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**PROFIT EFFICIENCY AMONG ISLAMIC BANKS IN  
MALAYSIA**

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**UUM**  
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**MASTER IN ISLAMIC FINANCE AND BANKING  
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**PROFIT EFFICIENCY AMONG ISLAMIC BANKS IN MALAYSIA**

**By**

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**Research Paper Submitted to  
Othman Yeop Abdullah Graduate School of Business,  
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Master in Islamic Finance and Banking**



Pusat Pengajian Perniagaan Islam  
ISLAMIC BUSINESS SCHOOL  
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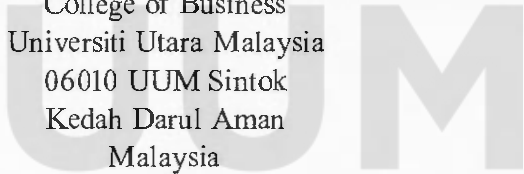

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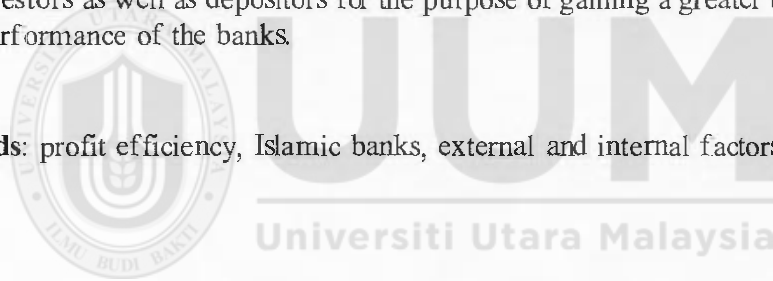


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## ABSTRACT

The sustainability of banking system depends on the profit efficiency of banking system. Profit efficiency of Islamic banks in Malaysia shows a fluctuating trend from the period of 2012 to 2016. The purpose of this study is to analyse the post Global Financing Crises (GFC) period and to examine the impact of external and internal factors on the profit efficiency of Islamic banks in Malaysia covering the period 2012 to 2016. In this study profit efficiency is measured using net income (NI). Secondary data was used from 16 Islamic banks in Malaysia for Observation 80. There are two external factors which are Gross Domestic Product (GDP) and Inflation (INF) and five internal factors which are Loan Growth (LGROW), Impaired Financing (IF), Loan Loss Provision (LLP), Net Interest Margin (NIM) and Staff Efficiency (STAFFX) tested in this study. This study used panel data analysis to analyse the data obtained from Fitch Connect Database. The study found that, factors like INF and STAFFX have negative significant impact on NI while NIM have a positive and significant impact on NI of Islamic banks in Malaysia. The other four factors which are GDP, LGROW, LLP and IF are found to be insignificant towards NI of Islamic banks in Malaysia. This study is beneficial for researches as guidance in making a good research. On the other hand, it is also important for the Islamic banks management team, investors as well as depositors for the purpose of gaining a greater understanding on the performance of the banks.

**Keywords:** profit efficiency, Islamic banks, external and internal factors



## ABSTRAK

Kemampuan sistem perbankan bergantung kepada kecekapan keuntungan sesuatu sistem perbankan itu. Kecekapan keuntungan bank-bank Islam di Malaysia menunjukkan corak turun naik dari tempoh 2012 hingga 2016. Tujuan kajian ini dijalankan adalah menganalisis tempoh waktu selepas krisis kewangan global serta untuk mengkaji kesan faktor luaran dan faktor dalaman ke atas kecekapan keuntungan bank-bank Islam di Malaysia meliputi tahun 2012 hingga 2016. Kecekapan keuntungan dalam kajian ini diukur menggunakan pendapatan bersih (NI). Data sekunder telah digunakan daripada 16 bank-bank Islam di Malaysia (80 pemerhatian). Faktor luaran yang digunakan untuk diuji didalam kajian ini adalah keluaran dalaman kasar (GDP) dan inflasi (INF), dan lima factor dalam yang telah digunakan didalam kajian ini adalah pertumbuhan pinjaman (LGROW), pembiayaan terjejas (IF), peruntukan kerugian pinjaman (LLP), kadar faedah bersih (NIM) dan kecekapan kakitangan (STAFFX). Kajian ini menggunakan data panel untuk menganalisis data yang diperolehi daripada Database Fitch Connect. Hasil kajian mendapati bahawa faktor seperti Inflasi (INF) dan kecekapan kakitangan (STAFFX) menunjukkan kesan negatif dan signifikan terhadap pendapatan bersih (NI) sementara kadar faedah bersih (NIM) menunjukkan hasil positif dan signifikan terhadap pendapatan bersih (NI) bank-bank Islam di Malaysia. Selain itu, faktor-faktor seperti GDP, LGROW, LLP dan IF didapati mempunyai kesan yang tidak signifikan terhadap NI bank-bank Islam di Malaysia. Kajian ini bermanfaat untuk para penyelidik sebagai panduan dalam mengendalikan penyelidikan yang baik. Selain itu, ia adalah penting kepada kumpulan pengurus bank-bank Islam, para pelabur serta pendeposit bagi tujuan untuk mendapatkan pemahaman yang lebih baik mengenai prestasi bank-bank Islam di Malaysia.

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**Kata Kunci:** Kecekapan keuntungan, Bank-bank Islam, faktor luaran dan faktor dalaman.

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## TABLE OF CONTENTS

TITLE PAGE	Page
PERMISSION TO USE	i
ABSTRACT	ii
ABSTRAK	iii
ACKNOWLEDGEMENT	iv
TABLE OF CONTENT	v
LIST OF TABLES	vi
LIST OF FIGURES	x
LIST OF ABBREVIATIONS	x
	xi

### CHAPTER 1: INTRODUCTION

1.0	Introduction	1
1.1	Background of the Study	1
1.2	Problem Statement	6
1.3	Research Question	11
1.4	Research Objective	11
1.5	Significance of the Study	12
1.6	Justification on the selection of Islamic Banks in Malaysia	13
1.7	Contribution to Body of Knowledge	13
1.8	Limitation of the Study	14
1.9	Organization of the Study	14

### CHAPTER 2: LITERATURE REVIEW

2.0	Introduction	16
2.1	Profit Efficiency	16
2.2	External Factors	20
	2.2.1 Gross Domestic Products (GDP)	20
	2.2.2 Inflation	22
2.3	Internal Factors	23

2.3.1	Impaired Financing	23
2.3.2	Loan Growth	25
2.3.3	Loan Loss Provision	26
2.3.4	Net Interest Margin	28
2.3.5	Staff Efficiency	30
2.4	Related Theories	31
2.4.1	Theory of Financial Intermediation	31
2.4.2	Agency Theory	33
2.5	Chapter Summary	34

### **CHAPTER 3 METHODOLOGY**

3.0	Introduction	35
3.1	Research Framework	35
3.2	Hypotheses Development	37
3.2.1	External Factors	37
3.2.1.1	Gross Domestic Products (GDP)	37
3.2.1.2	Inflation	37
3.2.2	Internal Factors	38
3.2.2.1	Impaired Financing	38
3.2.2.2	Loan Growth	38
3.2.2.3	Loan Loss Provision	38
3.2.2.4	Net Interest Margin	39
3.2.2.5	Staff Efficiency	39
3.3	Research Design	39
3.4	Operational Definition and Measurement	40
3.5	Data Collection	44
3.5.1	Data Sources	44
3.5.2	Population	44
3.5.3	Data Presentation	45

3.5.3.1	Multiple Regression Models	46
3.6	Data Analysis	47
3.6.1	Diagnostic Tests	47
3.6.1.1	Detecting Outliers	48
3.6.1.2	Multicollinearity Check	48
3.6.1.3	Normality Test	49
3.6.1.4	Heteroscedasticity Test	49
3.6.1.5	Auto-correlation Test	49
3.6.2	Fixed Effect Model	49
3.6.3	Multiple Regression Analysis	50
3.7	Chapter Summary	50

#### CHAPTER 4: RESULTS AND DISCUSSION

4.0	Introduction	52
4.1	Descriptive Statistics of Variables	52
4.2	Multicollinearity Check	54
4.3	Normality Test	57
4.4	Diagnostic Test	58
4.4.1	Heteroscedasticity Test	58
4.4.2	Auto-correlation Test	58
4.5	Multiple Regression Analysis	59
4.5.1	External Factors for Islamic Banks in Malaysia	61
4.5.2	Internal Factors for Islamic Banks in Malaysia	62
4.5.3	The Summary of the Result of the Relationship between Independent Variables and Profit Efficiency of Islamic Banks in Malaysia	63
4.6	Discussion on the Results	65
4.6.1	Discussion on External Factors	65
4.6.1.1	Gross Domestic Product	65
4.6.1.2	Inflation	65

4.6.2	Discussion on Internal Factors	66
4.6.2.1	Impaired Financing	66
4.6.2.2	Loan Growth	66
4.6.2.3	Loan Loss Provision	67
4.6.2.4	Net Interest Margin	67
4.6.2.5	Staff Efficiency	67
4.7	Chapter Summary	68
<b>CHAPTER 5: CONCLUSION AND RECOMMENDATION</b>		
5.0	Conclusion	69
5.1	Recapitulation of the Findings	69
5.1.1	Objective 1	69
5.1.2	Objective 2	70
5.2	Contribution and Implication of the Study	72
5.2.1	Theoretical Contribution	72
5.2.2	Empirical Contribution (New Findings)	73
5.3	Limitation of the Study	74
5.4	Suggestion for Future Research	74
<b>REFERENCES</b>		76
<b>APPENDICES</b>		
APPENDIX I	List of Islamic Banks in Malaysia	84
APPENDIX II	Data Profit (Net Income) of Islamic Banks in Malaysia	85
APPENDIX III	Diagnostic Test Result for Islamic Banks in Malaysia	86
APPENDIX IV	Correlation Matrix	87
APPENDIX V	Results of the Multiple Regressions for Islamic Banks in Malaysia	88

## LIST OF TABLES

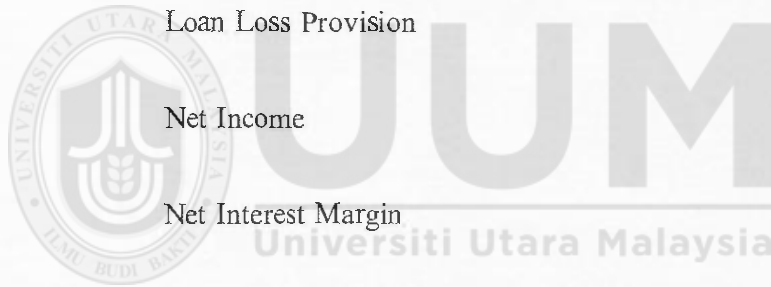
		Page
<b>Chapter 3</b>		
Table 3.1	The Summary of Variables Definition and Measurement	41
Table 3.2	The Summary on Measurement of Variables	43
Table 3.3	List of Islamic Banks in Malaysia	45
<b>Chapter 4</b>		
Table 4.1	Descriptive Statistics of Variables for Banks in Malaysia	53
Table 4.2	Multicollinearity Diagnostic Test for Islamic Banks in Malaysia Variables	55
Table 4.3	Correlation Matrix for Islamic Banks in Malaysia	56
Table 4.4	Skewness and Kurtosis Test for Islamic Banks in Malaysia	57
Table 4.5	Diagnostic Test for Islamic Banks in Malaysia	58
Table 4.6	External and Internal Factors on Profit Efficiency of Islamic Banks in Malaysia	60
Table 4.7	Summary of Multiple Regression Result of External and Internal Factors on Profit Efficiency for Islamic Banks in Malaysia	64

## LIST OF FIGURES

		Page
<b>Chapter 1</b>		
Figure 1.1	Depreciation of Profit of Islamic Banks in Malaysia	5
Figure 1.2	Profit of Islamic Banks in Malaysia from 2012 to 2016	8
<b>Chapter 3</b>		
Figure 3.1	Theoretical Framework for Profit Efficiency of Islamic Banks in Malaysia.	36

## LIST OF ABBREVIATIONS

BNM	Bank Negara Malaysia
FEM	Fixed Effects Model
GDP	Gross Domestic Product
IF	Impaired Financing
INF	Inflation
LGROW	Loan Growth
LLP	Loan Loss Provision
NI	Net Income
NIM	Net Interest Margin
PE	Profit Efficiency
STAFFX	Staff Efficiency
VIF	Variance Inflation Factor



# Chapter One

## Introduction

### 1.0 Introduction

Malaysian banking system consist of not only Islamic banks but also commercial and investment banks. This system contributes to the fund mobilizing and assisting the economic activities in Malaysia through financing. Today, as we are all concern, Islamic banks throughout the world, has been one of the fastest-growing sectors globally in the banking industry.

Presentation of this chapter offers 1.1 background of the study, 1.2 problem statement, 1.3 research questions, 1.4 research objective, 1.5 significance of the study, 1.6 justification on Islamic Banks in Malaysia, 1.7 contribution to body of knowledge, 1.8 limitation of the study and 1.9 organization of the Study.

### 1.1 Background of the Study

According to Ismail et.al (2013), Islamic banking refers to a banking system which is compliance with Shari'ah law. Further, Rahim et.al (2013), also agreed with Samad, Gardner and Cook (2005), they revealed that Islamic banking in Malaysia is unlike other countries in the world, where the first Malaysian Islamic Bank was commenced by the government called Bank Islam Malaysia Berhad (BIMB) in 1983. The government also developed and introduced "Interest-Free Banking Scheme" which enables Malaysia to be among the first globally that operates completely as an Islamic Banking institution. On the other hand, government through Bank Negara Malaysia

## References

- Abduh, M., & Idrees, Y. (2013). Determinants of Islamic Banking Profitability in Malaysia. *Australian Journal of Basic and Applied Sciences*, 7(2).
- Abdullah, S., Al Nasser, S., & Muhammed, J., (2013), "Introduction to history of Islamic banking in Malaysia", *Humanomics*, Vol. 29 Iss 2 pp.80–87.
- Ahmad, N. H. (2003). *Formation of credit risk, regulatory price effect and the path Linking credit to total risk*. Unpublished Doctor of Philosophy Thesis, University Utara Malaysia.
- Akbas, H.E., 2012. Determinants of Bank Profitability: An Investigation on Turkish Banking Sector. In: *Öneri Dergisi* 10 (37), 103–110.
- Akhtar, M. F., Ali, K., & Sadaqat, S. (2011). Factors Influencing the Profitability of Islamic Banks of Pakistan. *International Research Journal of Finance and Economics*.
- Alhadab, M., & Alsahawneh, S. (2016). Loan Loss Provision and the Profitability of Commercial Banks: Evidence from Jordan. *International Journal of Business and Management*, 11(12).
- Alharbi T.A., (2017) "Determinants of Islamic banks' profitability: international evidence", *International Journal of Islamic and Middle Eastern Finance and Management*, Vol. 10 Issue: 3, pp.331-350.
- Aliyu, S., & Yusuf, R.M. (2016). Profitability and Cost Efficiency of Islamic Banks: A Panel Analysis of Some Selected Countries. *International Journal of Economics and Financial Issues*, 1736-1743.
- Allen, F. & Gale, D (2000), *Comparing Financial Systems*, (MIT Press: Cambridge, MA, USA).
- Almanaseer, M. (2014). The Impact of the Financial Crisis on the Islamic Banks Profitability - Evidence from GCC. *International Journal of Financial Research*, 5(3).
- Al-Quran Kareem.
- Kundid, A., Škrabić, B., & Ercegovac, R. (2011). DETERMINANTS OF BANK PROFITABILITY IN CROATIA. *Croatian Operational Research Review (CRORR)*, 2.
- Ariff, M., (2017). Islamic Banking in Malaysia: The Changing Landscape, *Institutions and Economies*, 9 (2), 1-13.
- Ariff, M., & Rosly, S.A., (2011), 'Islamic Banking in Malaysia: uncharted waters', *Asian Economic Policy Re-view*, 6, pp. 301–319.

- Ariff, M. (2006), "Islamic banking, a variation of conventional banking", *Monash Business Review*, Vol. 3 No. 1.
- Aslam, M.K, Inamullah & Ismail,M.(2016). Determinants Affecting the Profitability of Islamic Banks; Evidence from Pakistan. *International Journal of Operations and Logistics Management*,5(2), pp:115-127.
- Athanasoglou, P., Delis, M. & Staikouras, C. (2006). *Determinants of bank profitability in the South Eastern European region*, MPRA Paper No. 10274.
- Athanasoglou, P.P., Brissimis, S.N. & Delis, M.D. (2005), "Bank-Specific, Industry-Specific and Macroeconomic Determinants of Bank Profitability", Bank of Greece, Working Paper No. 25, Athens.
- Athanasoglou, P., Brissimis, S. & Delis, M. (2008). Bank-specific, industry-specific and macroeconomic determinants of bank profitability. *Journal of International Financial Market, Institutions and Money*, Vol. 18, No. 2, pp. 121-136.
- Aziz. N.I.M. (2017). Islamic Banking Profitability: Roles Played by Internal and External Banking Factors. *Journal of Muamalat and Islamic Finance Research(JMIFR)*, 14(1), pp:23-38.
- Hussain, A., Affandi, S., & Shukur, N.A. (2015). The Internal Determinants of Islamic Bank's Profitability in Malaysia. *Journal of Basic and Applied Research*, 5(7),pp 17-21.
- Bader, M. K. I., Mohamad, S., Ariff, M., & Hassan, T., (2008). Cost, Revenue, And Profit Efficiency of Islamic Versus Conventional Banks: International Evidence Using Data Envelopment Analysis. *Islamic Economic Studies*, 15(2).
- Bashir, A. (2000), *Determinants of Profitability and Rates of Return Margins in Islamic Banks: Some Evidence from the Middle East*, Grambling State University Mimeo.
- Bashir, A.H.M. (2003), "Assessing the performance of islamic banks: some evidence from the Middle East", *Islamic Economic Studies*, Vol. 11 No. 1, pp. 31-57.
- Bashir, A & Hassan, M. (2004). *Determinants of Islamic Banking Profitability*. ERF Paper, 10<sup>th</sup> Conference.
- Bashir, A. M. (2003). Determinants of Profitability in Islamic Banks: Some Evidence from The Middle East. *Islamic Economic Studies*, 11(1).
- Batlagi. B.H (2000). *Econometric Analysis of Panel Data (2<sup>nd</sup> ed)*. New York: John Wiley & Sons.
- Ben Aneur, I. G., & Mhiri, S. M., (2013). Explanatory factors of bank performance Evidence from Tunisia. *Journal of Economic, Finance and Management*, Vol. 2, No. 1.

- Ben-Gal, I., (2005). *Data Mining and Knowledge Discovery Handbook: A Complete Guide for Practitioners and Researchers*, Chapter 1 Outlier Detection, Kluwer Academic Publishers.
- Berger, A. N., & Patti, E. B.D. (2003). Capital Structure and Firm Performance: A New Approach to Testing Agency Theory and an Application to the Banking Industry. *Journal of Banking & Finance*. Volume 30, Issue 4.
- Bank Negara Malaysia, (2018). *Financial Stability*. Retrieve from <http://www.bnm.gov.my/index.php?ch=li&cat=islamic&type=IB&lang=bm>.
- Brook, C. (2008). *Introductory Econometrics for Finance*. Unites States: Cambridge University Press.
- Boot, A. W. (2000). Relationship Banking: What Do We Know? *Journal of Financial Intermediation*, 9(7).
- Burhonov, J. (2006). *Islamic banking operations of commercial banks under Islamic Banking Scheme (IBS) of Malaysia: The per formance analysis.*, Master Thesis. Thammasat University. Bangkok, Thailand.
- Capraru, B., & Ihnatov, I. (2014). Banks' Profitability in Selected Central and Eastern European Countries. *Procedia Economics and Finance* 16.
- Chapra, M.U. (2008). *The Global Financial Crisis: Can Islamic Finance Help Minimize the Severity And Frequency Of Such A Crisis In The Future?*, Forum on the Global Financial Crisis.
- Chen, Y., (2016). *Spatial Autocorrelation Approaches to Testing Residuals from Least Squares Regression*. Plos One 11(1): E0146865.
- Creswell, J.W., (2014). *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches*. Fourth Edition.
- Dietrich, A., & Wanzenried, G. (2011). Determinants of bank profitability before and during the crisis: Evidence from Switzerland. *Int. Fin. Markets, Inst. and Money*, 21.
- Demirguc-Kunt, A. & Huizinga, H. (1999), "Determinants of commercial bank interest margins and profitability: some international evidence", *World Bank Economic Review*, Vol. 13, pp. 379-408.
- Elgari, A, M (2003): Credit Risk in Islamic Banking and Finance. *Islamic Economic Studies Vol. 10*, No. 2.
- Ekpu, V. & Paloni, A. (2015). *Financialisation, Business Lending And Profitability In The Uk*. University of Glasgow, Glasgow UK.
- Fitch Connect Database. Fitch Solutions, Ltd. (FITCH), Retrieve from <https://www.fitchsolutions.com>.

- Francis, M. E. (2013). Determinants of commercial bank profitability in Sub-Saharan Africa. *International Journal of Economics and Finance*, 5(9), 134.
- Fobozzi, F & Modigliani, F (1992) *Capital Markets*, Englewood Cliff, New Jersey: Prentice Hall.
- Gelman A., (2005). Analysis of Variance- Why It is More Important Than Ever. *The Annals of Statistics*,33(1), pp:153.
- Gizycki,M. (2001). The Effect of Macroeconomic Conditions on Banks Risk and Profitability. *Research Discussion Paper System Stability Department Reserve Bank of Australia (Vol6)*.
- Gujarati, D. N., & Porter, D. C. (2010). *Essentials of Econometrics* (4<sup>th</sup> ed.) Mc Graw-Hill.
- Gul, S., Irshad, F., & Zaman, K. (2011). Factors Affecting Bank Profitability in Pakistan. *The Romanian Economic Journal*.
- Gunes, N. (2014). Profitability in Turkish Banking Sector:Panal Data Analysis (The Period 1990-1999). *Journal of Economic and Social Thought*, 1(1), pp:15-26.
- Hair, Jr. J. F., Black, W. C., Babin, B. J. & Anderson, R. E. (2010). *Multivariate Data Analysis* (7<sup>th</sup>ed.) Upper Saddle River, NJ: Prentice-Hall, USA.
- Hasan, Z. & Lehar, H. (2009). *Macroeconomics*. Oxford University Press, New York, USA.
- Hassan, K.M. (2005). *The Cost, Profit and X-Efficiency of Islamic Banks*. Economic Research Forum, in 12th Annual Conference, 19th-21th December, 2005.
- Hasan, M., & Dridi, J. (2010). Put to the Test. *Finance and Development*, 47(4). Retrieved from <http://www.imf.org>.
- Hassan, T., Mohamad, S., & Bader, M. K.I. (2009). Efficiency of conventional versus Islamic banks: evidence from the Middle East, *International Journal of Islamic and Middle Eastern Finance and Management*,2(1).
- Hays, F. H., Lurgio, S. A., & Gilbert, A.H. (2011). Efficiency Ratios and Community Bank Performance. *Journal of Finance and Accountancy*.
- Hopkins, W.G. (2000). Quantitative Research Design. *Sportscience* 4(1), Retrieved from [sports.org/jour/0001/wghdesign.html](http://sports.org/jour/0001/wghdesign.html).
- Hussain, S., & Malik, S. (2011). Inflation and Economic Growth: Evidence from Pakistan. *International Journal of Economics and Finance*, 3(5).
- Isanzu, J. (2017). The Impact of Credit Risk on Financial Performance of Chinese Banks. *Journal of International Business Research and Marketing*, 2(3).

- Ismail, F., Majid, M. S.A., Rahim, R.A., (2013). "Efficiency of Islamic and conventional banks in Malaysia", *Journal of Financial Reporting and Accounting*, Vol. 11 Issue: 1, pp.92-107.
- Iqbal, M., & Molyneux, P. (2005). *Thirty Years of Islamic Banking: History, Performance and Prospects*. London: Palgrave Macmillan.
- Ivković, A. (2016), *Limitations of The GDP as a Measure of Progress and Well-Being*. Josip Juraj Strossmayer University of Osijek Faculty of Economics.
- Kaaya, I., & Pastory, D. (2013). Credit Risk and Commercial Banks Performance Tanzania: A Panel Data Analysis. *Research Journal of Finance and Accounting*, 4(16), 55-62.
- Kamarudin, F., Nordin, B.A.A., Muhammad, J., & Hamid, M.A.A. (2014). Cost, Revenue and Profit Efficiency of Islamic and Conventional Banking Sector: Empirical Evidence from Gulf Cooperative Council Countries. *Global Business Review* 15(1), pg 1-24.
- Kamarudin, B.H., Safa, M.S., & Mohd, R. (2008). Assessing Production Efficiency of Islamic Banks and Conventional Bank Islamic Windows in Malaysia. *International Journal of Business and Management Research*, 1(1).
- Kanwal, S., & Nadeem, M. (2013). The Impact of Macroeconomic Variables on The Profitability of Listed Commercial Banks in Pakistan. *European Journal of Business and Social Sciences*, 2(9).
- Khaldi, K. Hamdouni, A (2011): Islamic Financial Intermediation: Equity, Efficiency and Risk. *International Research Journal of Finance and Economics Issue 65*, p. 145.
- Khan, F., Anuar, M. A., Choo, L. G., & Khan, H. (2011). Determinants of Bank Profitability in Pakistan: A Case Study of Pakistani Banking Sector. *World Applied Sciences Journal*, 15(10).
- Khasawneh, A., (2016), "Vulnerability and Profitability of MENA banking system: Islamic versus commercial banks", *International Journal of Islamic and Middle Eastern Finance and Management*, 9 (4).
- Kohler, M. (2012). *Which Banks are more Risky? The impact of loan growth and business model on bank risk-taking*. Discussion Paper Deutsche Bundesbank (Vol. 33).
- Kolapo, T. F., Ayeni, R. K., & Oke, M. O. (2012). Credit risk and commercial banks' performance in Nigeria: A panel model approach. *Australian Journal of Business and Management Research*, 2(2), pg 31-38.
- Mahendru, M., & Bhatia, A., (2017) "Cost, Revenue And Profit Efficiency Analysis Of Indian Scheduled Commercial Banks: Empirical Evidence Across Ownership", *International Journal of Law and Management*, Vol. 59 Issue: 3, pp.

- Malaysia World Islamic Finance Marketplace (2018), Retrieve from <http://www.mifc.com/>.
- Menicucci,E.,& Paolucci, G., (2016) "The determinants of bank profitability: empirical evidence from European banking sector", *Journal of Financial Reporting and Accounting*, Vol. 14 Issue: 1, pp.86-115.
- Mohamad, A.M.N., Sufian, F.& Muhamed-Zulhibri, A.M. (2008), "The efficiency of Islamic Banks: empirical evidence from the MENA and Asian countries Islamic banking sectors", *The Middle East Business & Economic Review*, Vol. 20 No. 1, pp. 1-19.
- Moin, M.S. (2008), "*Performance of Islamic banking and conventional banking in Pakistan: A comparative study*", Master thesis, University of Skovde, Sweden.
- Mokhtar, H.S.A, Abdullah,N, & Alhabshi,S.M., (2008) "Efficiency and competition of Islamic banking in Malaysia", *Humanomics*, Vol. 24 Issue: 1, pp.28-48.
- Mustafa, A. R. U, Ansari, R. H., & Younis, M. U. (2012). Does the Loan Loss Provision Affect the Banking Profitability in Case of Pakistan?. *Asian Economic and Financial Review*, 2(7), 772.
- Norman, A. M., Chowdhury, M. M., Chowdhury, N. J., Kabir, M. J., & Pervin, S. (2015). The Effect of Bank Specific and Macroeconomic Determinants of Banking Profitability: A Study on Bangladesh. *International Journal of Business and Management*, 10(6).
- Mat Nor, A. & Ahmad, N. (2015). Impaired Financing Determinants of Islamic Banks in Malaysia. *Information Management and Business Review*, Vol 7,(3), pp.17-25.
- Mat Nor, A., Ahmad, N. & Ahmad.M.A (2017). Impact of Staff efficiency on Impaired Financing of Islamic Banks, MENA Countries. *Pertanika Journal of Social Science & Humanities*. Vol 25. (2), p977-992.
- Obamuyi, T. M. (2013). An analysis of the deposits and lending behaviours of banks in Nigeria. *International Journal of Engineering and Management Sciences*, 46–54.
- Pallant, J. (2010). *SPSS Survival Manual*. (4<sup>th</sup>Ed.), Open University Press, McGraw Hill: Berkshire, England.
- Paul, P. & Venkatesh, J. (2010). How Did Islamic Banks Do During Global Financial Crisis?, *Banks and Bank Systems*, 5(4).
- Rahim,R. A.,Kadri, N., & Ismail, F., (2013)*Efficiency Performance of Malaysian Islamic banks*. Working Paper, MPRA Paper No. 46238.
- Rahim,S.R.M., Bakar, J.A., & Ganapathy,T.,(2015). How Efficient Are Islamic Banks in Malaysia?.*Journal of Business Studies Quarterly*, 6 (2).,164-174.

- Rahman, S., & Zada, N. (2014). Islamic Banks and Financial Intermediation: The Gap between Theory and Practice. *Humanities and Social Sciences*, 20(2).
- Ramadan, I. Z., Kilani, Q. A. & Kaddumi, T. A. (2011). Determinants of bank profitability: Evidence from Jordan. *International Journal of Academic Research*. Vol. 3, No. 4.
- Reyna, O.T. (2007). *Panel Data Analysis Fixed and Random Effect Using Stata (v.4.2)*. Data and Statistical Services, Princeton University. Retrieved from <http://www.priceton.edu/ottores/Panell01.pdf>.
- Rosly, S.A., & Bakar, M.A.A (2003), "Performance of Islamic and mainstream banks in Malaysia", *International Journal of Social Economics*, Vol. 30 Issue 12.
- Rose, P. S. (2002). *Commercial Bank Management* (5<sup>th</sup> Ed.). Boston: McGraw-Hill.
- San, O. T., & Heng, T. B. (2013). Factors Affecting the Profitability of Malaysian Commercial Banks. *African Journal of Business Management*, 7 (8), 649-660.
- Salike, N., & Ao, B., (2017) "Determinants of Bank's Profitability: Role of Poor Asset Quality in Asia", *China Finance Review International*.
- Sekaran, U. (2003). *Research Method for Business: A Skill-Building Approach* (4<sup>th</sup> Ed.). John Wiley & Sons, Inc., New York, USA.
- Shafique, A., Faheem, M.A., & Abdullah, I. (2012), Impact of Global Financial Crises on the Islamic Banking System: Analysis of Islamic Financial System during Financial Crunch 2008, *Arabian Journal of Business and Management Review (OMAN Chapter)*, 1(9).
- Shahid, H., Rehman, R.U., Khan Niazi, G.S. & Raoof, A. (2010), "Efficiencies comparison of Islamic and conventional banks of Pakistan", *International Research Journal of Finance and Economics*, Vol. 49, pp. 24-42.
- Skala, D. (2012). Loan Growth in Banks: Origins and Consequences. *Finance, Financial Markets, Insurance*.
- Skinner, D.J (1999). How well does net income measure firm performance? A discussion of two studies. *Journal of Accounting and Economics* 26.105-111.
- Sufian, F., (2007) "The Efficiency of Islamic Banking Industry in Malaysia: Foreign Vs Domestic Banks", *Humanomics*, Vol. 23(3).
- Sufian, F. & Chong, R.R. (2008). Determinants of Bank Profitability in a Developing Economy: Empirical Evidence from Philippines. *Asian Academy of Management Journal of Accounting and Finance*. 4(2).
- Tahir, I.M., & Haron, S., (2010). Cost and Profit Efficiency of Islamic Banks: International Evidence Using the Stochastic Frontier Approach. *Banks and Bank Systems*, 5 (4).

- Tan & Floros (2012) Bank profitability and GDP growth in China: a note, *Journal of Chinese Economic and Business Studies*, 10(3).
- Tan, Y. (2016). The Impacts of Risk and Competition on Bank Profitability in China. *International Financial Markets, Instruments and Money*, 40.
- Ton, Z. (2009). *The Effect of Labor on Profitability: The Role of Quality*. Working Paper, Harvard Business School, 09-040.
- Ugoani, J.N.N. (2016). Nonperforming Loans Portfolio And Its Effect On Bank Profitability In Nigeria. *Independent Journal Of Management & Production* ,7 (2).
- Uyanik,G.K. & Guler Nese (2013). A Study on Multiple Linear Regression Analysis. *Procedia - Social and Behavioral Sciences Vol (106)*.
- Wanyama, K. W. & Mutsotso, S. N. (2010). Relationship between capacity buildings and employee productivity on performance of commercial banks in Kenya. *African Journal of History and Culture*, Vol. 2 No. 5 pp. 73-78.
- Wasiuzzaman, S., & Tarmizi, H. (2010). Profitability of Islamic Banks in Malaysia: An Empirical Analysis. *Journal of Islamic Economics, Banking and Finance*, 6(4).
- World Development Bank (2018). *GDP Annual Growth (%)*. Retrieved from <https://data.worldbank.org/indicator/NY.GDP.MKTP.KD.ZG/locations=MY>.
- World Development Bank (2018). *Inflation (Consumer Price Index)*. Retrieved from <https://data.worldbank.org/indicator/FP.CPI.TOTL.ZG/page>.
- Yudistira, D. (2003), "Efficiency of Islamic Banks: An Empirical Analysis of 18 Banks", Working Paper (0406007), Econ WPA.
- Zarrouk, H., Jedidia, K.B., & Moualhi, M., (2016),"Is Islamic Bank Profitability Driven by Same Forces as Conventional Banks? ", *International Journal of Islamic and Middle Eastern Finance and Management*, 9 (1).
- Zikmund, W. G. (2000). *Exploring Marketing Research and Business Research Methods*. Cengage Learning, USA.

## APPENDIX 1 -List of Islamic Banks in Malaysia

No.	Islamic Banks in Malaysia
1.	Affin Islamic Bank Berhad
2.	Al Rajhi Banking & Investment Corporation (Malaysia) Berhad
3.	Alliance Islamic Bank Berhad
4.	AmBank Islamic Berhad
5.	Asian Finance Bank Berhad
6.	Bank Islam Malaysia Berhad
7.	Bank Muamalat Malaysia Berhad
8.	CIMB Islamic Bank Berhad
9.	HSBC Amanah Malaysia Berhad
10.	Hong Leong Islamic Bank Berhad
11.	Kuwait Finance House (Malaysia) Berhad
12.	Maybank Islamic Berhad
13.	OCBC Al-Amin Bank Berhad
14.	Public Islamic Bank Berhad
15.	RHB Islamic Bank Berhad
16.	Standard Chartered Saadiq Berhad

**APPENDIX II – Data Profit (Net Income) of Islamic Banks in Malaysia**

	2012	2013	2014	2015	2016
BIMB	0.1	0.1	0.07	0.06	0.06
BMMB	0.05	-0.02	0.09	0.05	0.07
RHB ISLAMIC	0.09	0.08	0.1	0.1	0.11
CIMB ISLAMIC	0.18	0.14	0.13	0.12	0.14
MAYBANK ISLAMIC	0.1	0.08	0.08	0.01	0
KFH	0.04	0.06	0.05	-0.02	-0.02
AFFIN ISLAMIC	0.11	0.08	0.09	0.09	0.1
AM ISLAMIC	0.13	0.12	0.04	0.08	0.09
ALLIANCE ISLAMIC	0.14	0.07	0.06	0.06	0.04
HONG LEONG ISLAMIC	0.07	0.14	0.11	0.09	0.11
PUBLIC ISLAMIC	0.02	0.05	0.01	0.11	0.11
ASIAN FINANCE ISLAMIC	-0.02	0.02	0.03	0	0.01
AL RAJHI	0.08	0.08	0.08	0.08	0.07
OCBCAL AMIN	0.1	0.18	0.09	0.14	0.13
STANDARD SHART ISLAMIC	0.1	0.09	0.02	0.03	0.05
HSBC AMANAH	0.13	0.12	0.11	0.08	0.05

### APPENDIX III- Diagnostic Test Result for Islamic Banks in Malaysia

- xttest3

Modified Wald test for groupwise heteroskedasticity in fixed effect regression model

H0:  $\sigma(i)^2 = \sigma^2$  for all i

chi2(16) = 1574.68

Prob>chi2 = 0.0000

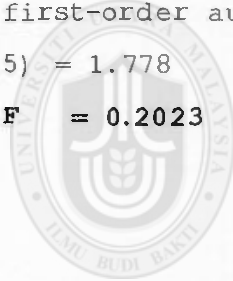
- xtserial NI IF LLP NIM LGROW STAFFX GDP INF

Wooldridge test for autocorrelation in panel data

H0: no first-order autocorrelation

F( 1, 15) = 1.778

Prob> F = 0.2023



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## APPENDIX IV- Correlation Matrix

### Correlations

		NI	NIM	LLP	LGROW	IF	GDP	INF	STAFFX
NI	Pearson Correlation	1	-.011	-.307**	.151	-.303*	.025	-.101	-.418**
	Sig. (2-tailed)		.919	.006	.180	.006	.827	.372	.000
	N	80	80	80	80	80	80	80	80
NIM	Pearson Correlation	-.011	1	.162	.095	-.054	.076	-.105	-.103
	Sig. (2-tailed)	.919		.152	.403	.632	.503	.354	.361
	N	80	80	80	80	80	80	80	80
LLP	Pearson Correlation	-.307**	.162	1	-.238*	.915*	.058	-.137	.458**
	Sig. (2-tailed)	.006	.152		.033	.000	.607	.225	.000
	N	80	80	80	80	80	80	80	80
LGROW	Pearson Correlation	.151	.095	-.238*	1	-.208	.044	-.106	-.108
	Sig. (2-tailed)	.180	.403	.033		.065	.701	.347	.339
	N	80	80	80	80	80	80	80	80
IF	Pearson Correlation	-.303**	-.054	.915**	-.208	1	-.022	-.119	.506**
	Sig. (2-tailed)	.006	.632	.000	.065		.844	.293	.000
	N	80	80	80	80	80	80	80	80
GDP	Pearson Correlation	.025	.076	.058	.044	-.022	1	.387**	.020
	Sig. (2-tailed)	.827	.503	.607	.701	.844		.000	.857
	N	80	80	80	80	80	80	80	80
INF	Pearson Correlation	-.101	-.105	-.137	-.106	-.119	.387**	1	-.027
	Sig. (2-tailed)	.372	.354	.225	.347	.293	.000		.811
	N	80	80	80	80	80	80	80	80
STAFFX	Pearson Correlation	-.418**	-.103	.458**	-.108	.506*	.020	-.027	1
	Sig. (2-tailed)	.000	.361	.000	.339	.000	.857	.811	
	N	80	80	80	80	80	80	80	80

\*\* . Correlation is significant at the 0.01 level (2-tailed).

\* . Correlation is significant at the 0.05 level (2-tailed).

**APPENDIX V -Results of the Multiple Regressions for Islamic Banks in Malaysia**

Dependent Variable: NI Method: Panel EGLS (Cross-section weights) Date: 04/05/18 Time: 18:07 Sample: 2012 2016 Periods included: 5 Cross-sections included: 16 Total panel (balanced) observations: 80 Linear estimation after one-step weighting matrix White cross-section standard errors & covariance (d.f. corrected) WARNING: estimated coefficient covariance matrix is of reduced rank				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.052871	0.010209	5.178934	0.0000
IF	-0.002733	0.002127	-1.284439	0.2042
LGROW	2.40E-05	0.000199	0.120630	0.9044
LLP	0.001068	0.007204	0.148210	0.8827
NIM	0.022444	0.002689	8.345877	0.0000
STAFFX	-0.176193	0.032559	-5.411473	0.0000
GDP	0.011942	0.027169	0.439532	0.6619
INF	-0.026645	0.012568	-2.120052	0.0384
<b>Effects Specification</b>				
Cross-section fixed (dummy variables)				
<b>Weighted Statistics</b>				
R-squared	0.804824	Mean dependent var	0.130583	
Adjusted R-squared	0.729494	S.D.dependentvar	0.112834	
S.E. of regression	0.030503	Sum squared resid	0.053034	
F-statistic	10.68385	Durbin-Watson stat	2.003243	
Prob(F-statistic)	0.000000			
<b>Unweighted Statistics</b>				
R-squared	0.616712	Mean dependent var	0.077248	
Sum squared resid	0.060485	Durbin-Watson stat	1.858552	