2.50	-4.99	21.48	0.000
The usage of other options to hedge interest rate exposure	1.66	3.72	-6.56	52	0.000
The usage of other futures to hedge interest rate exposure	1.12	3.45	-8.72	26.03	0.000
Debt equity ratio of subsidiaries in high political risk countries in relation to low risk countries	3.76	3.05	2.29	28.72	0.030

The impact of hedging upon the value of the multinational enterprise 3.10 3.63 -2.12 45 0.039

Political strategy in relation to financing

The dominant factor group (DFG 22) indicated greater importance than the non-dominant factor group (NDFG 22) upon allowing host countries to monitor the company's operations. Therefore, there appears to be a degree of commonality with the similar factor for foreign exchange hedging.

Sources of finance

In relation to financing choices, the dominant factor group (DFG 22) stressed more importance than the non-dominant factor group (NDFG 22) upon host country governments.

Debt-equity ratio of subsidiaries in countries with high political risk

The dominant factor group (DFG 22) believed that subsidiaries in low risk countries had the same debt equity ratio as subsidiaries in high risk countries, whereas the non-dominant factor group (NDFG 22) believed that subsidiaries in high risk countries had a higher debt equity ratio than in countries with low political risk.

Value of multinational when it raises debt finance from countries with high rates of corporation tax

When the MNC raises debt finance from countries with high rates of corporation tax, the dominant factor group (DFG 22) believed this

increased the value of the firm more than for the non-dominant factor group (NDFG 22), who believed the value of the firm remained the same. This could support a disequilibrium approach to the hedging of interest rate risk by these multinational finance directors.

B.10B Inductive Hypothesis 23-Longterm hedging of interest rate risk

There are no significant differences between the survey responses from those who scored low on the factor, the usage of swaps to hedge interest rate risk.

T-tests were performed on the survey items in relation to the groupings formed for factor 23. The significant differences are listed in Table B.23.

Table B.23

Question	Mean NDF Grp	Mean DF Grp	Value of 't'	D.F.	Two tailed prob
Minimise cost of capital of the parent multinational	3.27	4.35	-3.03	51	0.004
Achieve the target currency configuration of debt	2.50	3.55	-3.14	51	0.003
Diversify the investor base	1.95	2.65	-2.67	51	0.010
Lobby other groups and institutions	1.50	2.22	-2.36	49	0.022
Allocate assets and liabilities in a portfolio to maximise expected currency returns	2.04	2.62	-2.08	52	0.042

To decrease the risk that assets may be expropriated	3.53	4.33	-2.58	39	0.014
To reduce the incidence of exchange controls	3.29	4.08	-2.42	39	0.020
To achieve the correct portfolio configuration of debt	1.88	3.04	-3.58	38	0.001
Local debt markets of the host country	3.00	3.59	-2.02	51	0.048
International bond markets	1.63	2.72	-3.66	51.80	0.001
"Bail out" options and project exit values	2.76	3.34	-2.17	48	0.035
The usage of other options to hedge foreign exchange exposure	1.72	3.00	-3.36	51	0.001
The usage of currency swaps to hedge foreign exchange exposure	2.86	4.16	-4.55	34.00	0.000
The usage of other swaps to hedge foreign exchange exposure	2.18	2.97	-2.18	50	0.034
The usage of other options to hedge interest rate exposure	1.68	3.06	-3.62	52	0.001
The usage of other futures to hedge interest rate exposure	1.59	2.41	-2.13	52	0.038
Centralisation of capital budgeting	2.95	3.72	-2.35	52	0.022

Capital structure

The dominant factor group (DFG 23) stressed greater importance than the non-dominant factor group (NDFG 23) upon minimising the cost of capital of the parent MNC, achieving the currency configuration of debt and diversifying the investor base.

Political strategies adopted in relation to financing

The dominant factor group (DFG 23) placed greater emphasis than the non-dominant factor group (NDFG 23) upon lobbying groups and institutions.

The allocation of currencies

The dominant factor group (DFG 23) emphasised the allocation of assets and liabilities in a portfolio to maximise the expected currency returns.

Financing considerations in relation to high political risk countries

The dominant factor group (DFG 23) stressed more emphasis than the non-dominant factor group (NDFG 23) upon decreasing the risk that assets may be expropriated, reducing the incidence of exchange controls and achieving the correct portfolio configuration on debt.

Sources of finance

The dominant factor group (DFG 23) placed greater emphasis than the non-dominant group upon local debt markets and international bond markets.

Project-specific considerations in relation to financing

The dominant factor group (DFG 23) placed more importance than the non-dominant factor group (NDFG 23) upon "bail out" options and project exit values.

Hedging

The dominant factor group (DFG 23) placed greater emphasis than the non-dominant factor group (NDFG 23) upon a variety of hedging instruments for both foreign exchange and interest rate hedging, supporting the interpretation of the factor.

Centralisation

The centralisation of capital budgeting was greater for the dominant factor group (DFG 23) than it was for the non-dominant factor group (NDFG 23).

B.11 Centralisation of hedging functions

B.11A Inductive Hypothesis 24-Centralisation of foreign exchange rate hedging

There are no significant differences between the survey responses from those who scored low on the factor, the degree of centralisation of foreign exchange hedging.

T-tests were performed on the survey items in relation to the groupings formed for factor 24. The significant differences are listed in Table B.24.

Table B.24

Question	Mean NDF Grp	Mean DF Grp	Value of 't'	D.F.	Two tailed prob
Transaction costs	2.56	3.09	-2.10	56	0.040
Centralisation of transaction risk subsidiaries	2.44	4.41	-7.42	43.01	0.000
Centralisation of translation risk subsidiaries	3.66	4.71	-3.40	30.93	0.002
Centralisation of economic exposure risk	3.11	4.85	-6.44	28.86	0.000
Centralisation of capital budgeting	4.43	4.90	-2.06	30.37	0.048
Centralisation of cash management	3.44	4.06	-2.15	59	0.036
Centralisation of debt financing	3.57	4.15	2.11	58	0.040
Centralisation of the capital structure decision	4.38	4.74	-2.37	58	0.021
The impact of raising debt finance from countries with high rates of corporation tax upon the value of the multinational enterprise	3.20	3.66	-3.00	56	0.004

Country-specific factors in relation to financing

The dominant factor group (DFG 24) stressed greater importance than the non-dominant factor group (NDFG 24) upon transaction costs.

Centralisation

In relation to the centralisation of cash management, debt financing and equity financing of overseas subsidiaries the dominant factor group (DFG 24) expressed greater centralisation than the non-dominant factor group (NDFG 24).

Hedging

In relation to hedging, the dominant factor group (DFG 24) believed that hedging increased the value of the multinational to a greater extent than the non-dominant factor group (NDFG 24).

B.11B Inductive Hypothesis 25-Degree of centralisation of interest rate hedging

There are no significant differences between the survey responses from those who scored low on the factor, the degree of centralisation of interest rate hedging.

T-tests were performed on the survey items in relation to the groupings formed for factor 25. The significant differences are listed in Table B.25.

Table B.25

Question	Mean NDF Grp	Mean DF Grp	Value of 't'	D.F.	Two tailed prob
Maximise the value of the tax shield on debt	4.17	3.48	2.22	58	0.030
Conform to the industry and cultural norms of the host nation	3.04	2.32	2.43	57	0.018
Adapt by conforming to the host government's directives	4.16	3.22	4.25	57	0.000
Allocate assets and liabilities in an overall risk minimising configuration	4.33	3.76	2.30	59	0.025
To obtain cheap government financing	3.72	2.86	2.36	44	0.023
To take advantage of generally higher tax shields on debt	4.06	3.07	2.95	43	0.005
Taxation treaties signed between the home and host nation	4.00	3.25	3.25	56	0.002
The usage of currency swaps to hedge foreign exchange exposure	3.96	3.43	1.85	58	0.069
The usage of other swaps to hedge foreign exchange exposure	3.09	2.31	2.38	56	0.021
The usage of other futures to hedge interest rate exposure	2.60	1.78	2.11	50	0.039
Centralisation of interest rate risk hedging of subsidiaries	3.58	4.97	-6.14	23.67	0.000
Centralisation of translation risk subsidiaries	3.58	4.68	-3.36	29.00	0.002

Capital structure

The dominant factor group (DFG 25) stressed less importance upon maximising the tax shield and conforming to the industry norms of the host country than the non-dominant factor group (NDFG 25).

Political strategies adopted in relation to financing

The dominant factor group (DFG 25) placed less importance than the non-dominant factor group (NDFG 25) upon adapting or conforming to the host government's directives, in relation to the political strategies involved in the multinational's financing choices.

The allocation of currencies

In terms of allocating assets and liabilities in an overall risk minimising configuration, the dominant factor group (DFG 25) stressed less importance than the non-dominant factor group (NDFG 25).

Financing considerations in relation to high political risk countries

There was less importance indicated by the dominant factor group (DFG 25) than the non-dominant factor group (NDFG 25) upon obtaining cheap government financing and taking advantage of tax shields on debt, in relation to considerations needed when raising debt finance from a high political risk country. This is related to disequilibrium.

Country-specific considerations in relation to financing

The dominant factor group (DFG 25) revealed less importance than the non-dominant factor group (NDFG 25) upon taxation treaties signed with their country and the host country.

Hedging

The dominant factor group (DFG 25) stressed less importance than the non-dominant factor group (NDFG 25) upon the usage of currency swaps and other swaps to hedge exchange rate risk plus other futures to hedge interest rate risk.

Centralisation

The non-dominant factor group (NDFG 25) expressed greater decentralisation than the dominant factor group (DFG 25) of interest rate and translation risk management of the subsidiaries.

B.12 Centralisation of the finance functions

B.12A Inductive Hypothesis 26-Centralisation of the treasury

There are no significant differences between the survey responses from those who scored low on the factor, the degree of centralisation of the "core" treasury functions.

T-tests were performed on the survey items in relation to the groupings formed for factor 26. The significant differences are listed in Table B.26.

Table B.26

Question	Mean NDF Grp	Mean DF Grp	Value of 't'	D.F.	Two tailed prob
Maximise the value of the tax shield on debt	4.16	3.52	2.17	63	0.034
Centralisation of financing	3.78	4.93	-7.20	29.75	0.000
Centralisation of hedging	3.70	4.93	-9.05	31.38	0.000
Centralisation of cash management	3.14	4.21	-4.13	66	0.000
Centralisation of tax planning	3.74	4.85	-7.40	66	0.000
Centralisation of debt financing	3.42	4.12	-2.81	64	0.006

Capital structure

The dominant factor group (DFG 26) placed less importance than the non-dominant factor group (NDFG 26) upon maximisation of the tax shield on debt. There could be a link between maximisation of the tax shield and centralisation. For the multinational to take advantage of disequilibrium, this finding suggests that the finance function should be operated on a decentralised basis. This result supports the decentralised organisational structure-disequilibrium rationale.

Centralisation

In relation to the centralisation of debt financing, the dominant factor group (DFG 26) was more centralised than the non-dominant factor group (NDFG 26).

B.12B Inductive Hypothesis 27-Centralisation of investment and working capital

There are no significant differences between the survey responses from those who scored low on the factor, the degree of centralisation of the project management functions.

T-tests were performed on the survey items in relation to the groupings formed for factor 27. The significant differences are listed in Table B.27.

Table B.27

Question	Mean NDF Grp	Mean DF Grp	Value of 't'	D.F.	Two tailed prob
Lobby other groups and institutions	1.71	2.18	-1.81	62	0.075
Allocate debt and equity in a risk minimising configuration	3.32	3.79	-1.79	65	0.078
Transaction costs	2.42	3.28	-3.65	63	0.001
Costs of insolvency of the project	2.22	2.90	-2.32	59	0.024
The usage of other futures to hedge foreign exchange exposure	1.84	2.44	-1.80	62	0.077
The usage of other options to hedge interest rate exposure	2.15	2.89	-1.85	53	0.070
The usage of other futures to hedge interest rate exposure	1.77	2.48	-1.86	54	0.068
Centralisation of capital budgeting	2.50	4.26	-9.45	66	0.000
Centralisation of cash management	3.11	4.47	-5.85	66	0.000
Centralisation of tax planning	4.11	4.70	-3.17	66	0.002

The discount rate used to assess a project's overseas cash flow in relation to the domestic situation	3.16	3.52	-2.22	58	0.032
Debt equity ratio of subsidiaries in high political risk countries in relation to low risk countries	3.68	3.13	2.09	46	0.048

Political strategies adopted in relation to financing

The dominant factor group (DFG 27) placed greater importance upon lobbying than the non-dominant factor group (NDFG 27).

The allocation of currencies

The dominant factor group (DFG 27) stressed greater importance than the non-dominant factor group (NDFG 27) upon allocating debt and equity in a risk minimising configuration.

Country-specific considerations in relation to financing

The dominant factor group (DFG 27) stressed greater importance than the non-dominant factor group (NDFG 27) upon transaction costs.

Project-specific considerations in relation to financing

The dominant factor group (DFG 27) stressed greater importance than the non-dominant factor group (NDFG 27) upon costs of insolvency of the project.

Hedging

The dominant factor group (DFG 27) stressed greater importance than the non-dominant factor group (NDFG 27) upon the usage of a variety of derivative instruments to hedge both foreign exchange and interest rate risk exposure.

The discount rate used to evaluate overseas projects

In terms of the discount rate used to discount overseas projects, the dominant factor group (DFG 27) tended to use a higher discount rate to assess overseas projects than the domestic situation. The non-dominant factor group (NDFG 27) tended to use the same discount rate as the domestic situation. This may imply that different discount rates are used for the parent and the subsidiary.

Value of multinational when it raises debt finance from countries with high rates of corporation tax

When the dominant factor group (DFG 27) raised debt finance in countries with high rates of corporation tax, they believed that the value of the multinational marginally increased. However, the non-dominant factor group (NDFG 27) and hence those who advocate greater decentralisation of cash management and capital budgeting believed that they were able to increase the value of the multinational to a much greater extent.

APPENDIX C
Non-response Bias

Main survey-UK

Table C.1

Market Value £ Million

Respondent	Non-respondent			
Mean	Mean	Value of 't'	D.F.	Two tailed prob
3062	1496	1.74	56.15	0.091

Table C.2

Total Sales £ Million

Respondent	Non-respondent			
Mean	Mean	Value of 't'	D.F.	Two tailed prob
3589	1156	2.35	42.04	0.025

Table C.3

Total Assets Employed £ Million

Respondent	Non-respondent			
Mean	Mean	Value of 't'	D.F.	Two tailed prob
2856	2577	0.18	84	0.855

Table C.4*Overseas Tax £ Million*

Respondent	Non-respondent			
Mean	Mean	Value of 't'	D.F.	Two tailed prob
42.7	10.99	2.33	44	0.027

Main survey-US**Table C.5***Market Value £ Million*

Respondent	Non-respondent			
Mean	Mean	Value of 't'	D.F.	Two tailed prob
4183	2074	1.71	48.94	0.093

Table C.6*Total Sales £ Million*

Respondent	Non-respondent			
Mean	Mean	Value of 't'	D.F.	Two tailed prob
5851	3290	0.97	50.67	0.336

Table C.7*Total Assets Employed £ Million*

Respondent	Non-respondent			
Mean	Mean	Value of 't'	D.F.	Two tailed prob
3312	2150	0.71	58	0.480

Table C.8*Overseas Tax £ Million*

Respondent	Non-respondent			
Mean	Mean	Value of 't'	D.F.	Two tailed prob
78.43	41.74	0.73	62	0.470

Conjoint-UK**Table C.9***Market Value £ Million*

Respondent	Non-respondent			
Mean	Mean	Value of 't'	D.F.	Two tailed prob
3095	1601	1.69	40.40	0.106

Table C.10*Total Sales £ Million*

Respondent	Non-respondent			
Mean	Mean	Value of 't'	D.F.	Two tailed prob
2463	1473	1.31	38.12	0.197

Table C.11*Total Assets Employed £ Million*

Respondent	Non-respondent			
Mean	Mean	Value of 't'	D.F.	Two tailed prob
2574	3131	-0.29	50.30	0.773

Table C.12*Overseas Tax £ Million*

Respondent	Non-respondent			
Mean	Mean	Value of 't'	D.F.	Two tailed prob
55.14	12.21	2.26	29.19	0.031

Conjoint-US

Table C.13

Market Value £ Million

Respondent	Non-respondent			
Mean	Mean	Value of 't'	D.F.	Two tailed prob
3489	2025	1.19	41.13	0.240

Table C.14

Total Sales £ Million

Respondent	Non-respondent			
Mean	Mean	Value of 't'	D.F.	Two tailed prob
3876	1622	1.35	27.75	0.193

Table C.15

Total Assets Employed £ Million

Respondent	Non-respondent			
Mean	Mean	Value of 't'	D.F.	Two tailed prob
3085	1162	1.23	23.16	0.232

Table C.16*Overseas Tax £ Million*

Respondent	Non-respondent			
Mean	Mean	Value of 't'	D.F.	Two tailed prob
66.12	15.78	1.43	26.68	0.164

Sample of UK v Sample of US companies for the main survey**Table C.17***Market Value £ Million*

Respondent	Non-respondent			
Mean	Mean	Value of 't'	D.F.	Two tailed prob
3062	4183	-0.84	70	0.402

Table C.18*Total Sales £ Million*

Respondent	Non-respondent			
Mean	Mean	Value of 't'	D.F.	Two tailed prob
3589	5851	-0.93	41.02	0.358

Table C.19*Total Assets Employed £ Million*

Respondent	Non- respondent			
Mean	Mean	Value of 't'	D.F.	Two tailed prob
2856	3312	-0.30	68	0.763

Table C.20*Overseas Tax £ Million*

Respondent	Non- respondent			
Mean	Mean	Value of 't'	D.F.	Two tailed prob
42.25	78.41	0.77	34.55	0.447

Sample of UK v Sample of US companies for the scenario analysis

Table C.21*Market Value £ Million*

Respondent	Non- respondent			
Mean	Mean	Value of 't'	D.F.	Two tailed prob
3095	3489	-0.29	55	0.720

Table C.22*Total Sales £ Million*

Respondent	Non-respondent			
Mean	Mean	Value of 't'	D.F.	Two tailed prob
2463	3876	-0.79	34.38	0.426

Table C.23*Total Assets Employed £ Million*

Respondent	Non-respondent			
Mean	Mean	Value of 't'	D.F.	Two tailed prob
2574	3085	-0.38	51	0.770

Table C.24*Overseas Tax £ Million*

Respondent	Non-respondent			
Mean	Mean	Value of 't'	D.F.	Two tailed prob
55.1	66.9	-0.29	39.33	0.751

APPENDIX D

The Scenarios in the Conjoint Analysis

For each of the following scenarios, the finance director was asked to indicate on a Likert scale (from 1 to 9) the level of interest they would show for taking on a project in that country. 1 represented not at all interested, 5 represented indifference and 9 represented extremely interested.

Country Scenario 1

Host Country Characteristics	Status
POLITICAL SITUATION	Highly Stable
TAXATION SYSTEM	Neutral
EXCHANGE RATE	Fairly Stable
FINANCING SOURCE	International
INFLATION	Above 20%
DISCOUNT RATES ON LOANS FROM HOST GOVERNMENT OR BANKS	Significantly lower than UK
CAPITAL BUDGETING	Decentralised

Country Scenario 2

Host Country Characteristics	Status
POLITICAL SITUATION	Unstable
TAXATION SYSTEM	Aggressive
EXCHANGE RATE	Extremely Volatile
FINANCING SOURCE	International
INFLATION	10% or Lower
DISCOUNT RATES ON LOANS FROM HOST GOVERNMENT OR BANKS	Significantly higher than UK
CAPITAL BUDGETING	Centralised

Country Scenario 3

Host Country Characteristics	Status
POLITICAL SITUATION	Somewhat Stable
TAXATION SYSTEM	Aggressive
EXCHANGE RATE	Extremely Volatile
FINANCING SOURCE	Local
INFLATION	Above 20%
DISCOUNT RATES ON LOANS FROM HOST GOVERNMENT OR BANKS	Significantly lower than UK
CAPITAL BUDGETING	Decentralised

Country Scenario 4

Host Country Characteristics

POLITICAL SITUATION
TAXATION SYSTEM
EXCHANGE RATE
FINANCING SOURCE
INFLATION
DISCOUNT RATES ON LOANS FROM
HOST GOVERNMENT OR BANKS
CAPITAL BUDGETING

Status

Unstable
Favourable
Extremely Volatile
Local
Above 20%
Significantly lower than UK

Decentralised

Country Scenario 5

Host Country Characteristics

POLITICAL SITUATION
TAXATION SYSTEM
EXCHANGE RATE
FINANCING SOURCE
INFLATION
DISCOUNT RATES ON LOANS FROM
HOST GOVERNMENT OR BANKS
CAPITAL BUDGETING

Status

Somewhat Stable
Favourable
Subject to occasional fluctuations
International
Between 10% and 20%
Significantly lower than the UK

Centralised

Country Scenario 6

Host Country Characteristics

POLITICAL SITUATION
TAXATION SYSTEM
EXCHANGE RATE
FINANCING SOURCE
INFLATION
DISCOUNT RATES ON LOANS FROM
HOST GOVERNMENT OR BANKS
CAPITAL BUDGETING

Status

Unstable
Favourable
Fairly Stable
Internal
Above 20%
Significantly lower than the UK

Centralised

Country Scenario 7

Host Country Characteristics

POLITICAL SITUATION
TAXATION SYSTEM
EXCHANGE RATE
FINANCING SOURCE
INFLATION
DISCOUNT RATES ON LOANS FROM
HOST GOVERNMENT OR BANKS
CAPITAL BUDGETING

Status

Highly Stable
Favourable
Extremely Volatile
International
Above 20%
Significantly higher than UK

Decentralised

Country Scenario 8

Host Country Characteristics

POLITICAL SITUATION
TAXATION SYSTEM
EXCHANGE RATE
FINANCING SOURCE
INFLATION
DISCOUNT RATES ON LOANS FROM
HOST GOVERNMENT OR BANKS
CAPITAL BUDGETING

Status

Highly Stable
Aggressive
Subject to occasional fluctuations
Internal
Between 10% and 20%
Significantly higher than UK

Decentralised

Country Scenario 9

Host Country Characteristics

POLITICAL SITUATION
TAXATION SYSTEM
EXCHANGE RATE
FINANCING SOURCE
INFLATION
DISCOUNT RATES ON LOANS FROM
HOST GOVERNMENT OR BANKS
CAPITAL BUDGETING

Status

Somewhat Stable
Favourable
Fairly Stable
Internal
10% or Lower
Significantly higher than UK

Decentralised

Country Scenario 10

Host Country Characteristics

POLITICAL SITUATION
TAXATION SYSTEM
EXCHANGE RATE
FINANCING SOURCE
INFLATION
DISCOUNT RATES ON LOANS FROM
HOST GOVERNMENT OR BANKS
CAPITAL BUDGETING

Status

Somewhat Stable
Neutral
Subject to occasional fluctuations
Local
Above 20%
Significantly higher than the UK

Centralised

Country Scenario 11

Host Country Characteristics

POLITICAL SITUATION
TAXATION SYSTEM
EXCHANGE RATE
FINANCING SOURCE
INFLATION
DISCOUNT RATES ON LOANS FROM
HOST GOVERNMENT OR BANKS
CAPITAL BUDGETING

Status

Highly Stable
Neutral
Extremely Volatile
Internal
Between 10% and 20%
Significantly lower than UK

Centralised

Country Scenario 12

Host Country Characteristics

POLITICAL SITUATION
TAXATION SYSTEM
EXCHANGE RATE
FINANCING SOURCE
INFLATION
DISCOUNT RATES ON LOANS FROM
HOST GOVERNMENT OR BANKS
CAPITAL BUDGETING

Status

Unstable
Neutral
Fairly Stable
Local
Between 10% and 20%
Significantly lower than UK

Decentralised

Country Scenario 13

Host Country Characteristics

POLITICAL SITUATION
TAXATION SYSTEM
EXCHANGE RATE
FINANCING SOURCE
INFLATION
DISCOUNT RATES ON LOANS FROM
HOST GOVERNMENT OR BANKS
CAPITAL BUDGETING

Status

Unstable
Neutral
Subject to occasional fluctuations
International
10% or lower
Significantly lower than UK

Decentralised

Country Scenario 14

Host Country Characteristics

POLITICAL SITUATION
TAXATION SYSTEM
EXCHANGE RATE
FINANCING SOURCE
INFLATION
DISCOUNT RATES ON LOANS FROM
HOST GOVERNMENT OR BANKS
CAPITAL BUDGETING

Status

Highly Stable
Aggressive
Fairly Stable
Local
10% or lower
Significantly lower than UK

Decentralised

Country Scenario 15

Host Country Characteristics

POLITICAL SITUATION
TAXATION SYSTEM
EXCHANGE RATE
FINANCING SOURCE
INFLATION
DISCOUNT RATES ON LOANS FROM
HOST GOVERNMENT OR BANKS
CAPITAL BUDGETING

Status

Unstable
Aggressive
Subject to fluctuations
Internal
Above 20%
Significantly lower than UK

Decentralised

Country Scenario 16

Host Country Characteristics

POLITICAL SITUATION
TAXATION SYSTEM
EXCHANGE RATE
FINANCING SOURCE
INFLATION
DISCOUNT RATES ON LOANS FROM
HOST GOVERNMENT OR BANKS
CAPITAL BUDGETING

Status

Somewhat Stable
Aggressive
Fairly Stable
International
Between 10% and 20%
Significantly lower than UK

Centralised

Country Scenario 17

Host Country Characteristics

POLITICAL SITUATION
TAXATION SYSTEM
EXCHANGE RATE
FINANCING SOURCE
INFLATION
DISCOUNT RATES ON LOANS FROM
HOST GOVERNMENT OR BANKS
CAPITAL BUDGETING

Status

Highly Stable
Favourable
Subject to occasional fluctuations
Local
10% or lower
Significantly lower than UK

Centralised

Country Scenario 18

Host Country Characteristics

POLITICAL SITUATION
TAXATION SYSTEM
EXCHANGE RATE
FINANCING SOURCE
INFLATION
DISCOUNT RATES ON LOANS FROM
HOST GOVERNMENT OR BANKS
CAPITAL BUDGETING

Status

Somewhat Stable
Neutral
Extremely Volatile
Internal
10% or lower
Significantly lower than UK

Decentralised

Country Scenario 19

Host Country Characteristics

POLITICAL SITUATION
TAXATION SYSTEM
EXCHANGE RATE
FINANCING SOURCE
INFLATION
DISCOUNT RATES ON LOANS FROM
HOST GOVERNMENT OR BANKS
CAPITAL BUDGETING

Status

Highly Stable
Aggressive
Subject to occasional fluctuations
International
Above 20%
Significantly higher than UK

Decentralised

Country Scenario 20

Host Country Characteristics

POLITICAL SITUATION
TAXATION SYSTEM
EXCHANGE RATE
FINANCING SOURCE
INFLATION
DISCOUNT RATES ON LOANS FROM
HOST GOVERNMENT OR BANKS
CAPITAL BUDGETING

Status

Somewhat Stable
Favourable
Subject to occasional fluctuations
Local
Between 10% and 20%
Significantly lower than UK

Decentralised

Country Scenario 21

Host Country Characteristics

POLITICAL SITUATION
TAXATION SYSTEM
EXCHANGE RATE
FINANCING SOURCE
INFLATION
DISCOUNT RATES ON LOANS FROM
HOST GOVERNMENT OR BANKS
CAPITAL BUDGETING

Status

Unstable
Favourable
Extremely Volatile
Internal
Between 10% and 20%
Significantly lower than UK

Centralised

Country Scenario 22

Host Country Characteristics

POLITICAL SITUATION
TAXATION SYSTEM
EXCHANGE RATE
FINANCING SOURCE
INFLATION
DISCOUNT RATES ON LOANS FROM
HOST GOVERNMENT OR BANKS
CAPITAL BUDGETING

Status

Highly Stable
Neutral
Fairly Stable
Local
Above 20%
Significantly higher than UK

Decentralised

APPENDIX E
The Main Survey

[A copy of the main survey is shown overleaf]

MULTINATIONAL FINANCING AND CAPITAL BUDGETING DECISIONS

1. What type of *organisational structure* is your MNC based on ?

product lines	
divisional	
functional	
global matrix	
geographical area	

2. Do you believe that your *overseas subsidiaries* have an optimum capital structure?

all subsidiaries	
many subsidiaries	
some subsidiaries	
no Subsidiaries	

3. Do you believe that your *parent MNC* has an optimum capital structure?

YES	
NO	

4. Do you believe that your MNC has a *global* optimum capital structure?

YES	
NO	

5. Does your multinational have a *currency mix goal*?

YES	
NO	

6. Do you *operate* in countries with high levels of political risk?

YES	
NO	

7. Do you raise *debt finance* in countries with high levels of political risk?

YES	
NO	

8. Please enter the *weighted average cost of capital* of your parent MNC ?

%

Is this WACC specified above, *before tax* or *after tax* ?

Before tax	
After tax	

9. Indicate the scale of importance for each of the following factors involved in the capital structure decision:

Scaling : 1=of no importance, 5=of greatest importance	1	2	3	4	5
Minimise cost of capital of the parent multinational					
Minimise cost of capital of the subsidiaries					
Maximise the value of the tax shield on debt					
Conform to the industry and cultural norms of host nation					
Achieve the target currency configuration of debt					
Minimise the global cost of capital of the MNC group					
Diversify the investor base					

(Please tick appropriate boxes)

10. Indicate the scale of importance for each of the following *political strategies*, in your MNC's financing choices:

(Please tick appropriate boxes)

Scaling : 1=of no importance, 5=of greatest importance

	1	2	3	4	5
Adapt by conforming to the host government's directives					
Avoid a high political risk country					
Structure finances in the form of an equity joint venture					
Allow host institutions to monitor the company's operations					
Insure the project with a political risk insurer					
Politick with the World Bank					
Lobby other groups and institutions					

11. Indicate the scale of importance for each of the following policies:

Scaling : 1=of no importance, 5=of greatest importance

	1	2	3	4	5
Allocate assets and liabilities in an overall risk minimising configuration					
Match values of assets and liabilities in each respective currency					
Allocate debt and equity in a risk minimising configuration					
Allocate liabilities in proportion to net project cash flows in each currency					
Allocate assets and liabilities in an overall tax minimising configuration					
Allocate assets and liabilities in a portfolio to maximise expected currency returns					

12. Indicate the scale of importance for each of the following, for an MNC involved in raising *debt finance* from a *high political risk* country:

Scaling : 1=of no importance, 5=of greatest importance

	1	2	3	4	5
To obtain cheap government financing					
To take advantage of generally higher tax shields on debt					
To decrease the risk that assets may be expropriated					
To lessen exchange rate risk by borrowing in a weak currency					
To match assets against liabilities for subsidiary					
To reduce the incidence of exchange controls					
To achieve the correct portfolio configuration of debt					

13. Indicate the scale of importance for each of the following, when financing *overseas subsidiaries or affiliates*:

Scaling : 1=of no importance, 5=of greatest importance	1	2	3	4	5
Local debt markets of host country					
Internally generated funds from the parent reserves					
Internally generated funds from the subsidiary reserves					
Local equity markets of host country					
International equity markets					
International bond markets					
Host country banks					
Other host country financial institutions					
International host country governments					
Co-financing from the world bank					

14. For each *country specific factor*, indicate its scale of importance when raising finance from overseas:

Scaling : 1=of no importance, 5=of greatest importance	1	2	3	4	5
Level of political risk of host country					
Level of money interest rates of host country					
Level of real interest rates of host country					
Host country inflation rate					
Exchange rate parity between home country and host country					
Transaction costs					
Taxation treaties signed with the U.K (or the U.S)					
Exchange controls					
Variability of exchange rate between home and host country					
Variability of host country interest rates					

15. For each *project-specific factor*, indicate its scale of importance when financing from overseas:

Scaling : 1=of no importance, 5=of greatest importance	1	2	3	4	5
Variability of project cash flows denominated in foreign currency					
Time horizon of project cash flows					
Variability of project cash flows denominated in home currency					
Costs of monitoring project					
Life of project					
"Bail Out" options and project exit values					
Costs of insolvency of the project					

16. Indicate the scale of importance in *hedging foreign exchange risk*, for each of the following:

Scaling : 1=of no importance, 5=of greatest importance

	1	2	3	4	5
Index options					
Other options					
Index Futures					
Other Futures					
Currency swaps					
Other swaps					

17. Indicate the scale of importance to your MNC in *hedging interest rate risk*, for each of the following:

Scaling : 1=of no importance, 5=of greatest importance

	1	2	3	4	5
Index options					
Other options					
Index futures					
Other futures					
swaps					

We do not hedge interest rate risk

18. Are hedging operations carried out on a decentralised or centralised basis for each of the following types of risks hedged ?

Scaling : 1=completely decentralised

5=completely centralised

	1	2	3	4	5
Interest rate risk of subsidiaries					
Transaction risk of subsidiaries					
Translation risk of subsidiaries					
Economic exposure risk					

19. Indicate the degree of centralisation in capital budgeting decisions on projects varying in initial capital expenditures:

Scaling : 1=completely decentralised

5=completely centralised

	1	2	3	4	5
Less than \$50 million					
Between 50 and 100 million dollars					
Between 100 and 200 million dollars					
Between 200 and 500 million dollars					
In excess of 500 million dollars					

20. In various areas of the finance function, indicate the trend towards greater decentralisation or centralisation:

Scaling : 1=trend towards greater decentralisation

5=trend towards greater centralisation

	1	2	3	4	5
Financing					
Hedging					
Capital budgeting					
Cash management					
Tax planning					

21. Which investment appraisal techniques do you use to evaluate projects?

	FAVOURED METHOD	"BACKUP" METHOD
Accounting Rate of Return		
Net Present Value Method		
Internal Rate of Return		
Payback Method		
Adjusted Present Value Method		
Capital Asset Pricing Model		
Arbitrage Pricing Model		
Mean Variance Approach		
Other PLEASE SPECIFY		

22. In your evaluation of projects, what do you adjust to account for the project risk:

cash flows	
discount rate	
discount rate and cash flows	

23. How are projects evaluated?

on a subsidiary basis only	
by parent only	
by both the parent and subsidiary	

24. With regard to the discount rate used to assess foreign project's cash flows, how does the discount rate compare with the discount rate used to assess domestic projects?

Scaling : 1=significantly lower than the domestic rate

5=significantly higher

	1	2	3	4	5
We do not use discount rates					

25. With regard to the *debt financing* of overseas subsidiaries, please indicate the *level of centralisation*:

Scaling : 1 = debt financing is completely decentralised
5 = debt financing is completely centralised

1	2	3	4	5

26. With regard to the *equity finance* of overseas subsidiaries, please indicate the level of centralisation:

Scaling : 1 = equity financing is completely decentralised
5 = equity financing is completely centralised

1	2	3	4	5

27. Do you insure projects where political risk is high?

Scaling : 1 = always, 5 = never

1	2	3	4	5

28. Has your MNC the same, a lower or higher *debt/equity ratio* than if it operated within a purely domestic market?

Scaling : 1 = significantly lower debt equity ratio than domestic counterpart

5 = significantly higher

1	2	3	4	5

29. When your *parent MNC* raises *debt finance*, what do you believe happens to the parent's weighted average cost of capital (WACC)?

Scaling : 1 = No impact upon lowering the after tax WACC of parent MNC
5 = Very high impact

1	2	3	4	5

30. When your subsidiary raises debt finance, what do you believe happens to the weighted average cost of capital (WACC) of the subsidiary?

Scaling : 1 = No impact upon lowering the after tax WACC of subsidiary
5 = Very high impact upon lowering the after tax WACC of subsidiary

1	2	3	4	5

31. What is the debt/equity ratio of your subsidiaries in countries with high political risk?

Scaling : 1 = Significantly lower than subsidiaries in low political risk countries
5 = Significantly higher than subsidiaries in low political risk countries

1	2	3	4	5

32. Are capital structure decisions made on a decentralised or a centralised basis for overseas subsidiaries?

Scaling : 1 - Capital structure decisions are completely decentralised

5 - Capital structure decisions are completely centralised

1	2	3	4	5

33. What do you believe happens to the value of your MNC when it raises debt from countries with high rates of corporation tax?

Scaling : 1 - significantly decreases the value of the MNC

5 - significantly increases the value of the MNC

1	2	3	4	5

34. What do you believe happens to the value of your MNC when it engages in hedging?

Scaling : 1 - significantly decreases the value of the MNC

5 - significantly increases the value of the MNC

1	2	3	4	5

(Please complete the following box)

NAME OF RESPONDENT	
COMPANY NAME	
POSITION	
TELEPHONE NUMBER	



**THANKYOU FOR TAKING PART IN THE SURVEY
PLEASE RETURN THE QUESTIONNAIRE USING "FREEPOST"**

Please send completed survey to:-

Mr. V.J. Hooper, Plymouth Business School, University of Plymouth
Drake Circus, Plymouth PL4 8AA.

APPENDIX F

Nature of the Interview Questions

Background

What are the main philosophies or issues underlying the financing of overseas subsidiaries and affiliates ? (i.e. what drives this process).

How do you allocate currencies within your multinational company?

Do you have a currency of debt denomination preference ? What is this preference dependent upon?

Political Risks

How do political risks, encountered within countries you operate, affect your company's financing choices ? Does this strategy alter the risk profile of the multinational in reality?

Capital Structure

Outline some of the issues involved in your capital structure decision ? Do you believe that you have an optimum capital structure?

By going multinational, to what extent do you believe that you can lower your weighted average cost of capital ? What are the main reasons for this?

What do you perceive are the advantages of using local debt?

Centralisation

Is the finance function run on a centralised basis? Why?

General Equilibrium and Disequilibrium

Do you believe that hedging increases the value of your firm ? Why?

Does raising debt finance in countries with high rates of corporation tax increase the value of the firm ? Why?

Do you ever raise finance in countries with high rates of corporation tax and then invest the proceeds in other overseas subsidiaries?

By diversifying overseas does this reduce risk ? To what extent does the risk profile of the multinational change?

Project Evaluation

What is the magnitude of the discount rate used to evaluate overseas projects?

To what extent do underlying project characteristics affect your financing strategy?

**APPENDIX G
COMBINED SAMPLE OF MULTINATIONALS
FREQUENCY TABLES FOR THE SURVEY DATA**

QUESTION	VALUE	FREQUENCY
Q2	1	12
	2	31
	3	26
	MISSING VALUE	2
Q3	1	25
	2	42
	MISSING VALUE	4
Q4	1	38
	2	29
	MISSING VALUE	4
Q5	1	32
	2	37
	MISSING VALUE	2
Q6	1	29
	2	42
Q7	1	45
	2	24
	MISSING VALUE	2

N.B. TOTAL NUMBER OF RESPONDENT=71 RESPONDENT (30 US AND 42 UK MNCs)

	CELL 1	VALUE 2	3	4	5	MISSING VALUE
Q9A	6	5	10	12	37	1
Q9B	12	14	17	17	9	2
Q9C	5	9	9	23	22	3
Q9D	13	20	19	10	5	4
Q9E	13	7	21	20	9	1
Q9F	5	5	10	14	36	1
Q9G	17	22	20	10	0	2
Q10A	2	8	21	26	11	3
Q10B	5	10	19	17	18	2
Q10C	9	17	29	10	2	4
Q10D	24	19	14	8	0	6
Q10E	33	16	8	7	2	5
Q10F	46	12	8	0	0	5
Q10G	29	21	10	4	2	5
Q11A	4	4	10	29	23	1
Q11B	6	7	9	25	23	1
Q11C	3	11	16	26	13	2
Q11D	5	24	21	13	5	3
Q11E	2	5	20	30	13	1
Q11F	16	17	24	10	2	2
Q12A	7	9	12	17	8	18
Q12B	2	10	13	15	11	20
Q12C	3	4	9	18	17	20
Q12D	7	6	10	12	17	19
Q12E	4	4	9	18	16	20
Q12F	3	3	10	20	15	20
Q12G	9	15	11	9	5	22
Q13A	6	7	23	25	9	1
Q13B	6	22	16	18	8	1
Q13C	3	6	20	29	12	1
Q13D	41	15	9	4	1	1
Q13E	40	17	6	5	2	1

Q13F	28	19	11	7	4	2
Q13G	3	2	19	33	13	1
Q13H	12	16	24	13	4	2
Q13I	24	19	16	7	3	2
Q13J	51	11	3	2	1	3
Q14A	5	9	16	28	10	3
Q14B	2	7	10	36	13	3
Q14C	4	2	9	29	23	4
Q14D	5	7	20	26	10	3
Q14E	5	11	20	22	9	4
Q14F	8	16	21	22	0	4
Q14G	3	5	20	32	8	3
Q14H	1	5	17	34	10	4
Q14I	3	7	19	30	9	3
Q14J	4	8	18	29	8	4
Q15A	2	7	13	27	14	8
Q15B	3	3	17	33	7	8
Q15C	3	12	25	17	5	9
Q15D	14	20	17	10	1	9
Q15E	3	8	23	24	5	8
Q15F	4	13	27	15	4	8
Q15G	13	19	19	9	3	8
Q16A	41	11	7	3	2	7
Q16B	24	11	10	12	7	7
Q16C	42	12	8	1	1	7
Q16D	32	8	11	10	4	6
Q16E	3	9	12	28	15	4
Q16F	16	16	11	16	4	8
Q17A	37	8	5	2	3	16
Q17B	23	5	10	9	8	16
Q17C	36	8	7	2	2	16
Q17D	30	7	5	9	5	15
Q17E	6	1	8	20	22	14
Q18A	3	0	4	18	39	7
Q18B	8	7	13	17	22	4
Q18C	5	0	8	13	40	5
Q18D	6	0	12	11	36	6
Q19A	2	3	13	6	42	5
Q19B	0	1	6	0	49	15
Q19C	0	0	4	1	47	19
Q19D	0	0	3	1	46	21
Q19E	0	0	2	2	46	21
Q20A	1	0	6	20	43	1
Q20B	0	1	8	20	40	2
Q20C	3	12	26	11	18	1
Q20D	4	5	15	22	25	0
Q20E	0	1	11	16	43	0
Q22	13	31	24			2
Q23	5	6	60			0
Q24	0	1	43	14	4	9
Q25	1	7	14	25	22	2
Q26	0	0	3	8	54	6
Q27	2	11	10	10	23	15
Q28	1	5	34	15	6	10
Q29	5	12	23	16	3	12
Q30	12	12	22	11	1	13
Q31	2	5	16	22	4	22
Q32	0	0	3	21	46	1
Q33	0	7	33	15	5	11
Q34	0	1	37	25	4	4

REFERENCES

- Adler, M. and Dumas, B. (1984). 'Exposure to Currency Risk: Definition and Measurement', *Financial Management*, vol. 13, no. 2, pp. 41-50.
- Aggarwal, R. and Baliga, G. (1987). 'Capital Structure Among Latin American Companies', *Managerial Finance*, vol. 13, no. 1, pp. 3-11.
- Aggarwal, R. and Soenen, L. (1987). 'Changing Benefits of International Diversification of Real Assets', *Rivista Internazionale di Scienze Economiche e Commerciali*, vol. 24, no. 11, pp. 1103-1112.
- Aggarwal, R. and Soenen, L. A. (1989). 'Managing Persistent Real Changes in Currency Values: The Role of Multinational Operating Strategies', *Columbia Journal of World Business*, vol. 24, no. 3, pp. 60-67.
- Aggarwal, R. and Soenen, L. A. (1989). 'Project Exit Value as a Measure of Flexibility and Risk Exposure', *Engineering Economist*, vol. 35, no. 1, pp. 39-54.
- Akaah, I. P. and Yaprak, A. (1988). 'Identifying Target Segments for Foreign Direct Investment: An Application of the Conjoint Methodology', *International Marketing Review*, vol. 5, no. 3, pp. 28-37.
- Ang, J. S. and Dukas, S. P. (1991). 'Capital Budgeting in a Competitive Environment', *Managerial Finance*, vol. 17, no. 2,3, pp. 6-15.
- Ashton, D. J. (1991). 'Corporate Financial Policy: American Analytics and UK Taxation', *Journal of Business Finance and Accounting*, vol 18, no. 4, pp. 465-482.

Basi, R. S. (1964). *'Determinants of United States Private Direct Investments in Foreign Countries'*, Ohio: Kent State University, Bureau of Economic Research No. 3.

Beamish, P. W. and Banks, J. C. (1987). 'Equity Joint Ventures and the Theory of the Multinational Enterprise', *Journal of International Business Studies*, vol. 18, no. 2, pp. 1-16.

Belk, P. A. and Glaum, M. (1990). 'The Management of Foreign Exchange Risk in UK Multinationals: An Empirical Investigation', *Accounting and Business Research*, vol. 21, no. 81, pp. 3-13.

Bennett, P. D. and Green, R. T. (1972). 'Political Instability as a Determinant of Direct Foreign Investment', *Journal of Marketing Research*, vol. 9, pp. 162-186.

Boddewyn, J. J (1988). 'Political Aspects of MNE Theory', *Journal of International Business Studies*, vol. 19, no. 3, pp. 341-363.

Booth, L. D. (1982). 'Hedging and Foreign Exchange Exposure', *Management International Review*, vol. 22, no. 1, pp. 26-42.

Brewer, H. L. (1989). 'Components of Investment Risk and Return: The Effects on Common Shareholders from Firm Level International Involvement', *Management International Review*, vol. 29, no. 1, pp. 17-28.

Brewer, T. L. (1993). 'Government Policies, Market Imperfections and Foreign Direct Investment', *Journal of International Business Studies*, vol. 24, no. 1, pp. 101-120.

Buckley, P. J. (1988). 'The Limits of Explanation: Testing the Internalization Theory of the Multinational Enterprise', *Journal of International Business Studies*, vol. 19, no. 2, pp. 181-193.

Buckley, P. J. and Casson, M. (1976). *The Future of the Multinational Enterprise*. London: Macmillan.

Carsberg, B. V. and Hope, A. (1976). *Business Investment Decisions Under Uncertainty: Theory and Practice*, London: Institute of Chartered Accountants in England and Wales.

Caves, R. E. (1971). 'International Corporations: The Industrial Economics of Foreign Investment', *Economics*, Feb, pp. 1-27.

Chan, K. W. (1988). 'The Effects of Competition and Corporate Political Responsiveness on Multinational Bargaining Power', *Strategic Management Journal*, vol. 9, no. 3, pp. 289-295.

Child, J. (1984). *Organization*, New York: Harper and Row.

Cohen, B. I. et al., eds. (1979). *The Multinational Corporation: A Radical Approach*, (Papers by S. Hymer), Cambridge: Cambridge University Press.

Collier, P., and Davis, E. W. (1985). 'Currency Risk Management in UK Multinational Companies', *Accounting and Business Research*, Autumn, pp. 327-35.

Collier, P., Davis, E. W., Coates, J. B. and Longden, S. G. (1990). 'The Management of Currency Risk: Case Studies of US and UK Multinationals', *Accounting and Business Research*, vol. 20, no. 79, pp. 206-210.

Collins, J. M. (1990). 'A Market Performance Comparison of U.S. Firms Active in Domestic, Developed and Developing Countries', *Journal of International Business Studies*, vol. 21, no. 2, pp. 271-287.

Davis, E., Coates, J., Collier, P. and Longden, S. (1991). '*Currency Risk Management in Multinational Companies*', Institute of Chartered Accountants in England and Wales, Prentice-Hall.

Doz, Y. L. (1981). 'Headquarters Influence and Strategic Control in MNCs', *Sloan Management Review*, vol. 23, no. 1, pp. 15-30.

Doz, Y. L. and Prahalad, C. K. (1987). '*The Multinational Mission: Balancing Local Demands and a Global Vision*'. Free Press.

Draper, D. W. (1983). 'Financial Futures for Hedging Long-term Debt', *Harvard Business Review*, vol. 61, no. 2, pp. 172,174,176.

Dunning, J. (1976). '*The Future of the Multinational Enterprise*'. London: Macmillan.

Dunning, J. H. (1988). 'The Eclectic Paradigm of International Production: A Restatement and Some Possible Extensions', *Journal of International Business Studies*, vol. 19, no. 1, pp. 1-31.

Dunning, J. H. and Rugman, A. (1985). 'The Influence of Hymer's Dissertation on the Theory of Foreign Direct Investment', *American Economic Review*, vol. 75, May.

Eaker, M. R. and Lenowitz, J. (1986). 'Multinational Borrowing Decisions and the Empirical Exchange Rate Evidence', *Management International Review*, vol. 1, pp. 24-32.

Eckl, S. and Robinson, N. (1990). 'Some Issues in Corporate Hedging Policy', *Accounting and Business Research*, vol. 20, no. 80, pp. 287-298.

Eom, H. and Lee, S. (1987). 'A Large Scale Goal Programming Model-Based Decision Support for Formulating Global Financing Strategy', *Information and Management*, vol. 12, pp. 33-44.

Fatemi, A. M. (1988). 'The Effect of International Diversification on Corporate Financing Policy', *Journal of Business Research*, vol 16, no. 1, pp. 17-30.

Flood, E. and Lessard, D. R. (1986). 'On the Measurement of Operating Exposure to Exchange Rates: A Conceptual Approach', *Financial Management*, vol. 15, no. 1, pp. 23-36.

Galbraith, C. S. and Kay, N. (1986). 'Towards a Theory of the Multinational Enterprise', *Journal of Economic Behaviour and Organization*, vol. 7, no. 1, pp. 3-19.

Galbraith, J. and Kazanjian, R. (1986). 'Organizing to Implement Strategies of Diversity and Globalisation: the Role of Matrix Designs', *Human Resource Management*, Spring, pp. 37-54.

Geringer, J., Beamish, P. W. and Dacosta, R. G. (1989). 'Diversification Strategy and Internationalisation: Implications for MNE Performance', *Strategic Management Journal*, vol. 10, pp. 109-119.

Ghadar, F. (1982). 'Political Risk and the Erosion of Control: the Case of the Oil Industry', *Columbia Journal of World Business*, vol. 17, no. 3, pp. 47-51.

Ghoshal, S. and Nohria, N. (1990). 'Internal Differentiation within Multinational Corporations', *Strategic Management Journal*, vol. 10, no. 4, pp. 323-337.

Gomes-Casseres, B. (1989). 'Ownership Structures of Foreign Subsidiaries: Theory and Evidence', *Journal of Economic Behavior and Organization*, vol. 11, no. 1, pp. 1-25

Gordon, L. A., Pinches, G. E. and Stockton, F. T. (1988). 'Sophisticated Methods of Capital Budgeting: An Economics of Internal Organization Approach', *Managerial Finance*, vol. 14, no. 2-3, pp. 36-41.

Gordon, M. J. (1989). 'Corporate Finance Under the MM Theorems', *Financial Management*, vol. 18, no. 2, pp. 19-28

Green, P. E., Krieger, A. M., Agarwal, M. and Johnson, R. M. (1991). 'Adaptive Conjoint Analysis: Some Caveats and Suggestions: Comment', *Journal of Marketing Research*, vol. 28, no. 2, pp. 215-225.

Green, R. T. and Cunningham, W. H. (1975). 'The Determinants of US Foreign Investment: An Empirical Examination', *Management International Review*, vol. 15, pp. 113-120.

Grubel, H. (1968). 'Internationally Diversified Portfolios: Welfare Gains and Portfolio Flows', *American Economic Review*, Dec, pp. 1299-1314.

Hanink, D. (1985). 'A Mean-Variance Model of MNC Location Strategy', *Journal of International Business Studies*, vol. 16, no. 1, pp. 165-170.

He, X. and Guisinger, S. (1992). 'Does tax neutrality principle matter? Fresh funds investment versus reinvested earnings'. Baltimore: Academy of International Business (North East Chapter). Annual Proceedings.

Hedlund, G. (1986). 'The Hypermodern MNC a Heterarchy', *Human Resource Management*, no. 1, pp. 9-36.

Heenan, D. (1988). 'A Different Outlook for Multinational Companies', *Journal of Business Strategy*, vol. 9, no. 4, pp. 51-54.

Hekman, C. R. (1983). 'Measuring Foreign Exchange Exposure: A Practical Theory and its Application', *Financial Analysts Journal*, vol. 39, no. 5, pp. 59-65.

Herschey, M. (1985). 'Multinational Involvement and Risk', *Economics Letters*, vol. 19, no. 3, pp 261-265.

Hill, C. W. L. and Kim, W. C. (1988). 'Searching for a Dynamic Theory of the Multinational Enterprise: A Transaction Cost Model', *Strategic Management Journal*, vol. 9, pp. 93-104.

Hitt, M. A. and Ireland, R. D. (1987). 'Building Competitive Strength in International Markets', *Long Range Planning*, vol. 1, pp. 115-120.

Ho, S. M. and Pike, R. H. (1991). 'Risk Analysis in Capital Budgeting Contexts: Simple or Sophisticated?', *Accounting and Business Research*, vol. 21, no. 83, pp. 227-238.

Hodder, J. E. and Senbet, L. (1990). 'International Capital Structure Equilibrium', *Journal of Finance*, vol. 45, no.5, pp. 1495-1516.

Hodgkinson, L. (1987). 'The Impact of Taxation on the Capital Budgeting Decision of Corporate Groups', PhD. Thesis, Plymouth.

Holland, J. (1985). 'Corporate Finance and Strategy: A European View', *European Management Journal*, vol. 3, no. 2, pp. 94-102.

Holland, J. (1990). 'Capital Budgeting for International Business: A Framework for Analysis', *Managerial Finance*, vol. 16, no. 2, pp. 1-6.

Hopwood, A. G. (1983). 'On Trying to Study Accounting in the Context in Which it Operates', *Accounting, Organisations and Society*.

Horaguchi, H. and Toyne, B. (1990). 'Setting the Record Straight: Hymer, Internalization Theory and Transaction Cost Economics', *Journal of International Business Studies*, vol. 21, no. 3, pp. 487-494.

Hymer, S. (1960). *The International Operations of National Firms: A Study of Direct Foreign Direct Investment*, (First published in 1976) Cambridge, Mass: MIT Press.

Itaki, M. (1991). 'A Critical Assessment of the Eclectic Theory of the Multinational Enterprise', *Journal of International Business Studies*, vol. 22, no. 3, pp. 445-460.

Iversen, C. (1936). *International Capital Movements*, Oxford: Oxford University Press.

Jacque, L. and Lorange, P. (1984). 'Hyperinflation and Global Strategic Management', *Columbia Journal of World Business*, vol. 19, no. 2, pp. 68-75.

Kaldor, N. (1972). 'The Irrelevance of Equilibrium Economics', *Economic Journal*, vol. 82, December, pp. 1237-55.

Karikari, J. A. and Collins, J. M. (1989). 'Market Structure and Operating Exposure as Determinants of Foreign Affiliate Value', *Management International Review*, vol. 29, no. 3, pp. 51-61.

Kee, R. and Bublitz, B. (1988). 'The Role of Payback in the Investment Process', *Accounting and Business Research*, vol. 18, no. 70, pp. 149-155.

Kennedy, C. R. (1988). 'Political Risk Management: A Portfolio Planning Model', *Business Horizons*, vol. 31, no. 6, pp. 26-33.

Kim, S. H., Crick, T. and Farragher, S. (1984). 'Foreign Capital Budgeting Practices Used by US and Non-US Multinational Corporations', *Engineering Economist*, vol. 29, no. 3, pp. 207-215.

Kindleberger, C. P. (1969). *American Business Abroad: Six Lectures on Direct Investment*, New Haven, Conn: Yale University Press.

Kira, D. S. and Kusy, M. I. (1990). 'A Stochastic Capital Rationing Model', *Journal of the Operational Research Society*, vol. 41, no. 9, pp. 853-863.

Klecka, W. R. (1980). *Discriminant Analysis*, Sage University Paper Series on Quantitative Applications in the Social Sciences, Beverly Hills: Sage Publications.

Kopits, G. F. (1976). 'Taxation and Multinational Flow; A Critical Survey', *IMF Staff Papers*, 23, 624-73.

Kruger, M. P. (1988). 'The Increasing Role of Subsidiary Boards in MNCs: An Empirical Study', *Strategic Management Journal*, vol. 9, no. 4, Jul, pp. 347-360.

Lee, K. C. and Kwok, C. C. Y. (1990). 'Multinational Corporations vs. Domestic Corporations: International Environmental Factors and Determinants of Capital Structure'. *Journal of International Business Studies*, vol 30, no. 4, pp. 331-352.

Lessard, D. R. (1985). *Evaluating International Projects: An Adjusted Present Value Approach*, in *International Financial Management*, 2nd ed., New York: John Wiley and sons, pp. 570-584.

Madura, J. (1985). 'Development and Evaluation of International Financing Models', *Management International Review*, vol. 4., pp. 17-27.

Madura, J. and Foseberg, R. H. (1990). 'The Impact of Financing Sources on Multinational Projects'. *Journal of Financial Research*, vol 13, no. 1, pp. 61-69.

Madura, J. and Nosari, E. J. (1984). 'Utilising Currency Portfolios to Mitigate Exchange Rate Risk', *Columbia Journal of World Business*, vol. 29, no. 1, pp. 96-99.

Mahajan, A. (1990). 'Pricing Expropriation Risk', *Financial Management*, vol. 19, no. 4, pp. 77-86.

Mandel, R. (1984). 'The Overseas Private Investment Corporation and International Investment', *Columbia Journal of World Business*, vol. 29, no. 1, pp. 85-95.

Mariotti, S. and Ricotta, E. (1986). 'Diversification: The European Versus the US Experience', *Multinational Business*, Spring, pp. 23-32.

Markowitz, H. (1959). *Portfolio Selection: Efficient Diversification of Investments*. New York: Wiley.

Martinez, J. and Jarillo, J. C. (1989). 'The Evolution of Research on Coordination Mechanisms in Multinational Enterprises', *Journal of International Business Studies*, vol. 20, no. 3, pp. 489-514.

McClure, H. J. (1988). 'Purchasing Power Parity, Interest rate Parities, and Modified Fisher Effect in the Presence of Tax Agreements: A Comment', *Journal of International of Money and Finance*, vol. 7, no. 3, pp. 347-350.

McIntyre, A. and Coulthurst, N. (1987). 'The Planning and Control of Capital Investments in Medium-sized Companies', *Management Accounting*, March, pp. 39.

Meleka, A. H. (1985). 'The Changing Role of Multinational Corporations', *Management International Review*, vol. 25, no. 4, pp. 36-45.

Miller, M. H. (1977). 'Debt and Taxes', *Journal of Finance*, vol. 32, no. 2, pp. 261-75.

Mills, R. W. (1988). 'Capital Budgeting Techniques used in the UK and the USA', *Management Accounting*, January, pp. 26-27.

Modigliani, F and Miller, M. H. (1958). 'The Cost of Capital, Corporation Finance and the Theory of Investment'. *American Economic Review*, vol 48, no. 3, June, pp. 261-297.

Modigliani, F. and Miller, M. H. (1963). 'Corporate Income Taxes and the Cost of Capital: A Correction', *American Economic Review*, vol. 53, no. 3, pp. 433-443.

Mohr, L. G. (1985). 'The Reliability of the Case Study as a Source of Information', in Coulam, R. and Smith, R. (eds.), *Advances in Information Processing in Organisations*, vol. 2, JAI Press.

Moore, W. L. and Holbrook, M. B. (1990). 'Conjoint Analysis on Objects with Environmentally Correlated Attributes: The Questionable Importance of Representative Design', *Journal of Consumer Research*, vol. 16, no. 4, pp. 490-497.

Mukherjee, T. K. (1988). 'The Capital Budgeting Process of Large U.S. Firms; An Analysis of Capital Budgeting Manuals', *Managerial Finance*, vol. 14, no. 2-3, pp. 28-35.

Negandhi, A. and Baliga, R. (1981). 'Internal Functioning of American, German and Japanese Multinational Corporations', in *The Management of*

Headquarters Subsidiary Relationships in Multinational Corporations (Otterbeck, L. ed.), pp. 107-20. Aldershot: Gower.

Negandhi, A. and Wedge, M. (1984). *'Beyond Theory Z: Global Rationalisation Strategies of American, German and Japanese Multinational Companies'*, CN: JAI Press Inc.

OECD (1990). *'Taxation and International Capital Flows: A Symposium of OECD and Non-OECD Countries'*. June.

Ohmae, K. (1985). *'Triad Power: The Coming Shape of Global Competition'*, New York: The Free Press.

Otterbeck, L. ed. (1981). *'The Management of Headquarter Subsidiary Relationships in Multinational Corporations'*, London: Gower.

Pike, R. (1981). *'A Study of Sophistication in Capital Investment Processes'*, PhD. Thesis, Bradford.

Pike, R. (1988). *'An Empirical Study of the Adoption of Sophisticated Capital Budgeting Practices and Decision-Making Effectiveness'*, *Accounting and Business Research*, vol. 18 no. 72, pp. 341-351.

Pike, R. (1989). *'Do Sophisticated Capital Budgeting Approaches Improve Investment Decision-Making Effectiveness?'*, *Engineering Economist*, vol. 34, no. 2, pp. 149-161.

Pike, R. and Sharp, J. (1989). *'Trends in the Use of Management Science Techniques in Capital Budgeting'*, *Managerial and Decision Economics*, vol. 10, no. 2, pp. 135-140.

Porter, M. E. (1986). *'Competition in Global Industries'*, Harvard Business School Press.

Praagman, J. and Soenen, L. A. (1986). 'Stability of Optimal Currency Cocktails', *Journal of Economics and Business*, vol. 38, no. 1, pp. 1-17.

Priem, R. L. (1992). 'An Application of Metric Conjoint Analysis for the Evaluation of Top Managers' Individual Strategic Decision Making Processes: A Research Note', *Strategic Management Journal*, vol. 13, pp. 143-151.

Quinn, L. R., (1989). 'Consulting Services Making Inroads into Risk Management Field', *The Magazine of Commodities and Options*, vol. 18, no. 6, pp. 48-50.

Reichert, A. K., Moore, J. S. and Byler, E. (1988). 'Financial Analysis Among Large U.S. Corporations: Recent Trends and the Impact of the Personal Computer', *Journal of Business Finance and Accounting*, vol. 15, no. 4, pp. 469-485.

Rhee, G., Chang, R., Koveos, R. (1985). 'The Currency of Denomination Decisions for Debt Financing', *Journal of International Business Studies*, vol. 16, no. 4, pp. 143-50.

Rosenzweig, P. M. and Singh, J. V. (1991). 'Organizational Environments and the Multinational Enterprise', *Academy of Management Review*, vol. 16, no. 2, pp. 340-361.

Rugman, A. M. (1976). 'Risk reduction by International Diversification', *Journal of International Business Studies*, vol. 17, no. 2, pp. 90-97.

Rugman, A. M. (1979). *International Diversification and the Multinational Enterprise*. Lexington: MA.

Rugman, A. M. (1981). *Inside the Multinationals: The Economics of Internal Markets*. New York: Columbia University Press.

Rugman, A. M. (1991). 'Diamond in the Rough', *Business Quarterly*, vol. 55, no. 3, pp. 61-64.

Rugman, A. M. (1991). 'US Trade Laws as Barriers to Globalisation', *World Economy*, September, pp. 335-350.

Rugman, A. M. and Verbeke, A. (1990). 'Strategic Capital Budgeting Decisions and the Theory of Internalisation', *Managerial Finance*, vol. 16, no. 2, pp. 17-24.

Rugman, A. M. and Verbeke, A. (1991). 'Europe 1992 and Competitive Strategies for North American Firms', *Business Horizons*, vol. 34, no. 6, pp. 76-81

Schnabel, J. A. (1989). 'Exposure to Foreign Exchange Risk: A Multi-Currency Extension', *Managerial and Decision Economics*, vol. 10, no. 4, pp. 331-333.

Senbet, L. W. (1979). 'International Capital Market Equilibrium and the Multinational Firm Financing and Investment Policies', *Journal of Financial and Quantitative Analysis*, vol. 14, pp. 455-80.

Sethi, S. P. and Luther, K. A. N. (1986). 'Political Risk Analysis and Direct Foreign Investment: Some Problems of Definition and Measurement', *California Management Review*, vol. 28, no. 2, pp. 57-68.

Shapiro, A. C. (1984). 'The Impact of Taxation on the Currency of Denomination for Long-term Foreign Borrowing and Lending', *Journal of International Business Studies*, vol. 15, no. 1, pp. 15-25.

Soenen, L. (1979). *Foreign Exchange Exposure Management: A Portfolio Theory Approach*. Sijthoff and Noordhoff.

Soenen, L. A. (1985). 'The Optimal Currency Cocktail: A tool for Strategic Foreign Exchange Management', *Management International Review*, vol. 25, no.2, pp. 12-22.

Soenen, L. A. (1988a). 'Exploiting Relationships Between Currencies to Mitigate Foreign Exchange Risk', *Management International Review*, vol. 28, no. 4, pp. 34-41.

Soenen, L. A. (1988b). 'Risk Diversification Characteristics of Currency Cocktails', *Journal of Economics and Business*, vol. 40, no. 2, pp. 177-189.

Soenen, L. A. and Aggarwal, R. (1987). 'Corporate Foreign Exchange and Cash Management Practices', *Journal of Cash Management*, vol. 7, no. 2, pp. 62-64.

Soenen, L. A. and Aggarwal, R. (1988). 'Banking Relationships and Cash and Foreign Exchange Management: A Study of Companies in the U.K., the Netherlands and Belgium', *Management International Review*, vol. 28, no. 2, pp. 56-69.

Soenen, L. A. and Aggarwal, R. (1989). 'Cash and Foreign Exchange Management: Theory and Practice in Three countries', *Journal of Business Finance and Accounting*, vol. 16, no. 5.

Stanley, M. and Block, S. (1983). 'An Empirical Study of Management and Financial Variables Influencing Capital Budgeting Decisions in the 1980's', *Management International Review*, vol. 23.

Stanley, M. T. (1990). 'Ethical Perspectives on the Foreign Direct Investment Decision', *Journal of Business Ethics*, vol. 9, no. 1, pp. 1-10.

Stephens, R. and Apasu, Y. (1986), 'Exploiting Global Opportunities: A future Orientated Strategic Perspective for Multinational Corporations', *European Management Journal*, vol. 4, no. 2, pp. 104-113.

Stopford, J. M. and Dunning, J. H. (1983). '*Multinationals: Company Performance and Global Trends*', New York: Macmillan.

Suhar, V. V. (1980). 'For the Corporate Treasurer: The Expert Hedger Needs to be Where Central Management Is', *Euromoney*, pp. 111-123.

Teece, D. (1985). 'Multinational Enterprise, Internal Governance, and Industrial Organisation', *American Economic Review*, Papers and Proceedings, 75: pp. 233-238.

Thompson, R. S. (1985). 'Risk reduction and International Diversification: An Analysis of Large UK Multinational Enterprises', *Applied Economics*, vol. 17, no. 3, pp. 529-541.

UNCTC (1990). '*The New Code Environment*', New York: UN.

United Nations (1983). '*Transnational Corporations and World development: Third survey*', New York: United Nations Publications.

Vernon, R. (1966). 'International Investment and International Trade in the Product Cycle', *Quarterly Journal of Economics*, no. 80, pp. 190-207.

Vickers, D. (1974). 'Disequilibrium Structures and Financing Decisions in the Firm', *Journal of Business Finance and Accounting*, vol. 1, no. 3, pp. 375-387.

Wallace, R. S. O. and Mellor, C. J. (1988). 'Non-response Bias in Mail Accounting Surveys: A Pedagogic Note', *British Accounting Review*, vol. 20, no. 2, pp. 131-139.

Westwick, C. A. and Sohet, P. S. D. (1976). *'Investment Appraisal and Inflation'*, Committee Occasional Paper, no. 7, Institute of Chartered Accountants in England and Wales.

Williamson, O. E. (1981). 'The Modern Corporation: Origins, Evolution, Attributes', *Journal of Economic Literature*, pp. 1537-68.

Williamson, O. E. (1985). *'The Economic Institutions of Capitalism'*, New York: Free Press.

Williamson, O. E. (1988). 'Corporate Finance and Corporate Governance', *Journal of Finance*, vol. 43, no. 3, pp. 567-591.

Wilson, M. (1990). 'Empirical Evidence of the Use of a Framework of Risk and Return in Capital Budgeting for Foreign Direct Investment', *Managerial Finance*, vol. 16, no. 2, pp. 25-34.

World Bank (1992). *Annual Report*, Washington DC.

Yaprak, A. and Sheldon, K. T. (1984). 'Political Risk Management in Multinational Firms: An Integrative Approach', *Management Decision*, vol. 22, pp. 53.

Young, S., Hood, N. and Hamill, J. (1985). *'Decision-making in Foreign Owned Multinational Subsidiaries in the UK'*, ILO Working Paper No. 35, Geneva: ILO.