EFFICIENCY OF BAITUL MAAL WA TAMWIL AS ISLAMIC MICROFINANCE INSTITUTION IN INDONESIA

BY

ATIQI CHOLLISNI NASUTION

A thesis submitted in fulfilment of the requirement for the degree of Doctor of Philosophy in Islamic Banking and Finance

IIUM Institute of Islamic Banking and Finance
International Islamic University Malaysia

JUNE 2017
ABSTRACT

The primary objectives of most microfinance programmes are poverty alleviation and financial sustainability. By providing financing, Microfinance Institutions (MFI) aims to encourage the poor to become economically independent. Islamic microfinance offers financing schemes based on shariah principles which are different to conventional microfinance. Conventional microfinance deals with interest (riba) which is not allowed in Islam. Indonesia with the Muslim biggest population in the world has established the Baitul Maal wa Tamwil (BMT) which represents significant growth of Islamic MFIs in the country. Islamic MFI promotes Islamic values in their financial services and also optimises the charitable funds to help the needy. The effort to sustain and improve the quality life of the poor is the main objective of BMT. However, many studies show that this institution has inefficiencies on its operations, represented by the lack of expertise in the field of management. Hence, this study attempts to analyse the efficiency of BMT with the following objectives: first, to examine the efficiency of BMT as Islamic MFI in Indonesia; second, to investigate the influencing determinant factor of BMTs efficiency in Indonesia; and third, to explain issues related to BMT’s efficiency in Indonesia. Both primary and secondary data are used to achieve the objectives. The Data Envelopment Analysis (DEA) approach is used to measure the technical efficiency of BMT, while determinant factors that influence BMT efficiency are measured by multiple regression analysis. This study, then, uses a case study research method to find the issues affecting BMT’s efficiency. The samples for DEA method are gathered from 57 BMTs in three provinces with highest poverty rate and highest number of BMT namely, West Java, East Java and Central Java for the period of 2009 to 2011. Meanwhile, with case study research method, the study selects nine BMTs which represent the following criteria: most efficient BMTs, efficient BMTs and least efficient BMTs. The results show that the main source of technical inefficiency is pure technical inefficiency. It may indicate the lack of managerial system and resources in most BMTs. The study also finds a positive effect of profitability on technical efficiency, whereas, size and capital negative affect efficiency. The study finds that the main issue of BMTs is not related with the size or capital but rather human capital and managerial issues. Hence, focusing on the improvement of human capital and managerial system of BMTs is more important than increasing their size or capital. The study provides a significant contribution on how BMT, as an Islamic financial intermediary, can improve its efficiency. Moreover, the study provides policy recommendations for the Authority of Financial Services, the Department of Cooperatives and the BMT Centres in Indonesia concerning the development and enhancement of BMT roles in the country by increasing the quality of BMT’s human capital. Therefore, BMT may support the government mission to achieve its socio economic objectives. The findings may be relevant and applicable to Islamic MFI not only in Indonesia, but in other Muslim countries and for further empirical research in this area.
ملخص البحث

إن أهم ما يستهدف إليه معظم برامج التمويل الأصغر هو التخفيف من حدة الفقر والاستدامة المالية. وللمؤسسات
التمويلية الأصغر ترغب في تشجيع الفقراء على الاعتماد الذاتي الاقتصادي من خلال تمويلها. فتقدم التمويل الإسلامي
الأصغر مخططات تمويلية قائمة على مبادئ الشريعة الإسلامية التي تختلف عن التمويل التقليدي الأصغر. أما التمويل
التقليدي للمشاريع الصغيرة فهي توافق القادة (أي الربا) المحرمة في الإسلام. والهندوسيا باعتبارها أكبر السكان المسلمين
ixer في العالم نشأ مؤسسات مالية تسمى بيت المال والتمويل التي تمثل أعلى نسبة للنمو بين المؤسسات التمويلية
الإسلامية الأصغر في البلاد. ومع ذلك، فقد أظهرت العديد من الدراسات أن هذه المؤسسات تغلب فيها الإدارة. ومن ثم
تستهدف هذه الدراسة إلى ما يلي: أولا: اختبار الكفاءة لدى بيت المال والتمويل بكونها مؤسسة تمويلية إسلامية صغيرة في
إندونيسيا. ثانيا: البحث عن العوامل المحددة التي تؤثر على كفاءة بيت المال والتمويل في إندونيسيا. وثالثا: شرح القضايا
التي ترتبط بكفاءة بيت المال والتمويل في إندونيسيا. وتعتبر هذه الدراسة الأولية والناشئة، وتشمل في تقدير
قياس الكفاءة التقنية لدى بيت المال والتمويل، بينما يتم قياس العوامل المحددة للكفاءة بمنهجية
دالة الكفاءة التقنية (DEA) على الاختبارات المتعددة ومشاركة القضايا المتصلة به. وتم استخدام بيانات
57 بيت المال والتمويل من ثلاث محافظات ذات أكبر عدد من السكان الفقراء وأكبر عدد من مؤسسات بيت المال والتمويل المشغلة. وهي: جاوة الغربية، جاوة الشرقية، وجاوة الوسطى، للفترة بين 2009 إلى 2011.

وتظهر النتائج تتعلق بمتغيرات الربحية، وإنما يرتبط بحجم ورأس المال، وكثيراً ما يكون تعلقها برأس المال البشري والعوامل الإدارية.
من هنا، يمكن التأكيد على أن الربحية تلعب دوراً هاماً في تحقيق كفاءة مؤسسات بيت المال والتمويل في
زيادة الربح الممكن أو رأس المال. تقدم هذه الدراسة إسهاماً كبيراً في كيفية تحسين كفاءة مؤسسات بيت المال والتمويل بكونها
الوسيط المالي الإسلامي. وعلاوة على ذلك، تقدم الدراسة بعض النصائح لتحقيق الربحية والكفاءة في مؤسسات بيت المال والتمويل الإنوجينية لتكون الاهتمام بشكل أكبر وكفاءة مؤسسات بيت المال والتمويل في
البلاد، وبالتالي، فمن المتوقع أن تكون هذه النتائج ذات الصلة والقابلة للتطبيق على مؤسسات التمويل الإسلامي في البلدان الإندونيسية، وبحسب بل وغيرها
من البلدان المسلمة، وكما يكون أيضاً استخدامها لبحثات أخرى في المجال نفسه.
The thesis of Atiqi Chollisni Nasution has been approved by the following:

______________________________
Adewale Abideen Adeyemi
Supervisor

______________________________
Abdul Rahim Abdul Rahman
Co-Supervisor

______________________________
Salina Hj. Kassim
Internal Examiner

______________________________
Syed Mohd. Ghazali Wafa
External Examiner

______________________________
M. Shabri Abd. Majdi
External Examiner

______________________________
Radwan Jamal Yousef Elatrash
Chairperson
DECLARATION

I hereby declare that this thesis is the result of my own investigation, 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.

Atiqi Chollisni Nasution

Signature……………………………………….. Date ……………………………
INTERNATIONAL ISLAMIC UNIVERSITY MALAYSIA

DECLARATION OF COPYRIGHT AND AFFIRMATION OF FAIR USE OF UNPUBLISHED RESEARCH

EFFICIENCY OF BAJTUL MAAL WA TAMWIL AS ISLAMIC MICROFINANCE INSTITUTION IN INDONESIA

I declare that the copyright holder of this thesis are jointly owned by the student and IIUM.

Copyright © 2017 Atiqi Chollisni Nasution and International Islamic University Malaysia. All rights reserved.

No part of this unpublished research may be reproduced, stored in a retrieval system, or transmitted, in any form or by any means, electronic, mechanical, photocopying, recording or otherwise without prior written permission of the copyright holder except as provided below

1. Any material contained in or derived from this unpublished research may be used by others in their writing with due acknowledgement.

2. IIUM or its library will have the right to make and transmit copies (print or electronic) for institutional and academic purposes.

3. The IIUM library will have the right to make, store in a retrieved system and supply copies of this unpublished research if requested by other universities and research libraries.

By signing this form, I acknowledged that I have read and understand the IIUM Intellectual Property Right and Commercialization policy.

Affirmed by Atiqi Chollisni Nasution

........................................................................................................
Signature
........................................................................................................
Date
This thesis is dedicated to my lovely husband, children and parents for laying the foundation of love and support
ACKNOWLEDGEMENTS

_Bismillahirrahmanirrohim._

Alhamdulillah, all praise to Allah SWT who has given me the blessings to complete this study successfully. I would like to express my sincerest gratitude to my supervisors Dr. Abideen Adewale and Prof. Dr. Abdul Rahim Abdul Rahman, who have been very patient to teach, guide and supervise me during this studies. May Allah give them great blessings.

Special thanks and love for my beloved husband for his sacrifice, support and understanding throughout my studies. High praise and acknowledgement to my parents and my mother in law for all the supports and prayers. Also, to my beloved children Muhammad Yumna Helmy, Najla Atqiya and Muhammad Hirzi Hisyam for patiently tolerating throughout the period of my studies. Hopefully my children will appreciate the importance of seeking knowledge in the future.

I would also like to express my thanks to the institution of STES, STIT and Family of Yayasan Islamic Village who have given me support and encouragement to accomplish my work. Also, to INKOPSYAH, all BMT managers and staffs who were directly or indirectly involved to provide data and have supported the thesis to be more insightful and beneficial.

Lastly, Thanks are also due to those who offered me with their assistance during my studies and encourage me to complete my work, highly appreciation to my friends and colleagues especially brother Asafa Yinka, madam Rosnah Omar, pak Bedjo Santoso, pak Arief Budiman, Dr. Romzie Rosman, Dr.Wenny, IlIBF, KENMS, ISEFID, and FOTAR friends and many others. May Allah bless all of you.

_Jazakumullah khair al-jaza, amin ya robbal’alamin_
# TABLE OF CONTENTS

Abstract .............................................................................................................. ii
Abstract in Arabic ............................................................................................. iii
Approval Page .................................................................................................... iv
Declaration ......................................................................................................... v
Copyright ........................................................................................................... vi
Dedication .......................................................................................................... vii
Acknowledgements .......................................................................................... viii
List of Tables ...................................................................................................... xiii
List of Figures ..................................................................................................... xiv
List of Abbreviations ......................................................................................... xv

## CHAPTER ONE: INTRODUCTION ................................................................. 1
1.1 Research Background .................................................................................... 1
1.2 Research Problem ........................................................................................ 6
1.3 Research Questions ....................................................................................... 8
1.4 Research Objectives ...................................................................................... 8
1.5 Significance of the Study ............................................................................. 9
1.6 Contribution of Study .................................................................................. 9
  1.6.1 Contribution to the Body of Knowledge ................................................. 9
  1.6.2 Contribution to Managerial and Practical Implications ......................... 10
1.7 Structure of the Study ................................................................................. 10

## CHAPTER TWO: MICROFINANCE AND ISLAMIC MICROFINANCE ...... 12
2.1 Introduction .................................................................................................. 12
2.2 Microfinance ............................................................................................... 12
  2.2.1 The Theory of Microfinance ................................................................. 14
    2.2.1.1 Supply Lending ............................................................................... 16
    2.2.1.2 Imperfect Information Paradigm ...................................................... 17
    2.2.1.3 Informal Credit Market ................................................................. 17
    2.2.1.4 Savings of the Poor ........................................................................ 18
  2.2.2 Risk Mitigating Mechanism ................................................................... 18
  2.2.3 Microfinance Models ............................................................................. 21
  2.2.4 Microfinance Programs and Products .................................................... 24
  2.2.5 Prior Studies on Microfinance ............................................................... 28
    2.2.5.1 Group-Based and Individual Lending Contracts .............................. 28
    2.2.5.2 MFIs across the World ................................................................. 30
2.3 Islamic Microfinance .................................................................................... 34
  2.3.1 Demand of Islamic Microfinance .......................................................... 34
  2.3.2 The Principle of Islamic Microfinance ................................................... 35
  2.3.3 Islamic Microfinance Contract ............................................................... 38
  2.3.4 Islamic Microfinance Models: Review of Islamic Microfinance
      Institutions in the World ............................................................................ 42
  2.3.4.1 Hodeibah Microfinance Program ....................................................... 42
  2.3.4.2 Jabal al-Hoss the Village Banks ......................................................... 44
  2.3.4.3 Mu’assasat Bayt Al Mal ..................................................................... 45
CHAPTER FOUR: RESEARCH METHODOLOGY .............................................. 114

4.1 Introduction .................................................................................. 114
4.2 Research Design ........................................................................ 114
4.3 Sample Selection for BMT’S Efficiency ........................................ 116
   4.3.1 Sampling Method and Data Collection for Quantitative Analysis ... 116
   4.3.2 Sampling Method and Data Collection for Qualitative Analysis ... 124
4.4 Types of Data ............................................................................. 125
4.5 Research Method ......................................................................... 126
   4.5.1 Quantitative Analysis: Measuring BMT’s Efficiency and Its Determinants ................................................................. 127
      4.5.1.1 Efficiency Measurement Techniques .................................. 127
      4.5.1.2 Determinants of BMT’s Efficiency ..................................... 132
      4.5.1.3 Theoretical Framework .................................................... 134
      4.5.1.4 Hypotheses Development ................................................. 136
   4.5.2 Qualitative Analysis: Analyzing the Issues behind BMT Efficiency ................................................................. 139
      4.5.2.1 Case Study Research ......................................................... 139
      4.5.2.2 Data Analysis ................................................................. 141
4.6 Conclusion ................................................................................. 143

CHAPTER THREE: A REVIEW OF STUDIES ON EFFICIENCY ............ 72

3.1 Introduction ................................................................................. 72
3.2 Measuring Organizational Performance ....................................... 72
3.3 Theory of Efficiency .................................................................... 77
3.4 The Efficiency Measurement Techniques ..................................... 82
3.5 Data Envelopment Analysis .......................................................... 89
   3.5.1 Constant Return to Scale (CRS) ............................................ 91
   3.5.2 Variable Return to Scale (VRS) ............................................ 92
3.6 Literature Review on Efficiency .................................................... 92
   3.6.1 Efficiency of Commercial and Islamic Banks Worldwide .......... 93
   3.6.2 Efficiency of Microfinance Institution .................................. 99
   3.6.3 Efficiency of Islamic Microfinance Institutions ...................... 108
3.7 The Selection of Input and Output of DEA in MFIS ....................... 110
3.8 Conclusion .................................................................................. 112

2.3.4.4 Mosque-based Model .......................................................... 45
2.3.4.5 Islamic Financial Cooperative Concept .................................. 45
2.3.4.6 Amanah Ikhtiar Malaysia .................................................... 46
2.4 Microfinance and Islamic Microfinance in Indonesia ..................... 47
   2.4.1 Microfinance in Indonesia ..................................................... 47
   2.4.2 Islamic Microfinance in Indonesia .......................................... 49
2.5 Baitul Maal Wa Tamwil (BMT) ..................................................... 53
   2.5.1 BMT Business Model .......................................................... 53
   2.5.2 BMT Operation .................................................................... 60
   2.5.3 BMT Financing Activities .................................................... 62
2.6 Conclusion .................................................................................. 70

2.6 Conclusion .................................................................................. 70
CHAPTER FIVE: EFFICIENCY OF BMTS AND ITS DETERMINANTS...... 145

5.1 Introduction.................................................................................................................. 145
5.2 Research Findings....................................................................................................... 145
  5.2.1 Data Envelopment Analysis: Efficiency of BMTs ............................................. 145
  5.2.2 Determinants of BMT’s Efficiency...................................................................... 162
  5.2.3 Result of Two-Stage DEA Method...................................................................... 163
  5.2.4 Analyzing the Hypotheses ................................................................................. 166
5.3 Conclusion................................................................................................................... 171

CHAPTER SIX: CASE STUDIES ON THE EFFICIENCY OF BMT ............ 173

6.1 Introduction.................................................................................................................. 173
6.2 Selection of BMT ........................................................................................................ 173
6.3 Overview of Background and Islamic Microfinance Activities of
  Most - Efficient BMTS.................................................................................................... 175
  6.3.1 BMT Berkah Madani .......................................................................................... 176
    6.3.1.1 Overview and Background of BMT Berkah Madani ......................... 176
    6.3.1.2 BMT Berkah Madani’s Islamic Microfinance
         Activities ............................................................................................................. 178
  6.3.2 BMT Bina Insan Mandiri .................................................................................... 179
    6.3.2.1 Overview and Background of BMT Bina Insan
         Mandiri .............................................................................................................. 179
    6.3.2.2 BMT Bina Insan Mandiri’s Islamic Microfinance
         Activities ............................................................................................................. 181
  6.3.3 BMT Dana Mandiri Syariah .................................................................................. 183
    6.3.3.1 Overview and Background of BMT Dana Mandiri
         Syariah .............................................................................................................. 183
    6.3.3.2 Islamic Microfinance Activities of BMT Dana
         Mandiri Syariah ................................................................................................. 184
6.4 Overview of Background and Islamic Microfinance Activities of
  Efficient BMTs .............................................................................................................. 185
  6.4.1 BMT Mughni Madani .......................................................................................... 186
    6.4.1.1 Overview and Background of BMT Mughni Madani ......................... 186
    6.4.1.2 BMT Mughni Madani’s Islamic Microfinance
         Activities ............................................................................................................. 187
  6.4.2 BMT Binama ........................................................................................................ 189
    6.4.2.1 Overview and Background of BMT Binama ............................................. 189
    6.4.2.2 BMT Binama’s Islamic Microfinance Activities ..................................... 191
  6.4.3 BMT Barrah .......................................................................................................... 192
    6.4.3.1 Overview and Background of BMT Barrah ............................................. 192
    6.4.3.2 BMT Barrah’s Islamic Microfinance Activities ..................................... 194
6.5 Overview of Background and Islamic Microfinance Activities of
  Least - Efficient BMTS .................................................................................................. 196
  6.5.1 BMT Huwaiza ...................................................................................................... 197
    6.5.1.1 Overview and Background of BMT Huwaiza ....................................... 197
    6.5.1.2 BMT Huwaiza’s Islamic Microfinance Activities .................................. 199
  6.5.2 BMT ‘Ibaadurrahman .......................................................................................... 201
    6.5.2.1 Overview and Background of BMT ‘Ibaadurrahman ......................... 201
6.5.2.2 Islamic Microfinance Activities of BMT
‘Ibaadurrahman .......................................................... 203
6.5.3 BMT Kartini .................................................................. 205
   6.5.3.1 Overview and Background of BMT Kartini ................. 205
   6.5.3.2 Islamic Microfinance Activities of BMT Kartini ........... 207
6.6 Issues of BMT Efficiency .................................................. 208
   6.6.1 Issues of Most Efficient BMTs ................................. 208
      6.6.1.1 BMT Berkah Madani ........................................... 208
      6.6.1.2 BMT Bina Insan Mandiri ................................. 211
      6.6.1.3 BMT Dana Mandiri Syariah ............................... 214
   6.6.2 Issues of Efficient BMTs ........................................... 216
      6.6.2.1 BMT Mughni Madani ........................................... 216
      6.6.2.2 BMT Binama .................................................. 219
      6.6.2.3 BMT Barrah ................................................ 222
   6.6.3 Issues of Least Efficient BMT .................................... 224
      6.6.3.1 BMT Huwaiza .................................................. 224
      6.6.3.2 BMT ‘Ibaadurrahman ..................................... 227
      6.6.3.3 BMT Kartini ................................................ 230
6.7 Analysis of BMT Issues ................................................... 232
   6.7.1 Overview of BMTs Backgrounds and Issues ................. 232
   6.7.2 Analysis of Issues .................................................. 241
      6.7.2.1 Vision and Missions ....................................... 241
      6.7.2.2 Management ............................................... 243
      6.7.2.3 Business Model ........................................... 244
      6.7.2.4 Types of financing ......................................... 246
      6.7.2.5 Marketing and Promotion ............................... 248
      6.7.2.6 Non-Performing Financing (NPF) and Financial
        Management .................................................. 249
      6.7.2.7 Human Resource Management ............................ 251
6.8 Conclusion ..................................................................... 256

CHAPTER SEVEN: CONCLUSION AND POLICY RECOMMENDATION ........................................................... 259
7.1 Introduction .................................................................... 259
7.2 Main Findings: Efficiency of BMTS as Islamic Microfinance
   Institutions in Indonesia ................................................ 259
7.3 Efficiency of BMTS in Indonesia: The Way Forward ............... 267
      7.3.1 Department Cooperative of Indonesia ....................... 268
      7.3.2 Shariah Cooperative Incubation Center (INKOPSYAH) and
        other Institutions at BMT Centers ............................ 269
7.4 Policy Recommendations ................................................ 271
      7.4.1 Policy Recommendation for BMT ........................... 272
      7.4.2 Policy Recommendations for Government .................. 273
7.5 Contributions of the Study ............................................. 277
7.6 Limitations of the Study and Suggestions for Future Studies .... 280

REFERENCES ........................................................................ 283

APPENDIX 1 ....................................................................... 295
LIST OF TABLES

Table 1.1 Interest Rates of Microfinance Institutions (MFIs) in Several Countries 2
Table 2.1 Models of Microfinance 24
Table 2.2 Comparison between Conventional Bank & Microfinance Institution 25
Table 2.3 Differences Between Conventional and Islamic MFIs 40
Table 4.1 The Extent of BMTs in Indonesia Based on Assets 118
Table 4.2 The Number and the Percentage of Poor People in Indonesia, 2011 120
Table 4.3 Number of BMTs in Selected Regions 122
Table 4.4 The List of BMTs as Sample Selection 123
Table 4.5 Inputs and Outputs of the Study 130
Table 4.6 Descriptive of Dependent Variables 133
Table 4.7 Description of Variable Used as Determinants of Efficiency 134
Table 5.1 Technical Efficiency of BMTs: 2009-2011 148
Table 5.2 DEA Technical Efficiency of BMTs (Constant Return To Scale) For Years 2009-2011 151
Table 5.3 DEA Pure Technical Efficiency of BMTs 154
Table 5.4 DEA Scale Efficiency of BMTs 157
Table 5.5 Summary of Average DEA Efficiency of BMT from 2009 – 2011 161
Table 5.6 Descriptive Statistics of Variables 164
Table 5.7 Correlation Analysis among Variables 165
Table 5.8 The Ordinary Least Square Result of BMT’s Determinants 168
Table 6.1 Summary of Financial Service Activities of BMTs 235
Table 6.2 The Summary of Main Issues of BMTs 238
Table 6.3  The Score Categories of BMT Issues  252

**LIST OF FIGURES**

| Figure 2.1 | Structure of the Microfinance Institutions in Indonesia (Seibel, 2007) | 49 |
| Figure 2.2 | The Operational Principle of BMT (Suharto, 2011) | 58 |
| Figure 2.3 | BMT Establishment Process (PINBUK, 2008b) | 62 |
| Figure 2.4 | Cash Flow and Financial Management of BMT (PINBUK, 2008a) | 64 |
| Figure 2.5 | The Beginning Financing Process in BMT | 68 |
| Figure 3.1 | Categories of the Performance Measures (Carton and Hofer, 2006) | 74 |
| Figure 3.2 | Production frontiers and Technical Efficiency (Coelli, et al., 2005) | 77 |
| Figure 3.3 | Overall, Technical, and Allocative Efficiency (Coelli et al., 2005) | 81 |
| Figure 3.4 | Theory of Efficiency (Ascarya and Yumanita, 2009) | 85 |
| Figure 4.1 | Theoretical Framework | 135 |
| Figure 4.2 | The Expected Relationship between Independent Variables and Dependent Variables  (Source: Author’s own) | 138 |
LIST OF ABBREVIATIONS

AA       Asset Approach
ADRB     Asian Development Bank
AE       Allocative Efficiency
AIM      Amanah Ikhtiar Malaysia
AO       Account Officer
BAAC     Bank for Agriculture and Agricultural Cooperatives
BCC      Banker, Charnes and Cooper
BM       Baitul Maal
BT       Baitut Tamwil
BMM      Baitul Maal Muamalat
BMT      Baitul Mal wa Tamwil
BMT BM   BMT Berkah Madani
BMT BN   BMT Binama
BMT BIM  BMT Bina Insan Mandiri
BMT BR   BMT Barrah
BMT DMS  BMT Dana Mandiri Syariah
BMT HZ   BMT Huwaiza
BMT IR   BMT ‘Ibaadurrahman
BMT KR   BMT Kartini
BMT MM   BMT Mughni Madani
BPRs     Bank Perkreditan Shariah
BRAC     Building Resources Across Communities
BRI      Bank Rakyat Indonesia
BUS      Bank Umum Syariah
CE       Cost Efficiency
CRS      Constant Return to Scale
CGAP     Consultative Group to Assist the Poor
CU       Credit Union
DCI      Department Cooperative Indonesia
DEA      Data Envelopment Analysis
DFA      Distribution Free Approach
DMU      Decision Making Unit
EE       Economic Efficiency
FO       Funding Officer
FDH      Free Disposal Hull Analysis
GB       Grameen Bank
IA       Intermediation Approach
ICFA     Islamic Cooperative Finance
INKOPSYAH Induk Koperasi Syariah
IT       Information Technology
KJKS     Koperasi Jasa Keuangan Syariah
LAS      Natural Logarithm of Asset
LCAP     Natural Logarithm of Capital
LPRO     Natural Logarithm of Profitability
MCCA     Muslim Community Co-operatives
<table>
<thead>
<tr>
<th>Acronym</th>
<th>Full Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>ME</td>
<td>Microenterprises</td>
</tr>
<tr>
<td>MENA</td>
<td>Middle East and North African</td>
</tr>
<tr>
<td>MFI</td>
<td>Microfinance Institution</td>
</tr>
<tr>
<td>MIX</td>
<td>Microfinance International Exchange</td>
</tr>
<tr>
<td>NGO</td>
<td>Non Government Organization</td>
</tr>
<tr>
<td>NPF</td>
<td>Non Performing Financing</td>
</tr>
<tr>
<td>NPL</td>
<td>Non Performing Loans</td>
</tr>
<tr>
<td>OE</td>
<td>Overall Efficiency</td>
</tr>
<tr>
<td>OJK</td>
<td>Otoritas Jasa Keuangan</td>
</tr>
<tr>
<td>OTE</td>
<td>Overall Technical Efficiency</td>
</tr>
<tr>
<td>OLS</td>
<td>Ordinary Least Square</td>
</tr>
<tr>
<td>PA</td>
<td>Production Approach</td>
</tr>
<tr>
<td>PE</td>
<td>Profit Efficiency</td>
</tr>
<tr>
<td>PBMT</td>
<td>Perhimpunan Baitul Maal wa Tamwil</td>
</tr>
<tr>
<td>PLP</td>
<td>Parametric Linear Programming</td>
</tr>
<tr>
<td>PINBUK</td>
<td>Pusat Inkubasi Bisnis Usaha Kecil</td>
</tr>
<tr>
<td>PTE</td>
<td>Pure Technical Efficiency</td>
</tr>
<tr>
<td>RCDP</td>
<td>Rural Community Development Project</td>
</tr>
<tr>
<td>SE</td>
<td>Scale Efficiency</td>
</tr>
<tr>
<td>SFA</td>
<td>Stochastic Frontier Analysis</td>
</tr>
<tr>
<td>SHG</td>
<td>Self Help Group</td>
</tr>
<tr>
<td>SHU</td>
<td>Sisa Hasil Usaha</td>
</tr>
<tr>
<td>SME</td>
<td>Small and Medium Enterprises</td>
</tr>
<tr>
<td>TE</td>
<td>Technical Efficiency</td>
</tr>
<tr>
<td>TFA</td>
<td>Thick frontier Analysis</td>
</tr>
<tr>
<td>TFP</td>
<td>Total Factor Productivity</td>
</tr>
<tr>
<td>UCA</td>
<td>User Cost Approach</td>
</tr>
<tr>
<td>UNDP</td>
<td>United Nations Development Program</td>
</tr>
<tr>
<td>UUS</td>
<td>Unit Usaha Syariah</td>
</tr>
<tr>
<td>VAA</td>
<td>Value Added Approach</td>
</tr>
<tr>
<td>VRS</td>
<td>Variable Return to Scale</td>
</tr>
</tbody>
</table>

**Common abbreviation**

- e.g. *(exempligratia)* for example
- et al. *(et alia)*: and others
- etc. and so fourth
- i.e. that is
- PBUH Peace be upon him
- SWT Subhanallohu wa Ta’ala
- vol. volume
CHAPTER ONE
INTRODUCTION

1.1 RESEARCH BACKGROUND

Most developing countries in the world are facing poverty-related problems. The main cause of poverty is that the poor do not have access to financial services to improve their economic condition. Bank is one of the financial institutions that provides financial services – yet they often neglect poor customers and consider them as ‘unbankable’ due to their limited resources and conditions.

The Asian Development Bank or ADB (2004) defines poverty as a condition characterized by a lack of access to essential goods, services, assets and opportunities to which they should be entitled. It means that the poor need a tool to ease their consumption and increase their earning capacity to improve their standard of living. One way to help the poor to fight poverty is by providing them with financial assistance and services to enable them to participate actively in various economic opportunities.

In the last few years, microfinance has become an important component in reducing poverty, especially in developing countries. Microfinance is defined as the provision of a broad range of financial services such as deposits, loans, payment services, money transfers and insurance to poor and low-income households and microenterprises (ADB, 2004). Many studies have provided evidence that microfinance is an important and effective tool to eradicate poverty (Hasan and Alamgir, 2000; Zaman, 2004; Barr, 2005, Ahmed, 2009). Providing these financial services can assist the poor to establish or expand microenterprises (MEs) in the
informal sectors of economy and enhance their quality of life or release them from poverty (Widiyanto, 2007).

The objectives of most microfinance institutions (MFIs) are to achieve poverty reduction and financial sustainability (Nghiem et al., 2006; Ahmed, 2009; Qayyum and Ahmed, 2006). These two objectives represent the missions of MFIs; social and economic. To sustain, most MFIs charge high interest rates for microfinancing. The interest is calculated based on high transaction costs or default payment risk that could happen in financing the poor.

Table 1.1 Interest Rates of Microfinance Institutions (MFIs) in Several Countries

<table>
<thead>
<tr>
<th>Microfinance Institution in Country</th>
<th>Interest Rate (per annum)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bangladesh</td>
<td>20% - 35%</td>
</tr>
<tr>
<td>Cambodia</td>
<td>~ 45%</td>
</tr>
<tr>
<td>Nepal</td>
<td>18%-24%</td>
</tr>
<tr>
<td>India</td>
<td>20%-40%</td>
</tr>
<tr>
<td>Indonesia (BPRs, local-level microbanks)</td>
<td>28%-63%</td>
</tr>
</tbody>
</table>

Sources: Helms and Reille (2004)

Table 1.1 describes the interest rates charged by MFIs in several countries. High interest ranges from 20% per annum (MFIs in Bangladesh) to 63 % per annum by MFIs in Indonesia. As the basic principles of microfinance activity, MFIs offer small loans with high interest rates. The borrower is required to pay back the loan, including interest – regardless whether the business is successful or fail. Thus, all risks are handled by the borrowers.

On the other hand, microentrepreneurs have limited resources to expand in the economic sectors or to enhance their incomes. Charging high interest rates will be a burden for them, because it will not reduce the capital cost of microentrepreneurs
(Widiyanto, 2007). In fact, high interest rate is an obstruction to the development of MFI in the future. Mannan (2010) also argues that high interest rates bearing microcredit is not an answer for reduction of poverty, it just allows poverty to continue. Therefore, the establishment of Islamic MFI which is free from interest has become a necessity. Profit-sharing system as a mean to replace high interest rates is offered to share the risks between all parties involved.

Indonesia with the largest Muslim population in the world, also facing poverty. In 2011, the Center of Statistic Indonesia Bureau states that there are more than 30 million poor people or 12.5% of Indonesia population. But at the same time, there are approximately 55 million of small and medium enterprises (SMEs) or about 101 million active workforces in the country – as the main player in domestic economic activities. Muslim microentrepreneurs are the largest customer for microfinance program in the country, and is included in SME movement. The customer needs financial services which free from interest (read: riba).

In 1991, Indonesian government established the concept of Islamic Finance Institution to cater the needs of Muslim customers, especially Muslim microentrepreneurs who are expected to support the development of SMEs. Islamic finance institution comprises Islamic Commercial Bank and Banking Units, Rural Banks and Financial Cooperatives. Rural Banks and Financial Cooperatives assist and accommodate SME by providing microfinancing. It involves changing the standard of living of the people in rural areas by increasing their productivity and earning capabilities. There are very few numbers of Islamic MFI source in Indonesia that cater the needs of Muslims. Recently, the highest growth of Islamic microfinance institutions (Islamic MFI) in Indonesia is Baitul Maal wa Tamwil (BMT).
Islamic Financial Cooperative or BMT is an Islamic MFI, established by individual or group initiatives to help micronetrepeneurs as a strategy for eradicating rural poverty (Kholis, 2009). BMT divides its role into two functions. The functions that represent the missions of BMT are social and business. First, the social mission established by Baitul Maal is collecting and distributing charity funds to the poor as the main objective (Zakat, Infaq, Shodaqoh). Second, Baitut Tamwil is based on commercial or economic activities, upon which the funds are being distributed for productive activities. In addition, Baitut Tamwil also supports saving activities as part of the business in providing financial services to the poor or MEs in economic activities.

Several studies have been devoted to investigate the impact of BMT on poverty alleviation. Amalia (2009) finds that earning capacity of the poor is increased after they joined BMT as members. Adnan et al. (2003) finds that 83% of BMT do not offer only financial products, but also support real products such as trading, agriculture and small and home industry. It means that BMT do not only reduce poverty, but also develop the microenterprises.

Just like conventional microfinance, the argument as to whether or not the BMT have been able to positively impact the lives of the poor is still open to debate. As such, rather than attempting to prove impact which may likely also result in conclusive or opposing argument, it may be more useful to assess the ways through which BMT operation can be enhanced. In this case, the analysis of efficiency of BMT in Indonesia becomes important.

Efficient BMT should be able to fulfil its duty accountably and provide more positive impact. Instead, any form of inefficiency and ineffectiveness should be improved or eliminated to reduce obstacles in achieving BMT mission. Therefore,
measuring the efficiency of BMT is critical as it will encourage the productivity of BMT. As a result, in performing its role, more microentrepreneurs and poor can be reached, poverty can be eliminated, and at the same time, secure BMT position to be sustained in the future. These objectives are consistent and moving parallelly with dual objectives of MFI. Thus, the quality of responsibility towards financial sustainability and poverty alleviation can be achieved.

Widiyanto and Ismail (2007) explain that by increasing efficiency, it enables MFI to generate profits which will increase profit to be returned to investors, and that should encourage them to invest in MFI. Furthermore, they state that higher retained earnings will enable MFI to increase its capital internally and, therefore, it can reach more microentrepreneurs and sustain its operation. Sedzro and Keita (2009) also argue that study on efficiency is important to identify factors which is most likely to influence the performances of MFIs and to know whether MFI perform well and may survive autonomously in the long run.

There are several research articles on measuring the efficiency of microfinance institutions (MFIs) over the world. Most of them use DEA method to measure efficiency and they cover a sample period of two to five years. Among others are Qoyyum and Ahmad (2006), Sedzro and Keita (2009), Nghiem et al. (2006) and Nieto et al. (2007). Measuring efficiency is one of the indicators to measure the performance of an organization, whether it is public and non-public sectors or profit and non-profit organization.

One of objectives of this study is to support previous findings and to fill up the lacks in the literature and empirical researches by analysing the efficiency of BMT. Recently, there are only few studies that explore the efficiency of BMT in Indonesia, including Widiyanto and Ismail (2007), Ali (2009) and Akbar (2010) that find BMT
efficiency is still relatively low and lack of performance. The lack of efficiency on its operation may directly undermine BMT in attaining their desired socio economic objectives.

Different from the existing studies that only focus to analyse BMT in one area, this study attempts to analyse efficiency of BMTs from three different areas in Indonesia. The selection of area represents the role of BMT in serving grass root group of people. Furthermore, this study is also supported by applying methodology and coverage some variables that is different from the previous studies. Supporting by case study method, the study is not only expected to contribute to the literature only, but may also enrich the previous researches by providing the information about how Islamic MFI may survive as a financial sustainability and reducing the poverty by managing their efficiency. The study also expects to create a standard for efficient Islamic MFI which may help the future research to analyse the performance of this institution. Therefore, after reviewing the literature, there is a need to examine to what extent BMT is efficient by analysing the efficiency of BMTs as Islamic MFI in Indonesia.

1.2 RESEARCH PROBLEM
As the largest Muslim population in the world, poverty in Indonesia still continue to rise as the number of the poor does not decrease significantly and people still experience lack of access to finance. BMT, as one of the Islamic MFI in Indonesia, may help the needs of poor Muslim and Muslim microentrepreneurs by providing microfinancing and assisting them to achieve a better life.

Despite the problems during the development of BMT, the opportunity to develop BMT is quite large. BMT may reach poor Muslim population as a means to
increase welfare. This is congruent with government mission to develop the function of Islamic MFI in Indonesia. In fact, BMT roles and tasks are also seen in developing human resources and supporting small and micro enterprises (SMEs) that can support economic activities.

On the other hand, the inefficiency of BMT as reported by previous studies, indicates sign of limited ability of BMT in running their activities. The main problem faced by BMTs is mostly due to the absence of good management (Adnan, et al., 2003; Widiyanto and Ismail, 2007; Ali, 2009; Akbar, 2010) and less understanding on the concepts of Islamic microfinance, especially in the rules of Islamic products and contracts (Amalia, 2009). The problems which posed as a challenge faced by BMT have affected the institution performance as a whole. The consequences include inefficiency and it may cause problems and difficulties relating to its sustainability. There is, therefore, a need to analyse BMT efficiency in order to assess its performance.

There is a public concern over the efficiency of BMT in Indonesia. During the growth of Islamic MFI, BMT’s role is important for several stakeholders. Stakeholder is any group within or outside an organization that has a stake in the organization’s performance (Daft, 2001). Stakeholders can be creditors, employees, suppliers or owners. The satisfaction of each group can be different depends on interest in the organization. In the case of BMT, stakeholders include board members, government institutions, BMT Centers and customers. They are concerned with financial and social performance of BMTs.

Hence, it is important to analyse the efficiency of BMT. There is also a need to examine influencing factors and the issues which affect BMT efficiency. Therefore, this study aims to analyse the efficiency of BMTs in order to find acceptable solutions
for stakeholders and at the same time to strengthen the sustainable growth of BMT as an Islamic MFI in Indonesia.

1.3 RESEARCH QUESTIONS
The objectives of this study is to examine the efficiency of BMT as Islamic MFI in Indonesia. The approach to understand this problem will be evaluated by using DEA (Data Envelopment Analysis). In addition, this study attempts to ascertain the sustainability of BMT activities. The following are the main research questions of this study;

1. To what extent BMT is economically efficient in disbursing Islamic microfinance in Indonesia?
2. What are the influencing factors of BMT efficiency?
3. What are the issues affecting BMT efficiency and under what conditions such institution is sustainable?

1.4 RESEARCH OBJECTIVES
The purpose of this study is to examine the efficiency of BMT as an Islamic MFI in Indonesia. According to the research questions, the objectives include:

1. To examine the efficiency of BMT in Indonesia and their performance over a period of three years (2009 – 2011).
2. To investigate the determinant factors that influence the efficiency of BMTs in Indonesia.
3. To explain the managerial issues related to BMTs efficiency in Indonesia and how they can be sustained in handling the issues.