

Dedication

My doctorate dissertation is dedicated for my son Aron Henry Daud Schaefer, mother

Pungky and my late father Ade Daud Iswandi Nasution.



Acknowledgments

I would like to thank my panel of examiners for their advice, rigor, and generosity to provide knowledgeable inputs. I would express my gratitude to my doctorate supervisors: Prof. Sugiarto, Dr. Gracia S. Ugut and Dr. Edison Hulu for their patience, confidence, insightful, knowledgeable, and rigorous feedbacks to me. Lastly, to my family, mentors, and friends, I thank you deeply for your tremendous encouragement and support throughout this learning journey.

Table of Contents

Abstract	ii
Dedication	iv
Acknowledgments.....	v
Table of Contents.....	vi
List of Tables	viii
List of Figures	ix
List of Charts.....	ix
Definitions.....	x
CHAPTER 1 INTRODUCTION	1
1.1. Introduction.....	2
1.2. Background.....	9
1.3. Problem Statement.....	16
1.4. Research Questions and Research Objective	17
1.5. Limitations	22
CHAPTER 2. LITERATURE REVIEW	23
2.1. Introduction.....	24
2.2. Theoretical perspective on the determinant of the interest rate margin.....	28
2.3. Propensity to Project Finance in the Developing Countries	31
2.4. Syndicated loan: project finance loan spread determinants	33
2.5. Literature Review.....	35
2.6. Hypotheses Development	39
2.6.1. Critical Risk Factors	39
2.6.1.1. Political Risk and Sovereign Risk.....	39
2.6.2. Guarantee	41
2.6.3. Return Attributed Factors	47
2.6.3.1. Loan characteristics	47
2.6.4. Macroeconomic Factors.....	52
2.6.5. Private sector participation in the infrastructure sector	55

2.7.	Hypotheses Framework	60
2.8.	Focus Study: Private Sector Participation in the Power Sector	62
CHAPTER 3 METHODOLOGY		71
3.1.	Introduction.....	72
3.2.	Research Design and methodology.....	74
<u>3.2.1.</u>	Classic Assumption Test.....	75
<u>3.2.2.</u>	Hypotheses Testing.....	78
3.3.	Data Sources	82
<u>3.3.1.</u>	Sample and Population	84
<u>3.3.1.1.</u>	Sample Collection Method	88
3.4.	Variables	91
<u>3.4.1</u>	Dependent Variables.....	91
<u>3.4.2.</u>	Independent Variables	92
<u>3.4.2.1.</u>	Critical Risk Factors	92
<u>3.4.2.2.</u>	Return Attributed Factors	93
<u>3.4.2.4.</u>	Control variables: Macroeconomics factors	95
3.5.	Regression Equations and Coefficient of Determination.....	96
CHAPTER 4. RESULTS		99
4.1.	Introduction.....	100
<u>4.2.</u>	Descriptive statistics	100
<u>4.2.1.</u>	Summary Statistics.....	101
<u>4.3.</u>	Econometrics Regression.....	102
<u>4.3.1.</u>	Empirical model I.a:.....	104
1.	Indonesia	105
2.	Malaysia	107
3.	Thailand	108
4.	Philippines.....	109
i.	The Empirical Model I.b:.....	111
1.	ASEAN-4	112
CHAPTER 5. CONCLUSION AND RECOMMENDATION		120
REFERENCES		125
APPENDIX		131

List of Tables

Table 1. Literature's review and Research Gap	35
Table 2. Literature's review on the loan spread determinants	37
Table 3. Credit enhancement factors comparison in Indonesia, Thailand, and the Philippines	43
Table 4. Empirical literatures review on the project finance loan spread determinants	50
Table 5. Outline of Electric power liberalization models	65
Table 6. Overview of the electricity sector in the ASEAN four countries	68
Table 7. Project Finance Loan Observation Sample.....	83
Table 8. Explanatory data of Political risk.....	86
Table 9. Explanatory variables under examination and data sources	89
Table 11. Summary statistics	102
Table 12. Regression result of OLS single countries of Loan Spread	104
Table 13. Regression result of OLS single countries of Project interest rate	105
Table 14. OLS Regression Results and the Overview (ASEAN-4).....	112
Table 15. Results overview for dependent variable of loan spread	113
Source: Author (2021)	113
Table 16. OLS Regression Results and the Overview (ASEAN-4).....	114
Table 17. Results overview for dependent variable of Interest Rate	114
Table 18. Literature review and adj R-square.....	116
Table 19. Result Findings Adj R-Square	117

List of Figures

Figure 1: Web of contracts of an SPV in project finance	26
Figure 2: Hypotheses framework.....	60
Figure 3: Data Flowchart	90

List of Charts

Chart 1: Project finance loan spread over LIBOR in the ASEAN four countries for selected project financings.....	6
--	---

Definitions

ASEAN	: The Association of Southeast Asian Nations
ASEAN 5	: five Southeast Asian countries—Indonesia, Malaysia, the Philippines, Singapore, and Thailand.
LIBOR	: London Interbank Offered Rate
IPP	: Independent Power Producer
PF	: Project Finance
SPV	: Special Purpose Vehicle
PSP	: Private Sector Participation
PPP	: Public Private Partnership
GDP	: Gross Domestic Product
WBGI	: World Bank Governance Index
ICRG	: International Country Risk Guide
MIGF	: Multilateral Investment Guarantee Fund
FDI	: Foreign Direct Investment
CAPM	: Capital Asset Pricing Model
PPA	: Power Purchase Agreement
NFC	: Non-financial Contract

Project Interest rate: Summation of LIBOR and Project Finance Loan Spread