



RENTAL YIELD AS THE REFERENCE  
BENCHMARK PRICING FOR *MUSYARAKAH*  
*MUTANAQISAH* HOME FINANCING IN MALAYSIA

BY

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## ABSTRACT

Islamic financial institutions offer home financing products which are fully compliant with *Shariah*. A problem lies in the fact that the *musyarakah mutanaqisah* home financing product lacks a reference, or price benchmark, which is independent on the interest rate. Many have suggested to price this product based on rental rate, as this rate is indicative of the real value of the property being occupied. The main objective of this study is to assess the viability of rental yield as a pricing reference for *musyarakah mutanaqisah* home financing, as an alternative to reliance on the market interest rate. This study adopts a multi-step research approach to arrive at conclusive findings. The first step is to determine whether the rental yield is reflective of real economic conditions, while the second is to examine the future trend for rental yield in four different states in Malaysia - Kuala Lumpur, Selangor, Johor, and Penang. In the third step, the forecast data are used to discern the details of *musyarakah mutanaqisah* home financing products, and, lastly, the resulting price between *musyarakah mutanaqisah* home financing based on rental yield is compared with *murabahah* and conventional home financing. This research utilizes the autoregressive distributed lag (ARDL) model to analyze the relationship between rental yield with selected macroeconomic and housing market variables for the 1988 to 2016 period using annual data. The forecasting technique of the auto regressive integrated moving average (ARIMA) and artificial neural network (ANN) models are adopted to assess the predictability of the rental yield for a period of 20 years. The study provides evidence that rental yield is found to be reflective when regressed against the macroeconomic and housing market indicators. The analysis shows that a short period is required for the model to adjust back to the long-term equilibrium. The result observes the future movements of the housing market by considering the rental yield. Based on a simulation exercise, the projected Islamic financial institution's gain for *musyarakah mutanaqisah* home financing for Kuala Lumpur is RM278,143.76, which is the highest amount among four different states in Malaysia. While the projected Islamic financial institution's gain for home financing in Penang is RM89,888.52, which is the lowest amount among the selected states. The difference in total payments made by a customer for *musyarakah mutanaqisah* home financing and *murabahah*/conventional housing loan amounts to RM36,640.02. The evidence in this research benefits to those stakeholders of Islamic financial institutions that want to refer to the rental yield as pricing benchmark for Islamic home financing. In conclusion, the rental yield is proposed as being a suitable alternative as the reference rate to benchmark price of Islamic home financing products, based on the *musyarakah mutanaqisah* model. Rental yield is regarded as a rate that is fair to both the customer and Islamic financial institutions, as it measures the actual rate of return to both parties in *musyarakah mutanaqisah* contract. The proposed rental yield is more stable, having less fluctuations and yet comparable to the conventional interest rates. The customers should gain more transparency as the rental yield measures the true usufruct of the property, as appose to the interest charges which are not tied to the property's usufruct.

## ملخص البحث

تسعى المؤسسات المالية الإسلامية لتقديم منتجات تمويل المنازل بشكل متوافق تمامًا مع الشريعة الإسلامية، ومن هذه المنتجات "منتج المشاركة المتناقصة لتمويل المنازل" وتكمن مشكلة منتج المشاركة المتناقصة لتمويل المنازل في أنه يفتقر إلى المرجعية، أو مؤشر لتسعيه بمعزل عن سعر الفائدة. وقد اقترح العديد من الخبراء أن يتم تسعير هذا المنتج على أساس معدل الإيجار، حيث يدل هذا المعدل على القيمة الحقيقية للممتلكات المستأجرة. تهدف هذه الدراسة لتقييم جدوى العائد من الإيجار كمرجع لتسعير تمويل المنازل عن طريق منتج المشاركة المتناقصة كبديل عن الاعتماد على سعر الفائدة في السوق. تبنت هذه الدراسة مقارنة بحثية متعددة الخطوات للوصول إلى نتائج صحيحة. تتمثل الخطوة الأولى في تحديد في ما إذا كان عائد الإيجار يعكس الظروف الاقتصادية الحقيقية، في حين كانت الخطوة الثانية تتمثل بدراسة الاتجاه المستقبلي لعائد الإيجار في أربع ولايات مختلفة في ماليزيا - وهي: كوالالمبور، سيلانجور، جوهور، وبينانغ. أما في الخطوة الثالثة فقد تم استخدام بيانات التنبؤ لتمييز تفاصيل منتج تمويل المنازل بالمشاركة المتناقصة. وأخيراً تم مقارنة السعر الناتج بين تمويل المنازل عن طريق المشاركة المتناقصة القائمة على أساس عائد الإيجار مع عقد بيع وشراء تمويل المنازل التقليدي. يستخدم هذا البحث نموذج (ARDL) لتحليل العلاقة بين عائد الإيجار مع متغيرات سوق الاقتصاد الكلي ومتغيرات سوق العقارات في الفترة الممتدة من عامي 1988 وحتى 2016 باستخدام بيانات سنوية. وتم الأخذ بتقنية (ARIMA) وموديل (ANN) لتقييم إمكانية التنبؤ بعوائد الإيجار لمدة 20 عامًا. وقد خصلت الدراسة إلى أن عائد الإيجار يعكس تراجع مؤشرات سوق الاقتصاد الكلي وسوق العقارات. يظهر التحليل أن هناك حاجة لفترة قصيرة لكي يتكيف النموذج مع التوازن طويل الأجل. ومن خلال النتائج نلاحظ التحركات المستقبلية لسوق العقارات من خلال النظر في عائد الإيجار. واستناداً إلى محاكاة عملية، فإن المكاسب المتوقعة للمؤسسات المالية الإسلامية في تمويل المنازل عن طريق المشاركة المتناقصة في كوالالمبور بلغت 278,143.76 رينجيت ماليزي، وهو أعلى مبلغ بين الولايات المختلفة في ماليزيا. في حين كانت المكاسب المتوقعة للمؤسسات المالية الإسلامية من تمويل المنازل في بينانغ تبلغ 89,888.52 رينجيت ماليزي، وهو أقل مبلغ بين الولايات المختارة. وكان الفرق في مجموع المدفوعات التي يدفعها العميل لتمويل المنازل بين المشاركة المتناقصة وبين عقد الشراء عن طريق قرض الإسكان التقليدي مبلغ 36,640.02 رينجيت ماليزي. يعتبر هذا البحث مفيد وملائم لأصحاب المصلحة في المؤسسات المالية الإسلامية الذين يرغبون في الإشارة إلى عائد الإيجار كمبرار لتسعير المنازل وفق التمويل الإسلامي. في خاتمة البحث، نقترح بأن يكون عائد الإيجار أفضل طريقة لتسعير تمويل المنازل بالشكل الإسلامي وأن يتم اعتماده كمعدل مرجعي يتم استخدامه لتسعير كافة منتجات تمويل المنازل الإسلامية بناء على نموذج المشاركة المتناقصة. حيث يعتبر عائد الإيجار نسبة عادلة لكل من العميل والمؤسسات المالية الإسلامية، حيث يقيس معدل العائد الفعلي لكلا الطرفين في عقد المشاركة المتناقصة. بالإضافة إلى ماسبق، فإن عائد الإيجار المقترح يعتبر أكثر استقراراً وأقل تقلباً مقارنة بأسعار الفائدة التقليدية. ويجب أن يحصل العملاء على مزيداً من الشفافية حيث يقيس عائد الإيجار حق الانتفاع الحقيقي للممتلكات، بعكس رسوم الفائدة التي لا ترتبط بملكية العقار.

## **APPROVAL PAGE**

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## DECLARATION

I hereby declare that this dissertation is the result of my own investigations, except where otherwise stated. I also declare that it has not been previously or concurrently submitted as a whole for any other degrees at IIUM or other institutions.

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# TABLE OF CONTENTS

Abstract .....	i
Abstract in Arabic .....	ii
Approval Page.....	iii
Declaration.....	iv
Copyright Page.....	v
Acknowledgements.....	vii
List of Tables .....	xi
List of Figures .....	xiv
List of Terminologies.....	xvi
<b>CHAPTER ONE: INTRODUCTION.....</b>	<b>1</b>
1.1 Background of the Study .....	1
1.2 Problem Statement .....	8
1.3 Research Objectives.....	11
1.4 Research Questions.....	12
1.5 Significance of the Study.....	12
1.6 Scope of Study .....	14
1.7 Definitions of Terms .....	15
1.8 Organization of Thesis.....	16
<b>CHAPTER TWO: OVERVIEW OF MUSYARAKAH MUTANAQISAH HOME FINANCING .....</b>	<b>18</b>
2.1 Introduction.....	18
2.2 Overview of Islamic Home Financing in Malaysia .....	18
2.3 Musyarakah Mutanaqisah Home Financing .....	24
2.3.1 Description of Musyarakah Mutanaqisah Home Financing Product	24
2.3.2 Transfer of Ownership .....	30
2.3.3 Default.....	31
2.3.4 Late Payment Compensations (Ta'widh).....	32
2.4 Payment Schedule for Musyarakah Mutanaqisah home financing.....	33
2.5 Issues in Musyarakah Mutanaqisah Home Financing .....	37
2.5.1 Usage of Interest rate as a Benchmark.....	37
2.5.2 Risk of Loss .....	38
2.5.3 Financing for a House Under Construction .....	39
2.5.4 Operational Issue .....	39
2.5.5 Issue of Property Maintenance Costs.....	40
2.6 Current Practice of Reference Benchmark Pricing for Home Financing Products .....	40
2.6.1 Benchmarking for Musyarakah Mutanaqisah Home Financing .....	40
2.6.2 Benchmarking for Murabahah Home Financing .....	42
2.6.3 Benchmarking for Conventional Home Loan.....	46
2.7 Chapter Summary .....	48



<b>CHAPTER THREE: RENTAL YIELD AS THE REFERENCE BENCHMARK PRICING .....</b>	<b>49</b>
3.1 Introduction.....	49
3.2 Overview of Housing Market and Rental Yield .....	49
3.2.1 Housing Market in Malaysia.....	49
3.2.2 Rental Yield in Malaysia .....	53
3.3 The Reference Benchmark Pricing Practices.....	58
3.3.1 The Reference Benchmark Pricing from International Standard.....	58
3.3.2 The Reference Benchmark Pricing in Malaysia .....	61
3.4 Shariah Principles of the Reference Benchmark Pricing.....	64
3.4.1 Shariah Principles from Primary and Secondary Sources .....	64
3.4.2 Benchmarking and Its Relation to Maqasid Shariah.....	65
3.4.3 Proposed Shariah Parameters for the Reference Benchmark Pricing.....	67
3.5 Theories Related to Reference Benchmark Pricing.....	69
3.5.1 Theory of Profit and Theory of Value Applied in Islamic Finance..	69
3.5.2 The Hedonic Theory .....	73
3.6 Review of Previous Studies .....	75
3.6.1 Reference Benchmark Pricing for Islamic Financial Products .....	76
3.6.2 Rental and Housing Market Variables.....	83
3.6.3 Rental and Macroeconomic Variables .....	90
3.6.4 Forecasting in Real Estate Market .....	97
3.7 Justification of Rental Yield as the Reference Benchmark Pricing for Musyarakah Mutanaqisah Home Financing.....	99
3.8 Identify the Research Gaps .....	101
3.9 Chapter Summary .....	102
 <b>CHAPTER FOUR: RESEARCH METHODOLOGY .....</b>	 <b>104</b>
4.1 Introduction.....	104
4.2 Conceptual Framework of the Research .....	104
4.3 Research Process.....	106
4.4 Model Specification .....	109
4.5 Variables Selection, Justification, and Measurements.....	110
4.5.1 Dependent Variable .....	110
4.5.2 Explanatory Variables.....	111
4.6 Data Sources .....	112
4.7 Methods of Analysis .....	113
4.7.1 Data Preliminary Test .....	114
4.7.1.1 Graphical Analysis.....	114
4.7.1.2 Descriptive Statistics of Variables .....	114
4.7.2 Pearson Correlation Test.....	115
4.7.3 Autoregressive Distributed Lags (ARDL) Model.....	116
4.7.3.1 Testing for Cointegration: “The Bound Test” .....	118
4.7.3.2 Long and Short-run Dynamics.....	119
4.7.3.3 Diagnostic Tests.....	121
4.7.4 Forecasting Analysis.....	122
4.7.4.1 Auto Regressive Integrated Moving Average (ARIMA) Models.....	122
4.7.4.2 Artificial Neural Network (ANN) Models.....	125
4.7.4.3 Error Tests.....	129

4.7.5 Simulation Analysis .....	130
4.8 Chapter Summary .....	134
<b>CHAPTER FIVE: EMPIRICAL ANALYSIS AND RESULT .....</b>	<b>135</b>
5.1 Introduction.....	135
5.2 Preliminary Analysis.....	135
5.2.1 Graphical Analysis.....	136
5.2.2 Descriptive Statistics.....	137
5.2.3 Normality Test Results .....	138
5.3 Result of Relationship between the Residential Property Rental Yield with the Macroeconomic and housing market Variables .....	139
5.3.1 Pearson Correlation Test Results .....	140
5.3.2 Unit Root Test Results .....	141
5.3.3 Bounds-Test Results .....	142
5.3.4 Long-Run Coefficients Estimation .....	143
5.3.5 Short-Run Estimation.....	146
5.3.6 Diagnostics Tests Results .....	148
5.4 Results of Forecasting.....	151
5.4.1 Descriptive Statistics of Rental Yield.....	151
5.4.2 Testing for Stationarity .....	153
5.4.2.1 ACF and PACF for Stationary Test.....	153
5.4.2.2 Unit Root Test for Stationarity .....	155
5.4.3 Autoregressive Integrated Moving Average (ARIMA) Model Analysis 155	
5.4.3.1 The Best Fit ARIMA Model.....	155
5.4.3.2 Diagnostic Checking for ARIMA Model .....	156
5.4.3.3 Result of Forecast Rental Yield using ARIMA Model.....	158
5.4.4 Artificial Neural Network (ANN) Models Analysis.....	160
5.4.4.1 The Best Fit ANN model .....	160
5.4.4.2 Result of Forecast Rental Yield using ANN model.....	161
5.4.5 Performance Comparison of the ARIMA and ANN Models Based on Evaluation Statistics.....	163
5.5 Result of Simulation Performance of the Pricing Calculation for Home Financing .....	164
5.5.1 Rental Yield as the Reference Benchmark Pricing of Musyarakah Mutanaqisah Home Financing .....	164
5.5.2 Pricing Simulation of Musyarakah Mutanaqisah Home Financing	168
5.5.2.1 Pricing Simulation of Musyarakah Mutanaqisah Home Financing for a Residential Property in Kuala Lumpur.....	169
5.5.2.2 Pricing Simulation of Musyarakah Mutanaqisah Home Financing for a Residential Property in Selangor .....	171
5.5.2.3 Pricing Simulation of Musyarakah Mutanaqisah Home Financing for a Residential Property in Johor .....	174
5.5.2.4 Pricing Simulation of Musyarakah Mutanaqisah Home Financing for a Residential Property in Penang .....	177
5.5.3 Pricing Simulation of Murabahah Home Financing .....	180
5.5.4 Pricing Simulation of Conventional Home Loan.....	182
5.6 Analysis of Pricing Simulation for Musyarakah Mutanaqisah, Murabahah, and Conventional Home Financing .....	184

5.7 Chapter Summary .....	189
<b>CHAPTER SIX: DISCUSSION AND CONCLUSION.....</b>	<b>190</b>
6.1 Introduction.....	190
6.2 Highlight of Major Findings .....	190
6.2.1 Relationship between the Residential Property Rental Yield with the Macroeconomic and Housing Market Variables .....	190
6.2.2 Predicting the Rental Yield.....	192
6.2.3 Pricing Simulation to Calculate the Pricing of Musyarakah Mutanaqisah Home Financing .....	192
6.2.4 Comparative Analysis of Pricing Simulation of Musyarakah Mutanaqisah, Murabahah and Conventional Home Financing.....	194
6.3 Summary of the Findings.....	195
6.4 Contributions of the Study .....	198
6.4.1 Contribution to the Body of Knowledge.....	198
6.4.2 Contribution to the Methodology.....	198
6.4.3 Contribution to the Islamic Banking and Finance Industry .....	199
6.5 Limitations of the Study.....	200
6.6 Suggestions for Future Research .....	200
<b>BIBLIOGRAPHY .....</b>	<b>202</b>
APPENDIX I     BOUND TEST FOR CASE II: RESTRICTED INTERCEPT AND NOT TREND (F-STATISTIC VALUE).....	214
APPENDIX II     ARIMA MODEL FORECAST CODING OF R PROGRAMMING LANGUAGE .....	217
APPENDIX III    ANN MODEL FORECAST CODING OF R PROGAMMING LANGUAGE.....	218
APPENDIX IV     LIST OF PUBLICATION .....	219

## LIST OF TABLES

<u>Table No.</u>		<u>Page No.</u>
2.1	List of Islamic Financial Institutions Offering the Islamic Home Financing based on Concept	21
2.2	Components of <i>Musyarakah Mutanaqisah</i> Home Financing	26
2.3	Example of Payment Schedule for <i>Musyarakah Mutanaqisah</i> Home Financing	35
2.4	Payment Schedule for <i>Murabahah</i> Home Financing	45
2.5	Payment Schedule for Conventional Home Loan	47
3.1	Review of Previous Studies in Reference to Benchmark Pricing	78
3.2	Rental and Housing Market Variables	87
3.3	Rental and Macroeconomic Variables	93
4.1	Variables, Acronym, Measurement and Source of Data	113
4.2	Summary of Statistical Methods, Variables and Data Sources in Investigating the Research Objectives	133
5.1	Result of Descriptive Statistics of the Variables	138
5.2	Correlation Matrix of the Variables	140
5.3	Unit Root Test for the Variables	142
5.4	Critical Values for the <i>F</i> -statistic, case (ii), ( $k=3$ , $n=30$ )	143
5.5	Autoregressive Distributed Lag Estimates Based on (AIC) (4,3,4,4), Dependent Variable is Rental Yield	144
5.6	Estimation of Long-Run Coefficients using the ARDL (4,3,4,4) Selection Based on (AIC), Dependent Variable is Rental Yield	145

5.7	Error Correction Model Representation for the Selected ARDL Model, (4,3,4,4) Selected Based on (AIC) Criterion	147
5.8	Results of Diagnostic Tests	149
5.9	Results of the Descriptive Statistics of Rental Yield, 1985 to 2015 (n=31)	151
5.10	Results for the ADF and PP tests of Rental Yield for Kuala Lumpur, Selangor, Johor and Penang	155
5.11	The Best Fit ARIMA Model of Rental Yield Kuala Lumpur, Selangor, Johor and Penang	156
5.12	Result of Forecast Rental Yield using ARIMA Model for Kuala Lumpur, Selangor, Johor and Penang	158
5.13	The Best Fitted ANN Model of Rental Yield for Kuala Lumpur, Selangor, Johor and Penang	160
5.14	Result of Forecast Rental Yield using ANN Model for Kuala Lumpur, Selangor, Johor and Penang	161
5.15	Values of Residual Error Metrics of the ARIMA and ANN Models	163
5.16	Result of Descriptive Statistics of Rental Yield Forecast for Kuala Lumpur, Selangor, Johor, and Penang; 2016 – 2035 (Projected n=20)	166
5.17	Payment Schedule of <i>Musyarakah Mutanaqisah</i> Home Financing for a Residential Property in Kuala Lumpur	170
5.18	Simulation Result of <i>Musyarakah Mutanaqisah</i> Home Financing for a Residential Property in Kuala Lumpur	171
5.19	Payment Schedule of <i>Musyarakah Mutanaqisah</i> Home Financing for a Residential Property in Selangor	173
5.20	Simulation Result of <i>Musyarakah Mutanaqisah</i> Home Financing for a Residential Property in Selangor	174
5.21	Payment Schedule of <i>Musyarakah Mutanaqisah</i> Home Financing for a Residential Property in Johor	176
5.22	Simulation Result of <i>Musyarakah Mutanaqisah</i> Home Financing for a Residential Property in Johor	177

5.23	Payment Schedule of <i>Musyarakah Mutanaqisah</i> Home Financing for a Residential Property in Penang	179
5.24	Simulation Result of <i>Musyarakah Mutanaqisah</i> Home Financing for a Residential Property in Penang	180
5.25	Payment Schedule of <i>Murabahah</i> Home Financing (Constant Amortization Case)	181
5.26	Simulation Result of <i>Murabahah</i> Home Financing for a Residential Property in Malaysia	182
5.27	Payment Schedule of Conventional Home Loan (Constant Amortization Case)	183
5.28	Simulation Result of Conventional Home Loan for a Residential Property in Malaysia	184
5.29	Summary of Pricing Simulation	185
5.30	Comparison of Customer's Monthly and Total Payment	187
6.1	Pricing Simulation of <i>Musyarakah Mutanaqisah</i> Home Financing for the Residential Properties in Four Selected States in Malaysia	193
6.2	Comparative Analysis of the Pricing Simulation of <i>Musyarakah Mutanaqisah</i> , <i>Murabahah</i> and Conventional Home Financing	195
6.3	Summary of the Findings	196

## LIST OF FIGURES

<u>Figure No.</u>		<u>Page No.</u>
1.1	Mortgage Market in Malaysia, 1996-2016	1
1.2	Market Share of Islamic Home Financing in Malaysia, 2007-2016	2
1.3	Population Density by State of Malaysia, 2010	6
1.4	Level of Urbanization by State of Malaysia, 2010	7
2.1	Islamic Financing by Concept as of December 2016	19
2.2	Structure of <i>Musyarakah Mutanaqisah</i> Home Financing	28
3.1	Malaysia House Price Index, 1988-2016 (% change)	50
3.2	Housing Loan (Extended by the Banking System), 1980-2016	51
3.3	Rental Yield for Kuala Lumpur, Selangor, Johor and Penang, 1985-2015	57
3.4	Comparison of the Base Lending Rate and the Base Rate Framework	63
3.5	Principles of Islamic Finance and <i>Maqasid Shariah</i>	66
4.1	Conceptual Framework of Research	106
4.2	Research Design of the Study	108
4.3	Box-Jenkins Methodology	124
4.4	Artificial Neural Network Simplified Structure	126
4.5	Design of the Artificial Neural Network	126
5.1	Graphical plot of Selected Macroeconomic and Housing Market Variables, 1988-2015	136
5.2	Plot of Cumulative Sum of Recursive Residuals	150

5.3	Plot of Cumulative Sum of Squares of Recursive Residuals	150
5.4	Graphical Plot of Rental Yield for KL, Selangor, Johor, and Penang, 1985-2015 (n=31)	152
5.5	Result of ACF and PACF of Rental Yield for Kuala Lumpur, Selangor, Johor and Penang	154
5.6	Graphical Plot of Residual Diagnostic Checking for ARIMA Model	157
5.7	Graphical Plot of Forecast Rental Yield using ARIMA Best Model for Kuala Lumpur, Selangor, Johor, and Penang	159
5.8	Graphical Plot of Forecast Rental Yield using the Best ANN Model for Kuala Lumpur, Selangor, Johor, and Penang	162
5.9	Forecast of Rental Yield for Kuala Lumpur, Selangor, Johor, and Penang; 2016–2035 (Projected n=20)	165



## LIST OF TERMINOLOGY

- 'Aqal* - Intellectual  
*Al-Quran* - The Holy Book of Islam  
*Bay' bithaman ajil* – Deferred payment  
*Darurriyyah* – Necessity  
*Deen* - Faith  
*Ghabn fahish* – Excessive over pricing  
*Gharar* – Uncertainty  
*Hadith* – Saying, action and tacit approval of Prophet Muhammad S.A.W. (p.b.u.h.)  
*Halal* – Permissible  
*Haram* – Forbidden  
*Ijarah* – Lease  
*Ijarah muntahiyah bittamlik* - Leasing ending with ownership  
*Istisna'* – A contract to manufacture goods  
*Mafsadah* – Preventing harm  
*Mal* – Wealth or property  
*Maqasid al-Shariah* – Objectives of Islamic law  
*Maslahah* – Preserving human interest  
*Maysir* - Gambling  
*Murabahah* – A sale of certain goods with a disclosed cost and mark-up  
*Muslim* – A person who follows the religion of Islam  
*Musyarakah* – A contract of profit and loss sharing  
*Musyarakah mutanaqisah* – A diminishing partnership contract  
*Nasab* - Lineage  
*Nasl* - Life  
*Riba* – Interest  
*Shariah* – Islamic law  
*Tawarruq* – A tripartite sale

# CHAPTER ONE

## INTRODUCTION

### 1.1 BACKGROUND OF THE STUDY

The Malaysian mortgage market has developed dramatically and plays a significant role in the country's economic activity. Malaysia boasts one of the highest incomes per capita in Southeast Asia and its real estate industry has expanded to provide housing, offices and commercial properties. The larger developments for urban areas have attracted a stable population growth and better income level, which contributes to the high demand for houses in the residential sector. Investing in real estate is considered to be one of the best investments, and home buyers or investors can invest directly in physical real estate, which involves purchasing residential or commercial properties to generate income and for subsequent resale at a future time. Figure 1.1 presents the mortgage market in Malaysia from 1996 until 2016.

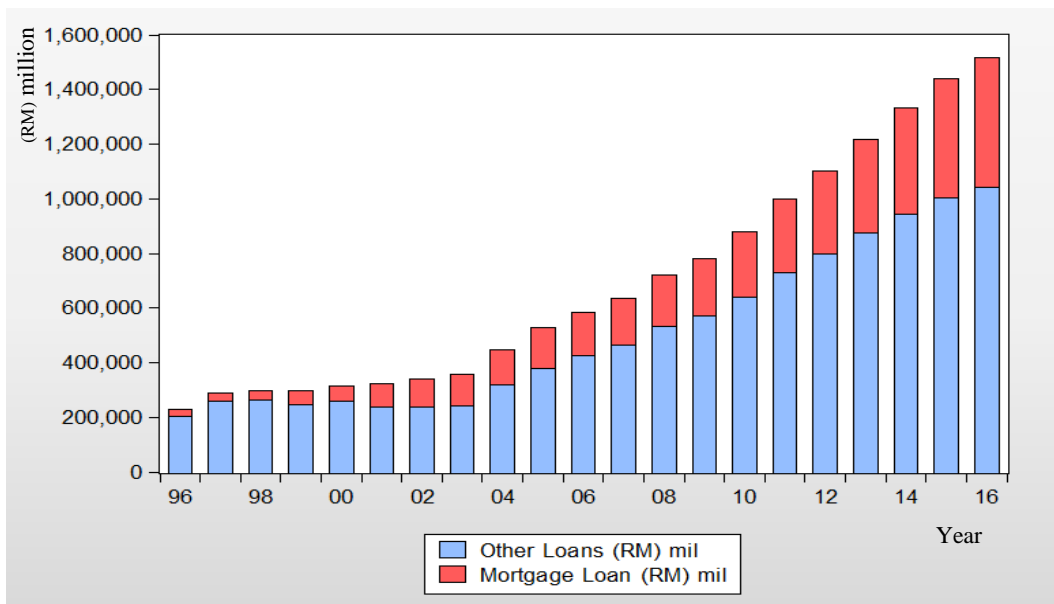


Figure 1.1 Mortgage Market in Malaysia, 1996-2016  
Source: BNM, Monthly Statistical Bulletin of Various Issues

The growth of mortgage debt, as measured by loan/financing for purchase of residential properties, increased from RM237 billion in 2010 to RM475 billion in 2016, thereby recording 12.29 per cent at compound annual growth rate (Figure 1.1). The significance of the mortgage market is also reflected in its contribution to total loans, at nearly 31 per cent in 2016, valued at RM475 billion out of RM1,514 billion, as compared to 27 per cent in 2010, valued at RM237 billion out of RM878 billion. The residential property sector continues to drive the overall market. The increase in housing loans due to increase in the population and income which indicates that the demand for housing is still growing.

Figure 1.2 provides the chart for market share of Islamic home financing in Malaysia since 2007 until 2016.

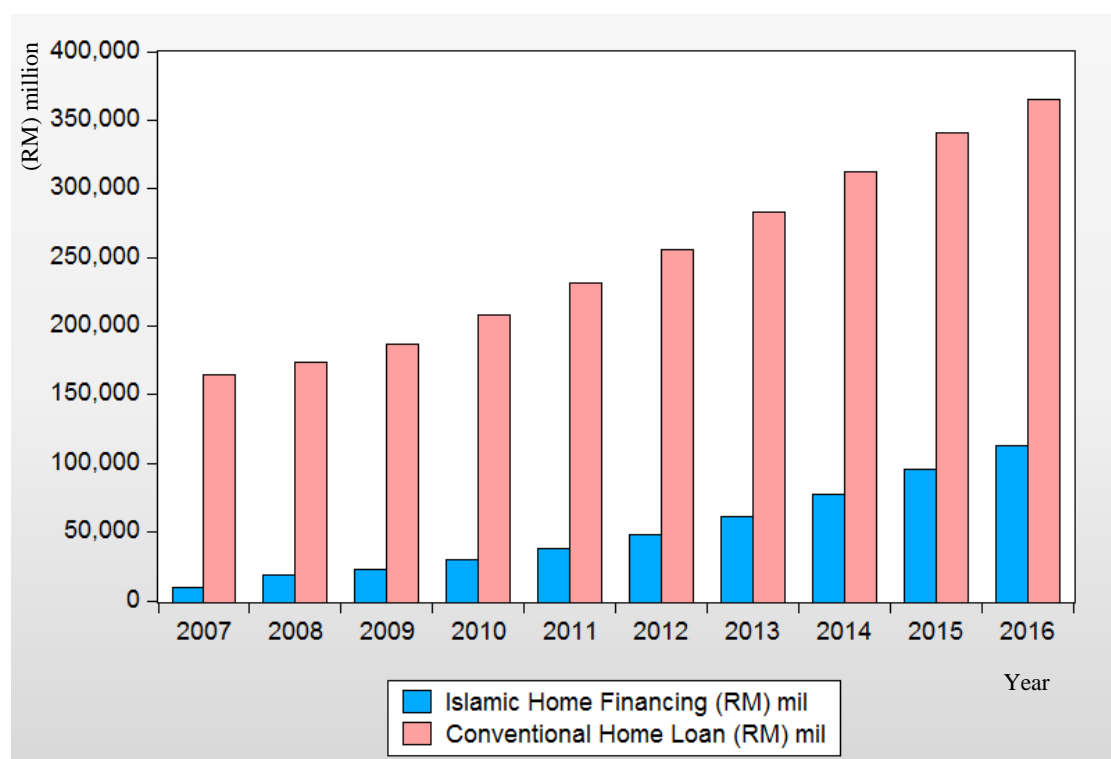


Figure 1.2 Market Share of Islamic Home Financing in Malaysia, 2007-2016  
 Source: BNM, Monthly Statistical Bulletin of Various Issues

Home financing has been the major contributor to the Islamic financial industry since the establishment of the first Islamic bank in Malaysia in 1983. The importance of home financing to the Islamic financial institutions continues to expand, as evidenced by the strong presence in the mortgage market. Figure 1.2 reports the market share of Islamic home financing in Malaysia, with values increasing RM29.5 billion in 2010 to RM112.69 billion in 2016, a 25.03 per cent at compound annual growth rate. The Islamic home financing's share of the total mortgage market is 23.61 percent in 2016 which shown impressive growth, as compared to 12.42 percent in 2010.

Malaysia's Islamic financial institutions provide several Islamic home financing products. A wide range of contracts has been applied, such as *murabahah*, *tawarruq* and *bay' bithaman ajil* (sale-based) financing, which adopt the concept of cost-plus financing. Other types of contract are also offered by Islamic financial institutions for home financing products, such as *musyarakah mutanaqisah* (diminishing partnership) home financing, *ijarah* (lease-based) and *istisna'* (order-to-build-based). Earlier studies have shown that the *musyarakah mutanaqisah* is the ideal *Shariah* principle for Islamic home financing (Mydin Meera & Abdul Razak, 2005, and Abdul Razak & Ismail, 2011). This contract promotes an equity-based, mutually beneficial relationship of profit- and loss-sharing, and is in line with the Islamic *muamalat*. In addition, Osmani & Abdullah (2010); Smolo & Hassan (2011b) and Abdul Aris et al. (2012) support the *musyarakah* contract as it complies with the *Shariah* principles.

It is important to note that, through the years, the *murabahah* contract has been the major form of home financing offered by the Islamic financial institutions in Malaysia. This is shown by the share of *murabahah* financing to the total of the financing portfolio of the Islamic financial institutions at approximately 49.97 per cent in December 2016 (BNM Monthly Statistical Bulletin January 2017). The *murabahah*

or *bay' bithaman ajil* is a cost-plus type of home financing where the price and thus the monthly instalments is based on the rate determined by the bank.

Recently, there has been increasing interest among the Islamic financial institutions to adopt the *musyarakah mutanaqisah* financing product in offering their home financing product. The *musyarakah mutanaqisah* home financing is also commonly practiced in other countries, for example, in Canada, the United Kingdom, Australia, and the United States of America. The *musyarakah mutanaqisah* home financing is essentially a partnership type of financing, where the customer and the financial institution take joint-ownership of the house with the financial institution's share of ownership being gradually bought by the customer throughout the financing period. The joint contract ceases when all the financial institution's share of the property is completely bought by the customer and the ownership of the house is fully transferred to the customer.

The ideal proposition of the *musyarakah mutanaqisah* home financing is to price the product based on the rental value of the house. However, the *musyarakah mutanaqisah* product is still tied to the implied or indicative conventional lending rates (Shuib, Borhan, & Abu Bakar, 2011). Even though benchmarking against the conventional interest rate is permissible, there has been criticism of Islamic banking and finance for depending on the conventional benchmark. Many contemporary Muslim scholars have been calling to initiate an independent benchmark pricing for Islamic financial institutions (Zaman, 1993; Mirakhor, 1996). The alternative benchmark must comply with the basic requirements of Islamic law and be in accordance with the guidelines of *Shariah*; hence, the candidate benchmark indicator must be free from the elements of *riba*, *maysir*, and *gharar*. The alternative benchmark should also be reflective of the real market situation and be in consonance with the real economic

activity and based on the risk-return profiles of the economic ventures. In addition, more importantly, the proposed benchmark should lead to the Islamic financial institutions being an agent to facilitate the achievement of the *maqasid Shariah*.

Rental yield is regarded as a rate that is fair to both the customer and Islamic financial institution, as it measures the actual rate of return to both parties in *musyarakah mutanaqisah* contract. The proposed rental yield is more stable, having less fluctuations and yet comparable to the conventional interest rates. The customers should gain more transparency as the rental yield measures the true usufruct of the property, as appose to the interest charges which are not tied to the property's usufruct. The rental yield can be different among one location to another for the same type of houses. Unlike interest rates are generally independent from the value of the property itself. Furthermore, the rental yield provides a more stable financing as it also reflects the true value of the property according to the physical and locational attributes. In addition, it is not depending on interest as a benchmark and, therefore, rental yield seems more sustainable. This approach will be able to calculate the monthly payment by automating the monthly rental price, rental rate calculation, regardless of how long the payment duration required by customers.

Previous studies have been conducted to study the relationship between the macroeconomic factors and their effect on the movement of house prices (see, for example, Ong & Chang, 2013; Ibrahim, Padli, & Baharom, 2009; and Algieri, 2013). Despite the general findings of these studies that there is a significant relationship between the house price and the selected macroeconomic indicators, there is still a lack of studies exploring the relationship of rental yield and the macroeconomics and other housing market determinants. This study examines the dynamic interactions between the alternative benchmark with macroeconomic and housing market variables, with the

aim of determining whether the rental yield is a suitable pricing benchmark for *musyarakah mutanaqisah* home financing.

The housing market is also significantly influenced by the demand and supply. As the Malaysia population continues to grow rapidly, it will place further pressures on demand for housing. An analysis to assess the demand and supply dynamics of the housing market by the current study to better understand the housing market condition. The Department of Statistics published the 2010 Population and Housing Census of Malaysia, which is the fifth decennial census conducted since the formation of Malaysia in 1963. Figure 1.3 shows the population density by states in Malaysia which the census was conducted in 2010.

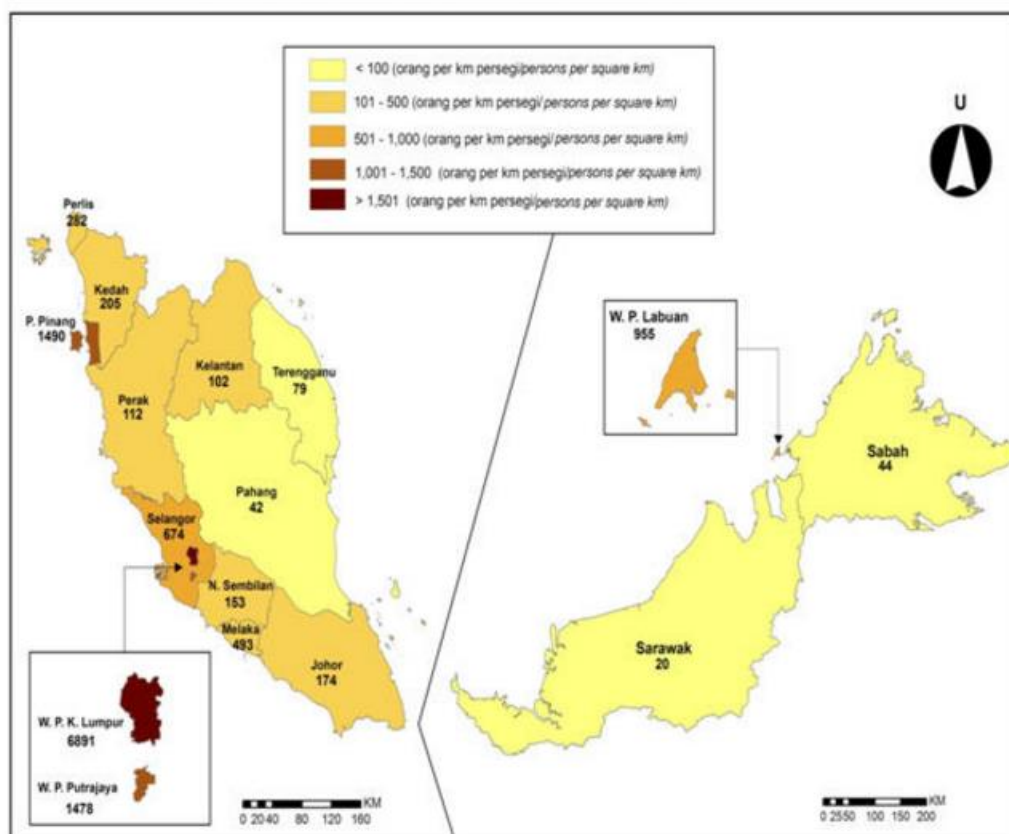


Figure 1.3 Population Density by State of Malaysia, 2010

Source: Department of Statistics, Population Distribution and Basic Demographic Characteristic Report 2010

The Census 2010 reveals that the total population of Malaysia was 28.3 million in 2010. According to the report, the population distribution by state indicated that Selangor is the most populous state (5.46 million) and followed by Johor (3.35 million). In addition, in terms of the population density of Malaysia, the most densely populated states are W. P. Kuala Lumpur (6,891 persons per square kilometre), Penang (1,490) and W. P. Putrajaya (1,478); as shown in Figure 1.3. The census reports that, due to Malaysia's rapid development, the proportion of the urban population had increased to 71.0 per cent in 2010 compared to 62.0 per cent in 2000. Apart from W. P. Kuala Lumpur and Putrajaya with 100 per cent urbanization, the other states with high urbanization are Selangor and Penang with 91.4 per cent and 90.8 per cent, respectively, followed by Johor with 71.9 per cent, as shown in Figure 1.4.

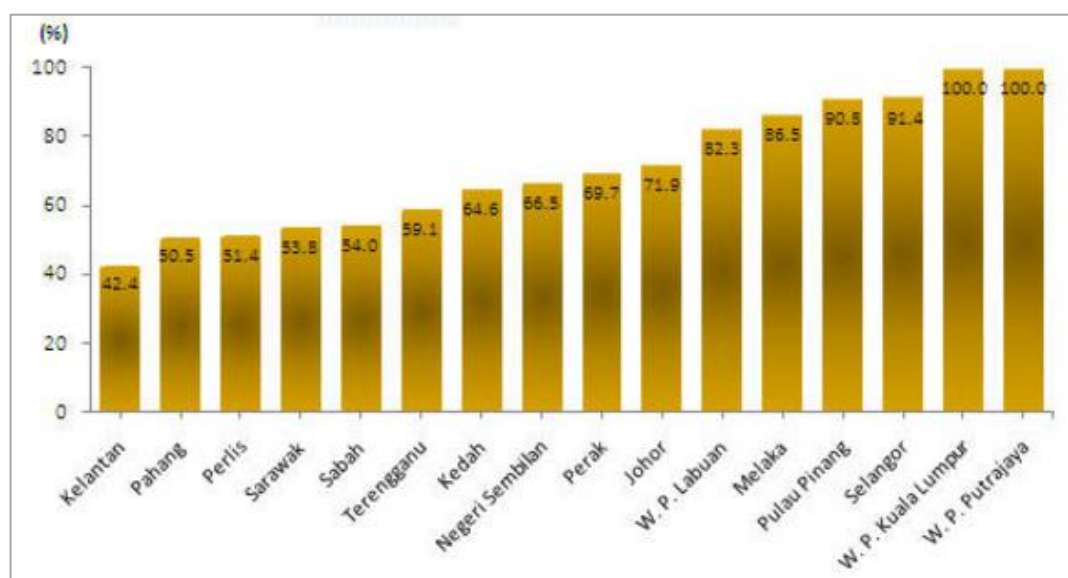


Figure 1.4 Level of Urbanization by State of Malaysia, 2010  
*Source:* Department of Statistics, The 2010 Population and Housing Census of Malaysia

The Malaysia's population is projected to increase by total 41.5 million people in 2040 (Department Of Statistic Malaysia (DOSM), 2016). Considering the rapid population growth in Malaysia, the demand for housing depends not only on the income