Empirical Essays on Sustainability, Portfolio Risk, and Outreach of Islamic Microfinance Institutions

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Abstract

Islamic microfinance is a growing sector that is expected to provide a long-term solution to poverty in the Muslim world, home to more than 600 million poor people. The role of microfinance institutions in poverty alleviation is still debatable, however established literature provides assurance that microfinance does contribute to the development of financial sector and reduction of poverty in developing countries. Nonetheless, the rise of competition in the microfinance sector has forced many microfinance institutions to resort to commercial funding and lending activities, which according to some studies has led microfinance institutions to trade off poverty alleviation objective with commercial goals of profitability and sustainability.

This thesis examines the impact of commercialisation push and its subsequent impacts on Islamic microfinance institutions in three empirical chapters. They are a) comparison of financial performance i.e. profitability and sustainability, between Islamic microfinance institutions with conventional microfinance institutions, b) examination of portfolio risk and vulnerability of Islamic microfinance institutions (IMFIs), and finally c) survey of the presence or absence of 'mission drift' at IMFIs. The thesis benefits from the latest panel data provided by MIX Market database, which is obtained from the publicly accessible websites at www.mixmarket.org. MIX Market provides reliable dataset for many microfinance institutions from all regions in the world. However, the dataset used for this research covers 1,320 microfinance institutions during the period of 1998 to 2014, from four regions where IMFIs exist, namely East Asia and Pacific, South Asia, Middle East and North Africa and Eastern Europe and Central Asia. IMFIs represent about 2.88 per cent, or only 38 IMFIs, in the dataset from the overall sample.

Using Ordinary Least Squares regression to analyse financial performance, portfolio risk, and poverty outreach, the research finds mixed results. Overall, although IMFIs are worse off than their conventional counterparts in terms of financial performance, i.e. lower profitability and high cost, they are relatively better off with outreach to the poor, indicated by lower average loan balance per borrower to income per capita (depth of outreach) and positive number of active borrowers (breadth of outreach).

In addition to lower or negative profitability, the first empirical chapter also indicates that IMFIs are operating at higher cost per borrower than conventional MFIs. However, interestingly IMFIs manage to record positive operational self-sufficiency (being a ratio of financial revenue over expenses, or OSS), which is an important indicator of sustainability, in addition to return on assets (ROA). Lower ROA is attributed to higher

operational cost, e.g. cost per borrower, while OSS is higher mainly due to irregular funding mechanism of IMFIs. Many of the IMFIs rely on donations or charitable funds and also to a certain extend grants from government and donors.

The second empirical chapter explores portfolio and default risk of IMFIs and find that they are facing relatively lower risks than conventional MFIs. The result defies expectation, as IMFIs are face challenging working environment and operate in some of the poorest countries in the world with frequent natural disasters or armed conflicts. They are also less vulnerable despite their clients are from the poorest segment in the society, often with lower educational level, and the nature of Islamic financial products are relatively unknown to most clients. Many of the IMFIs and their clients live in countries considered to be high risk or have histories of instability, either politically or economically.

Finally, the third paper examines poverty outreach performance of MFIs to find any evidence of mission drift in Islamic microfinance institutions. Using similar method with the first empirical chapter, the paper finds that there is no clear evidence of mission drift at Islamic microfinance institutions, as indicated by lower Average loan balance per borrower to income/capita and at the same time significantly lower percentage of women borrowers. However, this claim requires more explanations to qualify as convincing evidence. The findings contradict the argument for mission drift, i.e. the presence of higher Average loan balance and lower Percentage of women borrowers. The results do not confirm nor reject the hypothesis that there will be no mission drift at Islamic microfinance institutions. Nonetheless, the results are consistent with literature i.e. there is no clear evidence of mission drift in existing and mostly conventional microfinance institutions.

Overall, the regression results of all three empirical chapters of the thesis indicate that IMFIs are still loyal to their primary mission of poverty alleviation, despite operating at a loss and high operational cost. Their relatively positive outreach, in both scale and depth, is complementary to consistently high operational self-sufficiency. Although sustainability is important in microfinance, IMFIs are not currently concerned with sustainability objectives as their funding mechanism can still support their pursuit of poverty alleviation. However, as the drive of commercialisation and intensifying competition continue, especially with many international donors becoming more selective, IMFIs must abandon over-reliance on subsidy or grants. Should their current financial performance persists, i.e. lower return and higher cost, IMFIs may soon discover poverty alleviation mission as liability, not an achievable goal.

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Preface

This thesis is based on my original research conducted from October 2013 to August 2016 under the supervision of Dr Frank Hong Liu and Dr Luis Angeles. Where the works of other studies are used, they have been appropriately acknowledged in the thesis and properly referenced.

Some parts of this thesis have been presented in the following conferences:

a. Chapter 4, at the World Bank and IDB Inaugural Symposium on Islamic Economics and Finance 2015, September 2015, Istanbul.

b. Chapter 5, at the 14th BAFA conference on special interest group, Accounting and Finance in Emerging Economies, November 2015, Nottingham.

A working paper version of this thesis, which combines all the three empirical papers, has also been presented in the first round of special issue symposium of the Journal of International Financial Markets, Institutions, and Money in June 2016, in Taiyuan, China. The working paper has again been selected for final presentation for the special issue symposium to be held in Yunnan, China in December 2016.

Acknowledgement

This thesis is the fruit of years of labour and love. The PhD journey has been full of optimism, scepticism, frustration, and optimism again over the past three years. Yes, having finally completed this epic journey is quite an achievement. Although my academic contribution through this thesis might be miniscule, I could not be more proud with the journey and how far I have travelled in my academic life.

However, I would not be able to complete this journey and PhD research without the grace of Allah almighty, and the help, support, assistance, and push by so many people that I came across during my study life in Glasgow.

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Glasgow, September 2016

Luqyan Tamanni

Author's Declaration

I declare that, except where explicit reference is made to the contribution of others, that this dissertation is the result of my own work and has not been submitted for any other degree at the University of Glasgow or any other institution.

Signature

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Printed name

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Abbreviations

AAOIFI	Accounting and Auditing Organization for Islamic Financial Institutions
AIM	Amanah Ikhtiar Malaysia, Malaysia's only IMFIs
BMT	Baitul Maal wat-Tamwil, Indonesian brand of IMFIs
CGAP	Consultative Group to Assist the Poor
CPB	Cost per borrower
EAP	East Asia and Pacific
EECA	Eastern Europe and Central Asia
FSS	Financial Self Sufficiency
GLP	Gross Loan Portfolio
GNI	Gross National Income
GNIP	Gross National Income per Capita
IFC	International Finance Corporation
IFI	Islamic financial institution
IMFI	Islamic microfinance institution
LAC	Latin America and the Caribbean
LLR	Loan loss rate
MDGs	Millennium Development Goals
MENA	Middle East and North Africa
MFI	Microfinance Institutions
MIS	Management Information Systems
NAB	Number of active borrowers
NBFI	Non-bank financial institutions
NGO	Non-Governmental Organisation
OSS	Operational Self Sufficiency
PAR	Portfolio at risk
PFB	Percentage of female borrowers
ROA	Return on Assets
ROE	Return on Equity
SA	South Asia
SDGs	Sustainable Development Goals
SSA	Sub-Saharan Africa
WOR	Write off ratio

Chapter 1. Introduction

1.1 Background and motivation

The primary mission of microfinance institutions (MFIs) is to help their poor borrowers to come out of poverty and in so doing attain profitability to ensure a sustainable venture and operations. These dual objectives are often called double bottom line of micro lending to the poor. The premise is that the more sustainable the MFIs are the more poor people can they serve over the long run. Although, the role of microfinance institutions in poverty alleviation is still debatable, established literature provides assurance that microcredit or microfinance does contribute to the development of financial sector and reduction of poverty in developing countries (Ghalib et al., 2014, Imai et al., 2012, Khandker, 2005, Mosley, 2001, Navajas et al., 2000).

Traditionally, MFIs in developing countries are sponsored by donor organizations and poverty alleviation programmes, either from abroad or locally from their respective government. However, the rise of competition in the sector and limited funding sources that are available from donor agencies have forced many microfinance institutions to resort to commercial funding and lending activities. Donors are also moving away from grants or subsidised loans mechanism to a more commercialised approach. This change in funding structure of MFIs has led microfinance institutions to trade off poverty alleviation objective with commercial goals of profitability and sustainability.

Islamic microfinance is an infant sector that is gradually growing and coming of age. Its presence is almost negligible compared to the wealth of discussions and debates in the mainstream microfinance sector. Islamic banking industry is possibly much better known and understood, as there are increasingly more studies and publications dedicated to this segment. Ironically, to those familiar with the history of Islamic banking will know that the origin of Islamic banking is a microcredit institution in the form of rural savings cooperative founded in 1963. Although the story of Mit Ghamr Rural Savings Bank of Egypt is short lived as it was closed in 1967, its legacy of proving the feasibility of non-interest banking lives on. Soon after its closure, first and early Islamic banks emerged in United Arab Emirates (1975), Malaysia (1983), and including multilateral agency Islamic Development Bank that was established in 1975. All these and subsequent Islamic

financial institutions (IFIs) owe their existence to the success of Mit Ghamr experiment (Dusuki, 2008, El-Komi and Croson, 2013).

This research is not about celebrating this legacy, but the stories of recent and purpose-built microcredit or microfinance institutions to address the acute poverty in the developing world, particularly in Muslim countries where interest bearing products are preventing millions of poor people to access financial services. In series of studies by the World Bank Group (Karim et al., 2008), it is suggested that the percentage of people with preference to Islamic or non-interest financial services can reach as high as 50% in the MENA and South Asian regions. In country specific case like Indonesia, the preference to Islamic financial services is about 40 percent. Considering high incident of poverty in these regions or countries, it is imperative and sensible to consider the role of Islamic microfinance or microcredit institutions in dealing with poverty among 600 poor population in the Muslim world.

Microfinance is defined as efforts to collect savings and provide small loans or other financial services such as insurance to low-income households (Armendariz and Morduch, 2005). Islamic microfinance is similar in nature and satisfy this definition as well. The main difference between Islamic and conventional microfinance is the absence of interest in the former, and it uses more variety of financing modes, such as trade or cost-plus financing, equity finance, leasing, or forward sale (Rahman, 2007). In addition, Ahmed (2002) differentiates Islamic microfinance from conventional microfinance by its ability to mobilize funds from compulsory donation of the Muslims (i.e. zakat) and other social funds (especially *waqf*, or trust donation), mostly used as soft loans or safety nets in the event of default.

Unlike conventional microfinance, Islamic microfinance is still relatively unknown. According to a study by Consultative Group to Assist the Poor (CGAP), the outreach of Islamic microfinance accounts only 1-2 percent of the total microfinance outreach in Indonesia and Bangladesh (Karim et al., 2008). Further, using Indonesia as case study, Seibel (2008) concluded that Islamic microfinance institutions (IMFIs) have failed to prove themselves as efficient and dynamic providers of microfinance services, while Indonesia's conventional microfinance institutions (MFIs) are regarded as the world's leading example such as Bank Rakyat Indonesia's village banking unit (Robinson, 2002, Patten et al., 2001).

As noted by Seibel (2008), Islamic microfinance faces some pressing challenges, especially the failure of regulation and supervision and intensifying competition in the

industry. The current regulation in many countries allows different types of institutions to offer Islamic micro financing services, such as rural bank, cooperative, Non-Governmental Organization (NGOs) and subsidised government program. The competition also comes from commercial banks, both Islamic and conventional, which according to a survey accounts for 90 per cent of microloans in Indonesia (Dar, 2012).

The impact of this intensifying competition to IMFIs is not yet clear. However, some studies argue that competition has a negative impact on the performance of conventional MFIs. Kai (2009) suggests that intense competition brings a) decrease in dynamic incentive to finance the hard core poor, b) withdrawal of productive borrowers from the market, and c) drop in interest rates, which deteriorates the profitability and cross-subsidy of most MFIs. Decrease in interest rates and profitability, as has been indicated by Ayayi and Maty (2010), may affect long-term financial sustainability of MFIs.

This research aims to examine such impact to IMFIs. Ordinary Least Squares (OLS) regression is used to analyse financial performance, poverty outreach, and portfolio risk, and the thesis finds mixed results. Firstly, the first empirical paper finds that IMFIs are worse off than their conventional counterparts in terms of financial performance, i.e. negative return on assets and higher cost per borrower. The results indicate that IMFIs are operating at higher cost per borrower than conventional MFIs due to their smaller size, smaller number of borrowers and lower yield; hence, consequently lower profitability. However, IMFIs manage to record positive operational self-sufficiency (being a ratio of financial revenue over expenses, or OSS), which is an important indicator of sustainability, in addition to return on assets (ROA). Lower ROA is attributed to higher operational cost, e.g. cost per borrower, while OSS is higher mainly due to generous but unsustainable funding mechanism of IMFIs. Many of the IMFIs rely on donations or charitable funds such as religious alms giving *(zakat),* and to a limited extend grants from government and donors.

Secondly, the research finds that IMFIs are facing relatively lower portfolio at risk (i.e. delay in loan payment/instalment more than 30 and 90 days, or PaR>30days and PaR>90days) and write off ratio compared to conventional MFIs. Lower portfolio risks and default (as indicated by lower write off ratio) suggest that IMFIs are able to control their portfolio risks and keep their book in order.

Finally, despite relatively poor profitability, the third empirical chapter finds that IMFIs are relatively better off in terms of outreach to the poor, as indicated by lower average loan balance per borrower to income per capita (depth of outreach) and positive

number of active borrowers (breadth of outreach). This chapter examines poverty outreach performance of IMFIs to find any evidence of mission drift in Islamic microfinance institutions. Using similar method with the earlier empirical chapters, the third paper finds that there is no clear evidence of mission drift at Islamic microfinance institutions, as indicated by lower Average loan balance per borrower to income/capita and at the same time significantly lower percentage of women borrowers.

However, this conclusion needs to be explained further to justify as convincing evidence. The current finding contradicts the argument for mission drift, i.e. with the presence of higher Average loan balance and lower Percentage of women borrowers. Overall, the results in this empirical chapter do not confirm nor reject the hypothesis that there will be no mission drift at Islamic microfinance institutions. Nonetheless, the results are consistent with literature that there is no clear evidence of mission drift from existing microfinance institutions.

Finally, the regression results of the three empirical chapters indicate that IMFIs are still committed to the primary objective of poverty alleviation, despite suffering negative returns and operating at higher cost structure. Their relatively positive outreach, in both scale and depth, is complementary to high operational self-sufficiency. The research explores the role of sustainability for IMFIs, as they are facing contrasting performance in both financial and poverty outreach. As the drive of commercialisation and intensifying competition continue, especially with many international donors experience shortage in aid money post financial crisis of 2008 and austerity measures in their respective countries, IMFIs must abandon over-reliance on subsidy or grants. If the current financial performance persists, i.e. lower return and higher cost, IMFIs may soon discover poverty alleviation mission as a liability and not an achievable goal.

1.2 Research question and contribution

The first objective of this study is to measure the performance of Islamic microfinance institutions *vis-à-vis* their conventional counterparts and find any evidence of differences in financial performance, i.e. profitability or sustainability. The second objective is to investigate the vulnerability and default risk of Islamic microfinance and its impact of sustainability and outreach of IMFIs. Finally, the research aims to examine whether there is any evidence of mission drift in IMFIs, amidst increasing competition and commercialization. Overall, the three objectives should shed some lights on the importance sustainability and poverty alleviation mission for IMFIs.

Specifically, the research questions are as follows:

1) What are the impacts of competition to relative performance of Islamic microfinance institutions (IMFIs) to conventional microfinance institutions (MFIs)?
2) How would Islamic microfinance institutions deal with portfolio and default risks that come about with the forces of competition and commercialisation vis-à-vis achieving twin objectives of poverty alleviation and financial sustainability?
3) How will the Islamic microfinance institutions demonstrate their case for financial sustainability and poverty alleviation mission given their financial performance and riskiness factors?

This research makes several conclusions such as the following:

1) This research fills the gap in the literature on the impact of rising competition to financial sustainability of IMFIs in the developing world.
2) By taking IMFIs as case study, this research attempts to examine how MFIs at large deal with commercialisation and competition in balancing financial sustainability with poverty alleviation objectives.
3) The research is among a few attempts to conduct a comprehensive empirical survey on the development and financial performance of IMFIs.

1.3 Data and Methodology

1.3.1 Data collection

The primary source of data for this research is Microfinance Exchange or MIX Market, a non-profit platform where microfinance institutions can exchange data and information. The data gathered by MIX Market is freely available, except for much detailed information or business intelligence of MFIs in which case users must subscribe and pay certain amount of money (www.mixmarket.org). Dataset downloaded from MIX Market is the generic and free type.

MIX obtains the information from MFIs in a number of ways. First, MFIs voluntarily and initially upload their financial and social performance data to MIX market, either via email or webpage. Upon receiving these information, MIX market will then verify all the information and classify the MFIs based on the level of accuracy or quality of information supplied with diamond system. For the most accurate verified data, i.e. audited

financial reporting by renowned audit firm, the MFI concerned will be assigned 5 diamond, and the least verifiable data comes from MFIs with only 1 diamond.

Another useful classification in MIX database is age, profit orientation, legal status, and regional or country. However, MIX database does not classify MFIs into type based on operational nature of the MFI. For this research, an additional category of Islamic and conventional type MFI is introduced to enable proper analysis. This is the main variable of the dataset, as the main dependent variables will be tested against a dummy variable of Islamic microfinance institutions (IMFIs). Therefore, type of MFIs constitutes the main filter in sample selection process.

The process of classifying MFIs into Islamic, or conventional, is carried out manually. The first step is locating regions where there has been evidence on the presence of Islamic finance sector, no matter how small the size is. From established literature, it is found that Islamic financial institutions (IFIs), including IMFIs, can be found in East Asia and the Pacific (EAP), South Asia (SA), Middle East and North Africa (MENA), as well as Eastern Europe and Central Asia (EECA). From this initial process, all MFIs in the database that are from Latin America and Caribbean (LAC), Sub Saharan Africa (SSA), and the rest of the regions are removed from the dataset. Although SSA has significant Muslim population and significant poverty level, there is no IMFI found in the MIX dataset from this region. Despite Sudan is included as part of the SSA in the World Bank's regional classification, MIX Market considers Sudan as part of the MENA region. This study complies with MIX Market in this categorization.

The second step is identifying all the MFIs in these selected four regions that are IMFIs. IMFI is defined as any entity that offer Islamic microcredit products and services, either as full-fledged shariah compliant MFIs, or partially i.e. as a unit or windows operations of conventional MFIs. Majority of the IMFIs in the dataset are full-fledged shariah compliant IMFIs, with less than five of them are conventional MFIs with Islamic microfinance business branch, unit or products.

In the final dataset, the latter form of Islamic microfinance institutions constitutes about twenty percent of the total. Some well-known IMFIs, such as Akhuwat of Pakistan, Amanah Ikhtiar Malaysia (AIM), or generic name for IMFIs in Indonesia like Baitul Mal wat-Tamwil (BMT) are easy to spot and classify. For the rest of the IMFIs, they are identified by carefully browsing the websites of all MFIs from the countries that are known to have IFIs and IMFIs. Additional information also gathered from various sources, including microfinance supporting organisations such as Consultative Group to Assist the

Poor (CGAP), Sanabel Networks (www.sanabelnetworks.org), reports from donor agencies, multilaterals like Islamic Development Bank (IDB), and numerous publications or periodicals.

Finally, once all MFIs in the database can be ascertained whether there are offering Islamic microcredit products or otherwise, a new variable is introduced to the dataset and the MFIs are categorically assigned their respective type. This variable, *MFIType,* is new to studies that use MIX database and one of the contributions of this research.

The final dataset consists of 1,250 MFIs from four regions, in which 38 of them are IMFIs. Although the number represents only about 3 percent of IMFIs from the total MFIs in the dataset, this percentage is slightly higher than what presented in similar studies, most notably El-Zoghbi and Tarazi (2013). The figure also commensurate with the percentage or share of Islamic microfinance industry compared to the vast conventional or mainstream microfinance industry. Current share of 3 percent seems to be about the right sampling percentage from the overall population of MFIs.

1.3.2 Research Methodology

A study of microfinance is strongly related to poverty and poverty alleviation using financial instrument or institution. This link can be explained by the definition of poverty adopted by government of developing countries or development institutions which is proposed by the World Bank (Ravallion et al., 2009) i.e. moderate poverty for those with income less than $2 a day. Hence, based on this definition, poverty alleviation should be addressed by improving income and access to financing of the poor. This view is also supported by Sachs (Sachs, 2005) who attributes access to financing as one of the obstacles for the poor in improving their lives.

While this definition and emphasis on financing access is partial and does not represent the true nature of poverty, this research adopts lack of access to finance as the main component in addressing the problem of poverty. A more comprehensive definition of poverty is discussed by Sen (2008), Banerjee and Duflo (2012), and Sachs (2005). With improvement in income as the main indicator for poverty alleviation, the role of MFIs is critical and arguably more effective than subsidy driven poverty alleviation programmes as suggested by among others Cull et al. (2007) and Khandker (2005). This argument will be discussed in greater details in the second chapter.

In explaining the differences between IMFIs with conventional MFIs, or changes in the orientation of IMFIs vis-à-vis the presence of trade off between profitability and

poverty outreach, this study also uses institutional logic theory. Institutional logic explains the how an institution such as IMFI can transform from one state to another (Im and Sun, 2015, Kent and Dacin, 2013, Larsen, 2007). For instance, at the beginning of its operation most of the IMFIs are adopting a development or welfare logic, which is most relevant to poverty alleviation program. However, as the institutions deal with financial matters, and increased exposure to other financial institutions for funding, the new logic enters. The use of financial ratios to measure performance also forced MFIs to gradually embrace financial logic.

However, as IMFIs are facing stiffer competition in recent years, they must nevertheless adapt and overcome more pressing challenges in mobilizing funds and at the same time finding more efficient methods of disbursing them. Therefore, this research examines how IMFIs are dealing the issues of trade off between financial performance and outreach in relation to the main objectives of poverty alleviation and sustainability *vis-à-vis* conventional MFIs. This examination is done by exploring three aspects of IMFIs namely a) financial performance related to profitability and sustainability, b) portfolio risk and vulnerability of IMFIs with regards to portfolio at risk and write off ratio, and c) poverty outreach and mission drift of IMFIs. Each aspect will be presented in an empirical chapter aiming to answer research questions related to corresponding aspect of the research. The following section will outline the estimation methods used in this study.

1.3.3 Estimation methods

The first empirical chapter aims to measure the performance of IMFIs vis-à-vis conventional MFIs and find any evidence of differences in profitability and sustainability. The second empirical chapter examines portfolio and default risk of Islamic microfinance and its impact of sustainability and outreach of IMFIs. Finally, the third empirical chapter tests whether there is any evidence of mission drift in IMFIs, as well as measures both scale and depth of outreach for IMFIs. Overall, the three objectives should shed some lights on the state of sustainability and poverty alleviation mission at IMFIs.

The research adopts models used by Cull et al. (2007), Kar (2011), Kar (2013b) and, specific to mission drift chapter, Vanroose and D'Espallier (2013). While these studies classify the analysis based on lending methodology of the MFIs, the current research classifies the analysis based on the type of MFIs either conventional or Islamic. The MFI type is presented as an IMFI dummy and examined against sustainability, outreach, as well as risk indicators.

The research uses the following estimation methods for all the research questions. There is a slight variation with variables Cost, Outreach and Portfolio Quality; whenever each of these variable are used as dependent variable, it does not appear in the right hand side of the equation:

$$Y_{it} = \alpha + \beta_1 \, IMFI_{it} + \beta_2 \, Yield_{it} + \beta_3 \, (Outreach_{it} / Cost_{it} / PortfolioQuality_{it}) + X_{it} + \varepsilon_{it} \quad (1)$$

Y is vector of dependent variables consisting of indicators that could measure the model or estimation method:

Empirical chapter 1 estimates profitability or sustainability of MFIs. The objective of this regression is to determine whether there is any difference between Islamic and conventional microfinance institutions. The indicators used as dependent variables are Return on Assets (*ROA*), Operational Self Sufficiency (*OSS*), and Cost per Borrower (*CPB*).

ROA is a profitability measure that indicates whether the MFIs are making enough returns or not, given a certain size of total assets. OSS illustrates whether MFIs are self-sufficient or not; 100 percent (or 1) in the OSS score indicates that the MFIs are fully self-sufficient, and any figure below 100 percent (less than 1) demonstrates MFIs' inability to produce enough revenues to support their operations. While ROA is the ratio between net profits over total assets, OSS is a ratio of operating revenue to operating expenses. On the other hand, CPB is a ratio between operating expenses to average number of active borrowers and reveals how cost efficient the MFIs are in delivering loans to borrowers. CPB indicates whether the cost involved in serving each client is reasonable or not.

Empirical chapter 2 estimates the differences in risk between IMFIs and MFIs. The indicators used consist of a) Portfolio at Risk past due more than 30 days *(PaR>30days)* b) *PaR>90days* and c) Write off ratio (*WOR*). Portfolio at Risk past due more than 30 days is percentage of loans that are due for more than 30 days, or PaR>30days. It represents all loans that are due or late in their instalment by the borrowers for thirty days of more. Such delay in repayment or instalment is considered a warning for MFIs, since MFIs have usually gone through four to five collection cycles. Therefore any loan portfolio that registers persistent PaR>30days of more than 10 percent from the total loans, or in some cases as low as 5 percent, should send a warning to MFIs. PaR>90days is an indicator similar to PaR>30days, but for longer period. As a general rule, any loan portfolio with PaR>90days of more than 10 percent has more likelihood of default than for shorter period PaRs.

Empirical chapter 3 measures the depth and scale outreach of IMFIs. The objective of outreach regression is to determine whether there is any evidence of mission drift at microfinance institutions. *Depth of outreach* signifies the commitment of IMFIs to the poorest and the most marginalized segment of the poor i.e. lending to those that borrow small amount of loan at a time and higher percentage of women borrowers in the portfolio. The proxies to depth of outreach are Average Loan Balance per Borrower to GNI/Capita *(Avg. Loan GNIP)* and Percentage of Female Borrowers (*PFB*). On the other hand, *breadth or scale of outreach* is represented by one variable that is Log Number of Active Borrowers *(Log NAB)*. This indicator signifies that the larger the number the more poor people are reached and served by IMFIs, regardless of the size of loans or the gender of the borrowers. It is the first indicator to assess the success of IMFIs in providing loans to the poor, as it demonstrates the ability of IMFIs to reach out to the poor.

Independent variables consist of one categorical dummy variable, three continuous variables that explain the models, and a set of control variables. The first group is the main dummy variable to test the models against MFI types, namely IMFI *(MFI Type_Islamic)* that is used in all regressions and analysis.

The second group starts with yield or revenue. Yield is the most important contributor to profitability for all types of MFIs, and it represents interest or loan charges for the clients. Yield is measured in term of interest and fees received on loan portfolio, either nominal or the ratio between interest and fees and average gross loan portfolio, or real, which is nominal yield adjusted to inflation rate. For IMFIs, yield is in the form of profit margin or other shariah compliant pricing mechanism. This research uses the Real Yield on Gross Loan Portfolio or *YieldonGLP_Real.*

Outreach is a proxy to measuring poverty alleviation impact of microfinance intervention. Outreach can be examined in two aspects, scale or breadth of outreach and depth of outreach. The scale of outreach is measured by Number of Active Borrower *(Log NAB)* and size of Gross Loan Portfolio (GLP), while depth of outreach measures whether microfinance is really targeting the poorest segment of the community, through indicators such as Average Loan to Gross National Income/Capita *(Avg. Loan GNIP)* and Percentage of Female Borrowers *(PFB)*.

Cost indicators consist of variables that have been tested in relevant literature, especially Kar (2011), which are Operating Expenses to Gross Loan Portfolio and Log Cost per Borrower *(Log CPB)*. Two other cost variables related to funding, namely change

in total deposits *(Log Deposit)* and borrowings *(Log Borrow)* are also included. These variables will be an indication to cost of funds incurred to IMFIs in serving micro loans.

Portfolio quality may also affect the performance of MFIs as has been suggested by Cull (2007) or Kar (2011). The most commonly used measure of portfolio quality is Portfolio at Risk, either for those loans that have been due for 30 days or 90 days, or *PaR>30days* and *PaR>90days*. The other indicators are Loan Loss Ratio *(LLR)* and Write Off Ratio *(WOR)*. While PAR represents potential risk of default, loan loss and write off represents ex-post situation where the MFIs have recorded the loans as default. This research considers both *ex-ante* and *ex-post* situations.

The final group of independent variables and applicable to all models are control variables X_{it}. The control variables are Age, to control effects of age of the MFIs to the models, next is the differences in legal status of IMFIs, differences in respective regions where MFIs are located, and finally differences in profit orientation of the MFIs (non-profit versus for-profit). These variables have been used in existing literature, especially Cull et al. (2007) and Kar (2011).

Finally, ε is error term, where individual effect assumption of $\varepsilon_{it} = 0$ is expected to hold. It is included to accommodate any other factors that may affect the model but unaccounted for.

1.4 Contribution and significance of the study

This research aims to examine some of the issues highlighted in the previous section, with particular reference to IMFIs. The research will cover three specific topics within the theme of financial performance and poverty alleviation in light of commercialisation in the microfinance sector. The main research objective is to examine the impact of commercialisation and its subsequent impacts on IMFIs in three aspects, namely a) financial performance i.e. profitability and sustainability in comparison with conventional microfinance institutions, b) portfolio risk and vulnerability, and finally 3) outreach of IMFIs vis-à-vis the presence or absence of 'mission drift'.

Currently, there are very limited number of studies in the literature that examines sustainability and poverty outreach of Islamic microfinance empirically. A large number of literature in Islamic microfinance deal with conceptual and legal framework, as well as case studies or experiments of Islamic financial institutions in dealing with poverty and economic development. Among such empirical literature, include studies of individual MFIs such as Islami Bank Bangladesh's Rural Development Scheme (Rahman and

Ahmad, 2010), Sudan's Agricultural Bank, which successfully increased formal credit supply to the agriculture sector through profit sharing financing scheme (Elhiraika, 1996), and Akhuwat group lending model in Pakistan (Harper, 2012). These studies advocate the applicability of Islamic microfinance in the context of rural financing for microenterprises and agriculture sector. This is in line with the experiment of Mit Ghamr in Egypt, which can be considered as the first Islamic microfinance institution (Dusuki, 2008).

Similarly, in recent years there have been some exciting studies emerging in the literature on repayment behaviour of Islamic microfinance clients (El-Komi and Croson, 2013) and operational efficiency of IMFIs (Widiarto and Emrouznejad, 2015). This PhD research contributes to this group of literature on Islamic microfinance, while at the same time complement the debates on the trade-off between financial sustainability and poverty alleviation mission in the mainstream literature by providing an Islamic microfinance perspective. The current study also complements the above studies in providing cross-countries perspective as well as using a more extensive database provided by MIX Market.

In addition, this study extends the MIX Market database by identifying IMFIs from the overall population and then separates them into one new variable. This classification of IMFIs has not been used by other studies on Islamic microfinance. This extended database would be useful for other researchers in Islamic microfinance who relies on MIX database for their research.

1.5 Organisation of the study

The outline of this PhD research as follows: the first chapter will be the Introduction, followed by Chapter 2 on literature review, and the next one is Chapter 3 that defines 'What is Islamic Microfinance?'. The subsequent three chapters are empirical chapters on three main topics of this thesis, started with Chapter 4 on the 'Performance of Islamic microfinance institutions: is there any difference with conventional MFIs?', then Chapter 5 on the portfolio and default risk of Islamic microfinance institutions, and lastly Chapter 6 that discusses the presence or absence of mission drift at Islamic microfinance institutions. Finally, Chapter 7 is conclusion.

Chapter 2. Survey of Literature: Conventional Microfinance

2.1 Introduction

Microfinance has become an important sector in many developing countries, where it is considered as an effective tool for poverty alleviation and improvement in financial inclusion. The World Bank publications including a recent *Global Financial Development Report 2014* (World Bank, 2014) remain optimistic with microfinance and its promise to improve lives of the poor. Microfinance is also becoming one of the most of important research areas in finance and economics. There has been a surge in number of publication on the subject in the past decade from less than 100 titles in 1996 to more than 700 in 2010 (Fouillet et al., 2013).

One of the reasons for this development is the success of Microcredit Summit in 1997 that highlighted the emergence of microcredit institutions as the front-runner in poverty alleviation. This, among others, is attributed to the failure of commercial banks to provide the poor with access to capital due to their perception of the poor as risky or un-bankable (Armendariz and Morduch, 2005). Microfinance experiments such as Grameen Bank, Banco Sol are able to prove this is not the case, and gradually able to fill the gaps in the market while remain profitable and financially sound.

The conventional microfinance sector has since evolved from largely subsidized rural lending program into a sustainable microfinance industry, which attracts commercial banks and fund managers to develop customized products, either directly targeting the poor and microenterprises or indirectly through capital investments in the microfinance institutions. The focus of the microfinance institutions (MFIs) have also shifted from providing only credit to microenterprises to offering diverse financial products that serve the growing needs of the poor, such as savings and insurance. The product offering is slowly moving away from just microcredit to a range of microfinancial services, and increasingly in the recent years, to achieve a broader objective of financial inclusion (Ledgerwood et al., 2012, p.1).

In addition to increasing popularity and alleged success of many MFIs, the availability of data in recent decade has been the main reason for this surge (Brau and Woller, 2004). This change is evident from recent studies that take stock of what have been

researched in microfinance in the last two or three decades, by among others, Armendariz and Labie (2011a), Banerjee (2013) and Cull et al. (2013).

This chapter aims to provide a comprehensive review of literature on overall or conventional microfinance. This review will emphasise on recent development and progress made in the microfinance sector. The chapter proceeds as follows: section 2.2 provides an overview of the overall microfinance development. Section 2.3 outlines theoretical foundations of microfinance, while Section 2.4 provides overviews of lending methods of MFIs. Further, Section surveys studies on the empirical performance of conventional MFIs, including overview of organizational efficiency, portfolio quality, trade off, and mission drift. Finally, section 2.6 concludes.

2.2 Development of microfinance

Grameen Bank of Bangladesh is at the centre of microfinance story. Many researches attribute the development of microfinance to the initiative of Muhammad Yunus in establishing this microcredit institution in 1976. Grameen Bank is seen as synonymous with microfinance, as many succeeding MFIs in Asia and Africa are replicating the group lending model introduced by Grameen Bank in their institutions (Hermes and Lensink, 2007, Johnston and Morduch, 2008, Cull et al., 2009).

The success of Grameen Bank and its group lending methods has been a subject of some notable studies. Prominent among them are influential paper by Stiglitz (1990) who suggests that the key to Grameen's success was its peer monitoring system in group lending. Further the author concludes that peer monitoring provide a platform for transfer of risk among participants, which leads to improvement in overall welfare of the borrowers. Other studies on Grameen Bank includes its replicability by Hulme (1990); Auwal (1996) and its performance, such as by Schreiner (2003); Rai and Sjostrom (2004).

However, there are also studies that retrace the history of microfinance or microcredit to much earlier periods before the arrival of Grameen Bank, and suggest that microcredit has been there from the beginning (Attuel-Mendès, 2012). The experience of microcredit or similar movement in the 19th century has also been associated with the microfinance movement, among others the farmers credit union in Ireland (Hollis and Sweetman, 1998), rural credit cooperatives in Germany (Guinnane, 2001, Guinnane, 2011), and some similar movement in countries like Indonesia, Philippines and Thailand (Adams and Fitchett, 1992).

In the more recent period, the experience of India and Latin America also caught the attention of researchers, such as Sundaresan (2008) who attributed the development of microfinance in 1950-1980s to Accion and Sewa Bank in Latin America and India respectively, in addition to Grameen Bank.

In the past two decades, microfinance has evolved from subsidy laden credit programs to a highly commercialized and for profit organizational structure. Microfinance has also evolved from sole offering of credit to an array of financial services, or a change from microcredit to microfinance (Matin et al., 2002), and lately a shift in institutional focus from subsidy dependence to sustainable profit seeking (Cull et al., 2009).

However, the basic premise of microfinance remains the same, which is to enable the poor to emerge from poverty and at the same time deliver a sustainable return for the providers of microloans and micro financial services. This is often called double bottom line i.e. social impact of poverty reduction and financial sustainability of the MFIs. In the process, it is hoped that this movement will enable a least developed country to develop a mature and inclusive financial system.

However, the balancing act of attaining these two objectives, often conflicting by nature, is not easy. Putting more emphasis on social dimension may create adverse or unwanted consequences such as dependence on subsidy, lower outreach or lack of sustainability; likewise, an emphasis on sustainability may divert the attention on the poor to profitability of the MFIs. The later strategy is criticized as being a mere schism (Morduch, 2000), where the author criticises the proposition that banking approach to microfinance is said to be more efficient in poverty reduction. He argues that the proposition (also known as win-win proposition) is neither supported by logic nor empirical evidence; in fact it has created dichotomy or unnecessary trade-off in the microfinance movement between sustainability of the MFIs and social impact on the poor.

Trade-off between sustainability and poverty outreach is due to the nature of microfinance operation, where MFIs must lend without collateral and at the same time face asymmetric information to the financial condition of the poor (Armendariz and Morduch, 2005). Hence, not only that MFIs must mitigate possible adverse selection and moral hazard problems in lending to the poor, they also need to maintain certain level of profit to remain sustainable. The presence of asymmetric information is the main reason why commercial financial institutions avoid lending to the poor, and hence microfinance with ground based lending was introduced.

From a different perspective, microfinance is currently being mandated to also reduce the number of unbanked population in the world. The movement of financial inclusion is among others led by the World Bank. In *Banking the World* (Cull et al., 2013), this narrative is highlighted and illustrated by some empirical evidences from all over the world. The main argument in this book is that microfinance would be able to increase the number of unbanked population, currently about half of the world population by at least 50 percent in the next 20 years. Clearly this is not an easy task given to microfinance, as many MFIs might resort to an arguably easier commercial objective and moving further away from meeting more difficult social objective of poverty alleviation.

In line with the design challenges, some studies have also questioned the impact and the practicality of microfinance as a tool for poverty reduction and helping the poor moving up the ladder to a decent living condition. There are at least two aspects where commentators are critical to microfinance; one is to the overall idea that microfinance might solve the world's problem of poverty, and secondly to specific aspects of microfinance operations, most notably its claim to social impacts, including the methodology of MFIs in assessing and reporting social impacts.

In the first category, the studies criticise the overall idea and narrative of microfinance, especially the claims that it is a useful tool for poverty reduction program in developing countries (Bateman and Chang, 2012). This line of argument finds followers in the mainstream media, such as the Financial Times (Harford, 2009), which incite a larger public debate on the promise of microfinance.

In the second category, among the more prominent critique is Banerjee et al. (2013b) who questioned the social impact claims of MFIs. In a large study using a randomized trial in several developing countries, the authors assert that many of the claims made by microfinance advocates have been unfounded. This is further amplified by recent studies on the negative impact of microfinance, such as over indebtedness of the borrowers (Schicks, 2014) or changing social relationship of the rural community (Gerber, 2013).

At the heart of microfinance debates, the issue of trade-off between reaching to the poor and creating sustainable MFIs continue to attract equal number of supporters to both sides. It has divided the stakeholders of the microfinance movement into two camps, without any sign of reaching to an agreement, despite a feasible middle ground as explained in the literature.

The study by von Pischke (1996) proposes a measurement of trade-off between clients outreach and operational/financial sustainability of the microfinance institutions.

His measurement is built on the premise called the Rosenberg progression, whereby microfinance providers can embrace both outreach and sustainability strategy, and in the process advancing the MFIs from subsidy driven to a full-fledged profitable institutions through a series of strategy change. He cites the case of BancoSol in Bolivia, which in 1992 was transformed into a bank from an NGO-based microcredit institution. Since then BancoSol has been cited as a success. The author proposes four notable ways to measure trade-off, namely using net future value of the capital investment (or value of project cash flows), accounting profit (based on income statements), independence from subsidy using Subsidy Dependence Index of Yaron (1994), and sources of funding (mainly suggesting that ability to mobilize deposits as a better measure of sustainability).

2.3 Theoretical framework of microfinance

2.3.1 Theoretical framework

This research adopts the basic argument of market failure theory to develop hypothesis that microfinance institutions has a significant role in poverty alleviation. Market failure refers to the inability of the market institutions to allocate resources i.e. financial or otherwise, efficiently and effectively. Bator (1958) defines it as "the failure of a more or less idealized system of price-market institutions to sustain 'desirable' activities or to stop 'undesirable' activities."

Market failure in financial services occurs when the poor who need financing the most do not have the capacity nor access to finance, which are mainly provided by commercial banks (Morduch, 1999). This failure happens when the cost and risk of providing financing or credit to the poor outweigh its benefits for the financial institutions. This cost is related to mitigation of moral hazard and adverse selection problems that are prevalent in lending to the poor (Armendariz and Morduch, 2005). Banks have no access to information on the financial condition of the poor, and the only way for banks to secure their lending is through collateral, which in the case of the poor is not available. Hence, the commercial banks are reluctant to lend to the poor.

In such situation, government or other market players often to interfere and provide alternative services to the poor. Government subsidy or poverty alleviation that are based on providing microcredit are such a case. Likewise, the emergence of microfinance institutions, especially with group based lending that provides a kind of collateral for the loan, is an innovation to address asymmetric information in micro lending, especially moral hazard and adverse selection problems.

Nevertheless, microfinance is somewhat surprising phenomenon since economic principles of diminishing marginal returns to capital suggests that poor enterprises with low capital should earn higher returns and hence able to pay higher interest rates than larger ones. This principle argues that banks should be willing to lend to these micro enterprises or poor individuals, or 'money should flow from rich depositors to poor entrepreneurs' (Armendariz and Morduch, 2005). This, of course, did not occur due to asymmetric information as discussed earlier.

However, market failure theory has some limitations in explaining the recent failure or objections to the argument that microfinance is an effective tool in poverty reduction effort. To Bateman and Chang (2012) or Roy (2010) microfinance is not necessarily the right answer or the more efficient solution to the exclusion of the poor from financial sector development. In more specific reference, Woller (2002) argues that exclusion of the poor is due to marketing failure of the financial sector rather than market failure.

This study examines the performance of MFIs in terms of financial performance, portfolio risks, and poverty outreach with the assumption that they operate differently from commercial banks i.e. offer financing without collateral but must mitigate the problems of adverse selection and moral hazard. By taking the case of IMFIs, this study studies how differently would the performance of IMFIs vis-à-vis conventional MFIs while providing financial services to the poor without any collateral, and have to mitigate the problems of adverse selection or moral hazard.

2.3.2 Arguments for microfinance

Poverty traps argument has been suggested to encourage the establishment of microfinance institutions in many developing countries, more prominently by Sachs et al. (2004). They argue that lack of domestic savings and rapid population growth trigger a poverty trap in poor countries, with deterioration of capital and productivity eventually leads to poor economic growth and advancement. In turn, poor growth results in shortage of domestic savings, lack of capital and worsening productivity. This vicious cycle continues for many years, unless a deliberate action is taken to break the circle. Elsewhere, Sachs (2005) argues that foreign aid by advanced countries may break this cycle.

Along this line of argument, the failure of much broader macroeconomic policy of international development has also been suggested by Woller and Woodworth (2001) as the reason for microfinance development. It is argued that development strategy of many

poor countries has followed the industrialization path of developed countries, with reliance on economic growth to catch up advancement made by the Western countries and trickle-down effect to mitigate any income disparity caused by industrialization led growth. This is found to be flawed. Many developing countries suffer from both lack of sufficient growth, and widening of income inequality or increasing incidence of poverty. Woller and Woodworth (2001) argue that this failure has led many grass root organizations in these countries to deal with poverty by themselves, mainly by creating microcredit institutions to help the poor moving out of poverty.

This argument is similar with market failure theory suggested by among others Armendariz and Morduch (2005), who argue that the failure of banks to reach out to the poor as the main driver in the development of microfinance. In turn, market failure is due to asymmetric information arises from interaction between borrowers and MFIs, as well as agency problems in the execution of financial transactions.

Another bulk of literature deals with the role of financial sector development and economic growth, which is argued to has led the rising popularity of microfinance as a development instrument (King and Levine, 1993, Kaboski and Townsend, 2012, Pretes, 2002). The so-called finance-growth nexus provides a context to which microfinance emergence as a feasible solution to failures of government policies or market, as elaborated above, makes sense.

These arguments can be further elaborated in some specific discussions on poverty, development approach of MFIs, impact measurement, and finally debates on trade-offs between development goal of poverty outreach and profitability motive of microfinance institutions' shareholders. These are the subjects of the following subsections.

2.3.3 Microfinance and poverty alleviation

Poverty is the primary reason or *raison d'etre* for the introduction of microfinance in the first place. Therefore, poverty studies should provide some explanation to the emergence of microfinance as discussed in the previous section. This section aims to shed some lights on definition of poverty and the perceived role of microfinance in the important debates of its alleviation strategy.

The simple definition of poverty is a situation where there is an apparent lack of income or consumption level. However, Amartya Sen (Sen, 1983, 2008) disputes this definition of poverty, and suggests that measurement of poverty based on income is inadequate and misleading. Instead he alludes that poverty should be defined in the context

of minimally acceptable level of basic capabilities. In turn, poor is a result of combination of entitlement failure (loss of command over resources) and capability failure, or loss of ability to convert resources into useful functioning.

A more pragmatic definition is offered by the World Bank in its *World Development Report 2001,* in which poverty is defined as a situation where the poor people are facing a) lack of opportunity, b) insecurity and vulnerability and c) powerlessness. It is in the first category that finance is identified as a problem, as well as solution to poverty. This realization triggers institution such as the World Bank, Asian Development Bank and other multilaterals to introduce poverty alleviation programs with microfinance or access to finance as the main component.

These interventions by the multilaterals rest on an assumption that the key opportunity not available to the poor is their lack of access to credit or financial services i.e. due to market failure. As such, access to finance is an important narrative in the international development financing and economics literature on development and poverty studies. In fact, in recent years the narrative has been broadened to include financial inclusion as the main objective of creating access to financial services for the poor.

However not everyone is convinced that microfinance is a solution to poverty alleviation. For instance, Karnani (2011) argues that microcredit does not reduce poverty, main because a) loan side streaming to consumption by the poor customers and microenterprises, b) most of the borrowers are not entrepreneurs and they lack skill to run a business, c) lack of economies of scale and low productivity of the businesses, leading to low earning to rise out of poverty, and d) high interest rate that further indebt the poor borrowers.

2.3.4 Development approach: Institutionist versus Welfarist

The rise of microfinance to the front row of development strategy has encouraged a surge in academic research on the subject; one of them is development approach. The subject matter of many studies on this topic is the debates between poverty led approaches to microfinance (welfarist) versus that of sustainability of the MFI's approach (institutionist). The debate is summarized by Woller and Woodworth (2001) as 'striking a balance between institution-building versus poverty-lending focus'. More succinctly, Morduch (2000), refers to this division as microfinance 'schism', and he provides detailed accounts on what differentiates between the two, as discussed below.

Welfarists emphasize on the depth of outreach and impact on clients/borrowers, or the level of poverty reached. This suggests that microfinance should target those among the poorest people in the community, principally women and economically active poor, so that their welfare will be improved after being served by microfinance institutions. The main objective of welfarist MFIs tends to be self-employment of their borrowers, with greater attention given to income generating employment for the family. Although financial sustainability is important for the welfarists, they do not generally reject subsidy from the government or donors, as long as their objective to reach out to the poorest is met.

On the other hand, institutionists place more important role on the MFIs and their financial sustainability. Their concern is mainly financial deepening, or providing financial services to those not served or underserved by formal financial system. As such, they give more emphasis on number of poor people being served, or breadth of outreach. The more of poor people they serve the better. They believe that donors funds and government subsidy are not enough, and to be avoided if possible, to reach a scale their thought appropriate to deliver financial services to large number of clients in order to make an impact on poverty alleviation.

The view of Rhyne and Otero (1992) highlights the institutionists' dogma. They argue that financial systems approach in the provision of financial services to the poor is superior one, based on alleged experience that has created 'a successful technology for credit delivery that utilizes sound financial principles'. By sound principles, they refer to understanding clients' needs, cost efficiency and high repayment rates, which is key to achieving the main focus of achieving institutional self-sufficiency.

2.3.5 Critiques on impact claims and methodology

As different development approach (welfarist or institutionist) may shape microfinance sector differently, the outcomes may sometimes in contrary to the main objective of microfinance i.e. poverty alleviation. Researches that look at this end of microfinance may come across discouraging results. Among this group, there emerges a growing literature that takes a critical approach to studying microfinance and its role in poverty alleviation and more broadly economic development. This group of researches is led among others by Morduch (2000), Rankin (2001), Roy (2010), Bateman and Chang (2012), and Banerjee et al. (2013b)

In line with the design challenges, some studies have also questioned the impact and the practicality of microfinance as a tool for poverty reduction and helping the poor

moving up the ladder to a decent living condition. There are at least two aspects where these studies are critical to microfinance; one is to the overall idea that microfinance might solve the world's problem of poverty, and secondly to specific aspects of microfinance operations, most notably its claim to social impacts, including the methodology of MFIs in assessing and reporting social impacts.

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2.3.6 Commercialization, poverty vs. profit trade-off, and mission drift

At the heart of microfinance debates, the issue of trade-off between reaching to the poor and creating sustainable MFIs continue to attract equal number of supporters to both sides. It has divided the stakeholders of the microfinance movement into two camps, without any sign of reaching to an agreement, despite a feasible middle ground as explained in the literature.

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Subsidy Dependence Index of Yaron (1994), and sources of funding (mainly suggesting that ability to mobilize deposits as a better measure of sustainability).

Another explanation for possible trade-off is the nature of microfinance institutions as a hybrid between development and banking institutions (Kent and Dacin, 2013). Kent and Dacin (2013) use institutional logic to describe microfinance as a marriage between development logic, i.e. poverty alleviation with banking logic, i.e. banking mechanism to deliver loan that will help the poor out of poverty. At the beginning the hybrid system works quite well as demonstrated by the achievement of Grameen Bank and other forms MFIs, mainly dominated by NGOs and NBFI at the early stage in 1970s and 1980s. However, as these MFIs are operating more like a bank and the influx of many commercial banks in the 1990s, they have caused a radical change in microfinance logic, which is now very much behaving like financial or banking institution.

The changing in microfinance preferences, either institutionally or as a system is often referred to as mission drift, which is a substantial shift in the focus of MFIs from poverty outreach to ensuring their own sustainability and profitability. Mission drift can also cause, or caused by, commercialization of microfinance. This aspect will be discussed further in the following section that surveys performance of MFIs.

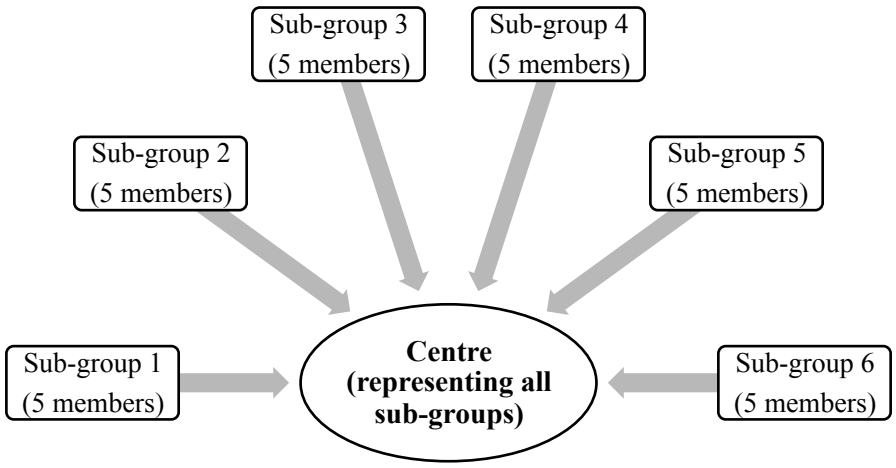
2.4 Lending Models of MFIs

The typology of the lending models encapsulates the types of existing MFIs, which mainly based on group versus individual lending models. The following will elaborate in more details based of this typology using select case studies of notable MFIs in the respective lending models.

2.4.1 Group lending models

There are three types in the group-lending category, namely Grameen model, Solidarity or Self-Help Group (SHG), and Village Banking model (Ledgerwood et al., 2012). Grameen model is characterized by small sub-group membership (usually five), a centre of up to six sub-groups constitutes the lending group of the MFI, and finally each member in the sub-group guarantees the loan of other member while in turn the centre acts as secondary guarantee. Likewise, Solidarity groups consist of slightly larger membership (up to 10 members) per group and each member guarantees each other's loan in the group. Finally, village banks are formed by 15 to 50 people and offer loans to the group members. The loan usually comes from the savings of the members or other sources externally.

Figure 1 Grameen Bank group lending structure



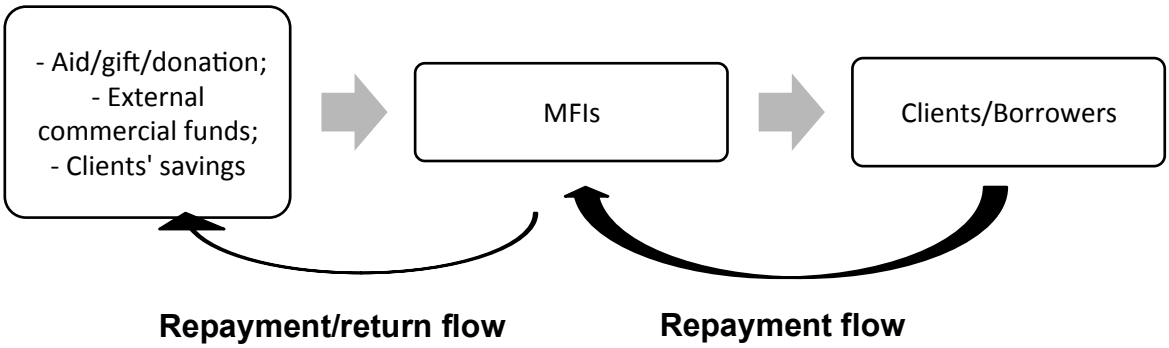
Source: Grameen Bank website; Shandker (2011)

The above model has been used by MFIs adopting the Grameen system or group-lending model, which include Amanah Ikhtiar Malaysia (AIM), and some IMFIs operating as Baitul Mal wat-Tamwil in Indonesia. Other group lending models, such as Solidarity and Village Banking operate in the same way, with the removal or extension of membership and sub-group limit in their centres. Most of the MFIs in the dataset that use group lending model are following Grameen model, which is why the cases presented here are those replicating Grameen's group lending model.

2.4.2 Individual lending models

Individual lending model is mainly offered by commercial based MFIs such as Islamic rural banks or commercial banks specializing in microfinance like Family Bank in Bahrain. There are very few MFIs structured as NGOs that offer individual lending, most prominent among this group is Akhuwat. Individual lending are similar to banking lending, where individual borrower or client is assessed and responsible for the loan individually. Unlike the group lending, where the other group members become guarantor for the borrower, individual lending often requires the borrower some form of collateral or a guarantee from the spouse or other immediate family member of the client.

Figure 2 Individual lending structure



Commercial banks that are offering microfinance products, such as Bank Rakyat Indonesia (BRI), use individual lending method to its customers ((Robinson, 2002). This lending method suits the commercial banks as well as similar banking structure i.e. rural bank. The model allows the banks and MFIs to operate and treat their customers individually like their traditional customers. However, the main challenge for these commercial banks is defining their market segment while making a profit. In the case of BRI in Indonesia, for instance, the challenge is to maintain their overall existing portfolio, which is still favourable to micro banking segment, remains the same in the future.

2.5 Empirical studies on the performance of conventional MFIs

Impact measurement of microfinance has been relying on the providers to supply the data and results of their intervention. This approach has been criticised by among others Banerjee et al. (2013b), who as the result of his dissatisfaction proposed a different approach namely randomized trial.

Despite this shift in impact measurement, primarily related to effectiveness of microfinance to living to its promise of alleviating poverty, performance measurement of microfinance institutions by their shareholders and operators has been largely the same. Performance of MFIs due to Yaron (1994), which further refined later by Manos and Yaron (2009).

In practical application, this approach that was initially introduced by Yaron (1994) and Manos and Yaron (2009), has been used recently by Tchakoute-Tchuigoua (2010) to classify the performance criteria of MFIs into five group of variables, namely a) Financial performance, b) Social performance, c) Organizational efficiency, d) Portfolio quality, and e) miscellaneous like Size and Solvency rate. Financial performance refers to 1) economic profitability indicators such as Return on Assets and Return on Equity, 2) self-sufficiency ratios such as Operational and Financial Self-Sufficiency (OSS, and FSS), and 3) profit

margin. Social performance can be measured with outreach indicators such as breath of outreach (Number of Active Borrowers, NAB) and depth of outreach (Average loan size per borrower). While organizational efficiency can be measured using operating expenses ratio (efficiency ratio) and cost per borrower, as well other cost indicators commonly reported by MFIs such as operating expenses per loan officer or administrative costs. Portfolio quality is measured by Portfolio at Risk (PAR) ratio. Finally size of the MFIs and their solvency ratio may also be used to gauge performance.

2.5.1 Organizational efficiency

The main pillar of performance measurement of the majority of MFIs is financial ratio, following the so-called banking logic that has dominated microfinance field in the past decade. Among the ratios measured by most of the MFIs are those related to cost efficiency in managing the MFIs, particularly related to staffing, loan disbursement, and costs related to recovering the loans that have been extended.

Efficiency of MFIs does not depend on the country where they operate, but the type of institution they are operating are relevant and important conclude Gutiérrez-Nieto et al. (2007), and in their case NGO type of MFIs is more efficient to non-NGOs.

2.5.2 Portfolio quality and risk management

From the investors' point of view, microfinance is seen as an attractive choice for portfolio diversification measured in terms of risk-return profile (Galema et al., 2011). In particular, the authors find that MFIs operating as rural banks are more attractive than other forms such as NGOs for international investors. These investors are also more likely to invest in Latin America than in Asia or Africa.

Portfolio quality of MFIs is also an important aspect for some researchers. For instance, in a study involving 350 MFIs from 70 countries, D'Espallier et al. (2011) find type of borrowers may have a different outcome for MFIs. They suggest that lower portfolio at risk and lower write-off rates are associated with higher proportions of women borrowers. On the other hand, Zeballos et al. (2013) find that the borrowers at risk of defaulting are not necessarily those investing in risky projects or risk takers. In a study involving 200 borrowers in Bolivia, the authors find that the defaulters are in fact 'take too little investment risk'.

2.5.3 Trade-off between sustainability and outreach

There are three positions emerged from trade-off debates in the literature, first is the one that refute trade-off between outreach and profitability; the next one asserts the prevalence of trade-off, and finally the view that advocates the importance of balance between outreach and financial sustainability/profitability.

The first group of studies suggest that focus on outreach would not reduce profitability or sustainability of microfinance institutions. These studies find little or no evidence of trade-off between financial sustainability and poverty outreach, either in single country context (Piot-Lepetit and Nzongang, 2014) or cross country analysis (Kar, 2011). In fact, Quayes (2012) finds a positive and complementary relationship between outreach and financial sustainability.

The second group finds that there is a trade-off between outreach and performance, which include studies at country specific or cross-countries (Cull et al., 2007). Similarly, there are studies that find a negative relationship between outreach and other performance indicators or proxy to sustainability, such as efficiency (Hermes et al., 2011, Abate et al., 2014). In this category, there are also studies that vaguely admit the presence of trade-off or find limited trade-off between outreach and sustainability, for example by Cull et al. (2009) and Mersland and Strøm (2008).

Finally, there are also growing number of recent studies that have tried to bridge the trade-off gap and provide a different perspective on the debates. They assert that MFIs can still maximize its outreach while maintaining a decent rate of profitability. This can be achieved in certain circumstances, such as where financial sector in the country is underdeveloped or prevalent of subsidy. Vanroose and D'Espallier (2013), for instance suggest that MFIs reach more poor clients and remain profitable if they operate in the market where (commercial) banking sector development is low. This view is supported by Assefa et al. (2013) who finds that when competition is high, it may reduce poverty outreach and repayment performance. Similarly, Conning (1999) suggests that MFIs can still target poor clients and remain profitable without reliance on external funding or leverage by carefully mitigating contract design problem and high monitoring cost.

2.5.4 Commercialization and mission drift

An extension to trade-off analysis is mission drift literature, which looks at how MFIs are deviating from its original objective of poverty alleviation. As in the trade-off debates, the existing literature offers no definite conclusion on mission drift. One part of

the literature suggest quite strongly that mission drift does occur, for instance as alluded by Copestake (2007), Hamada (2010), and Serrano-Cinca and Gutiérrez-Nieto (2013). According to these studies, mission drift may occur as a result of commercialization (Hamada, 2010) or high operational cost to serve the poor (Serrano-Cinca and Gutiérrez-Nieto, 2013).

On the other hand, Mersland and Strøm (2010) find that there is no evidence of mission drift in their samples of 379 MFIs from 74 countries. They argue that higher competition may have caused the mission drift to disappear (Vanroose and D'Espallier, 2013). In fact, commercialization seems to improve the ability of the MFIs to expand their credit outreach due to its ability to raise cheaper funds from commercial lines. For instance, Hamada (2010) suggests that many MFIs do have strong social performance measures internally. Therefore, there is a scope for better social performance management, especially through better clients targeting, product design, alignment of organizational goals, and enhancing external relationship with all key stakeholders.

What is evident from the above is inconclusive nature of these debates. In fact, studies on mission drift, trade-off between poverty outreach and financial sustainability, as well as commercialization of microfinance is still growing without any clear winner of the debate. While this is an exciting area of research in itself, the lack of similar studies for Islamic microfinance institutions offers an opportunity to fill the gap.

2.6 Conclusion

The study of microfinance has evolved through the decades, in both conceptual framework and empirical studies. The growing body of knowledge in microfinance is also due to the rapid development of microfinance sector, as indicated by the increasing number of microfinance institutions in the past three decades. While the pioneers like Grameen Bank, BancoSol and Bank Rakyat Indonesia remain prominent players in their respective markets, the number of players competing in the microfinance sector has certainly increased significantly. This is evident from the cases studies highlighted in the preceding sections. The number of MFIs surveyed in microfinance studies has multiplied, for instance only 124 in a study on MFI performance in 2007 (Cull et al., 2007) to 1,073 MFIs in 2013 (Vanroose and D'Espallier, 2013).

The same can be said about Islamic microfinance, although to a lesser degree of size and magnitude. However, as mentioned in a 2013 CGAP report cited earlier, Islamic microfinance is an important sector (or sub-sector) in the overall microfinance movement

globally. Among the key reasons is the economic condition of many Muslim countries, where nearly half of the 1.6 billion Muslims live in poverty. There is certainly a growth potential for MFIs in these countries, as 40 percent of Muslims worldwide that are surveyed by CGAP in 2008 and 2009 have a preference to Islamic mode of financing.

Unfortunately, there is a shortage of studies in literature that examine the feasibility and reliability of Islamic microfinance scheme, as will be discussed in great details in the next chapter that reviews existing literature on Islamic microfinance. The literature on the subject is largely conceptual and normative, which provides little information on the current status of IMFIs and even much less evidence on the performance of these institutions. This gap provides an exciting opportunity for this research to examine most important and highly debated aspects of IMFIs, such as mission drift issues, trade-off between financial performance and social impact or profit vs. outreach, impact of rising competition from commercial banks, commercialization or even impact assessment. This study will examine how different are IMFIs compared to conventional MFIs in their financial performance as well as poverty outreach. This study also aims to provide insight into the current situation of IMFIs using latest and improved datasets obtained from a reputable source i.e. MIX market.

Chapter 3. Survey of Literature: Islamic microfinance

3.1 Introduction

Islamic microfinance is a specialised part in a growing and diverse body of microfinance literature. To date there are quite a few papers on Islamic microfinance that are published in reputable journals, which fairly represent the size of Islamic microfinance industry compared to the overall microfinance sector. However, as more data becomes accessible to researchers, this segment will increase as interest on Islamic microfinance grows. This trend will follow similar surge in academic papers on conventional microfinance that started in the early 1990s. In addition to increasing popularity and success stories of many microfinance institutions, the availability of data has been the main reason for this surge (Brau and Woller, 2004). This is documented in recent studies that take stock of what have been researched in microfinance in the last two or three decades, by among others, Armendariz and Labie (2011a), Banerjee (2013) and Cull et al. (2013).

Likewise, Islamic microfinance sector is slowly evolving from an academic experiment into a niche industry in many Muslim countries, such as Indonesia, Bangladesh, Sudan, Pakistan and Yemen. According to Consultative Group to Assist the Poor (CGAP), there are at least 255 known Islamic microfinance institutions in the Muslim world serving more than 1.28 million clients (El-Zoghbi and Tarazi, 2013). While this development is encouraging, there are very few studies available that illustrate the feasibility, accurate description of size, and characteristics of these Islamic microfinance institutions (IMFIs). In fact, the literature on conceptual framework for Islamic microfinance is also relatively sparse compared to conventional microfinance, among the few includes Ahmed (2002), Smolo and Ismail (2011) and Abul Bashar et al. (2012).

The empirical studies are even more limited. For many researchers, the frustration begins early with the scarcity of data and its quality. In the MIX market database, for example, IMFIs are only represented by about 38 MFIs from the population of 2,500 MFIs from around the world. The problem might not be with the IMFIs, but possibly the structure of MIX self-reporting method that does not provide incentive to many IMFIs. At least, CGAP researchers (El-Zoghbi and Tarazi, 2013) managed to pull up to 255 IMFIs in their report. This in itself is again a small fraction of a true population of global IMFIs. In one estimate, Indonesia has over 3,700 small-scale cooperatives offering Islamic micro

savings and financing services across the country (Adnan and Ajija, 2015). The cooperative is known as BMT or Baitul Mal wat-Tamwil, literally means financial and investment house (Hadisumarto and Ismail, 2010).

Despite obvious limitation in data and adequate literature, this chapter aims to provide an overview of Islamic microfinance in the context of mainstream microfinance sector, and highlights some of the salient features that differentiate Islamic microfinance with conventional or overall microfinance. The succeeding sections will discuss the origin, different approaches in the development, and characteristics of Islamic microfinance. These will be followed by discussion on sources and uses of funds, as well as poverty impact of IMFIs. Finally, the chapter will conclude with some thoughts on possible opportunities for Islamic microfinance research, and how this study fits into this effort.

3.2 Theoretical framework of Islamic microfinance

Studies on Islamic microfinance could be viewed from three different groups of researches, namely effect of religion on development, microfinance, and Islamic finance. The first one falls into the same category as studies on general contribution of religion to development agenda and efforts, by among others Morris and Adelman (1980), Ragab (1980), Noland (2005), Pryor (2007) and Platteau (2008). In this group there is also study by Mersland et al. (2013) that examines the effect of religion i.e. Christianity in economic development effort through microfinance. This particular study finds that Christian MFIs consistently have lower financial profit and lower funding costs compared to non-religious MFIs.

The second group, or microfinance based studies, is the main analytical tool used in this research as has been discussed at length in the earlier sections of this chapter. In addition, this study will also use the perspective of Islamic finance studies, which could offer an intimate perspective in understanding Islamic microfinance, due to shared philosophical background. As such, this research will define and explain the performance of Islamic microfinance largely in the context of Islamic finance and microfinance studies, and to a limited extend in the context of religion and development, especially Mersland et al. (2013).

Islamic microfinance can be defined in the broader context of Islamic economics principles or in the context of existing practices of Islamic financial institutions. This section will cover the first part of the definition i.e. contextualizing Islamic microfinance in the conceptual discussion of Islamic economics and finance. The second part on empirical

experience and experiments of Islamic microfinance will be covered in the section that follows, as well as more thoroughly in the following chapter.

At this point, it is important to note that Islamic microfinance has been acknowledged as an important component for economic development of a country, at least to countries with predominantly Muslim population. This has among others noted by the recent report of the World Bank, *Global Financial Development Report 2014* with special topic on Financial Inclusion (World Bank, 2014). The report highlights an important role of Islamic finance to improve financial access in the countries where majority of the population shy away from financial institution for religious reason i.e. avoidance of interest. The section[1] on Islamic finance suggests that such preference is explained by high religiosity of the Muslims, especially those residing in the countries that are members of the Organization of Islamic Cooperation (OIC).

3.2.1 Defining Islamic microfinance

Islamic microfinance can be defined as provision of microfinancial products and services based on Islamic principles, which is similar to a definition of microfinance in general but a reference to Islamic principles (Wilson, 2007). The main characteristic of Islamic microfinance is the absence of *riba* (or usury), *gharar* (risk or ambiguity in transactions) and the use of different financing contracts, unlike conventional system that relies heavily on interest charged on credit or loans.

There have been few attempts to define and explain the operations of Islamic microfinance. The earlier one is by Khan (1994), in the context of rural development using Islamic banking principles. Further, Dhumale and Sapcanin (1999) produce an important report on a potential linkage between Islamic banking and poverty alleviation program in the Middle East and North Africa. Ahmed (2002) elaborates on the experiments of some Islamic microfinance institutions in Bangladesh.

Rahman (2007) and Dusuki (2008) point out that microfinance is an important, but hitherto missing, component in the development of Islamic finance, and poverty alleviation (Rahman, 2010a). Smolo and Ismail (2011) try to explain the contractual framework of Islamic microfinance institution and their role in providing financing to microenterprises. The most recent one is due to El-Komi and Croson (2013), who use experimental economics to test and confirm the feasibility of Islamic financing in microfinance setting.

[1] See *Global Financial Development Report 2014,* Box 1.4 on pages 36-38 and Appendix C from page 174.

Prohibition of riba is an important notion in Islamic economics and finance. Riba in Arabic means ‘addition’ or ‘increase’, and could be defined as any form of interest in financial transactions, despite some scholars limit riba only to usury (Noorzoy, 1982). Islamic scholars have unanimously agreed that riba is prohibited, as it is mentioned clearly in the Quran and Hadith (saying of Prophet Muhammad), although there are scholars who question whether riba is referred to interest, e.g. any form of financial charges, or it is referred to usury, which is an excessive form of interest (see for example Rahman, 1964). However, majority opinion holds that banking interest is indeed riba and prohibited. Despite this debate, many of the Muslim countries have put in place some kind of regulation and enabling policies to develop Islamic finance sector, including microfinance.

Gharar can be defined as danger of loss, risk or uncertainly (El-Gamal, 2001). Risk *per se* is not prohibited in Islam until it is included in financial or commercial transaction, which may create uncertainty to either party. As such, Islamic law prohibits any form of transactions that involves gharar or *bay al-gharar* (sale of risk), hence prohibition of gharar is the context of “sale of probable items whose existence or characteristics are not certain, due to the risky nature which makes the trade similar to gambling” (El-Gamal, 2000). Gharar is prohibited to prevent speculation that may put one party at a disadvantage, either due to asymmetric information, moral hazard or other forms of hazards created by uncertainty. However, prohibition of gharar may increase the premium imposed by Islamic financial institutions to their customers, although there is no significant effect to typically loyal customers (Berg and Kim, 2014).

In Islamic microfinance, there are at least three types of contracts that can be used, namely equity or micro-equity, trade finance or micro-credit, and charitable donation. From these contractual arrangements, partnership contract or musharakah is considered to be the most suitable for IMFIs (Smolo and Ismail, 2011). In musharakah, both IMFI and the borrower are equal partners in a transaction or business, where the share of equity (i.e. goodwill, cash or other form of assets) and profit/loss must be agreed upon at the beginning of the contract. The second type of contract is based on sales or purchase contract, mostly using murabahah contract. Murabahah is deferred sales contract where the IMFIs will buy inventory or consumable goods for the borrowers/clients who will in turn pay the IMFIs in instalments. Finally, charitable donation in the form of benevolent lon is also widely used. This loan uses mainly qard hasan contract, whereby the clients of IMFIs receive cash and pay the loan in exactly the same amount as they receive. IMFIs do not typically make profit from this transaction, however they are allowed to charge small administration fees to administer the loans.

Despite the available contracts or *aqad*, in practice most of the IMFIs predominantly use qard hasan (benevolent loan) and commercial mode of murabahah (cost plus financing) as suggested by Ahmed (2002). Although musharakah contract has some advantages compared to other types of contract such as murabahah, however it requires extra efforts from the IMFIs to administer numerous partnership arrangements and also time to educate the clients with this unusual contract. Musharakah is indeed superior as it provides adequate commercial incentive for IMFIs and banks (Akhtar, 1997), protects the borrowers from inflation pressure on their assets or investment (Abdalla, 1999), and it could also provide a basis for sustainable form of financing for the economy at large (Harper, 1994).

In recent years, there are several attempts that explore the application and applicability of these schemes to Islamic microfinance, such as housing finance using Islamic cooperative scheme targeted for the poor (Ebrahim, 2009), or an experiment on the repayment behaviour of Islamic microfinance borrowers as tested by El-Komi and Croson (2013), who use experimental economics to confirm the feasibility of Islamic microfinance in the context of information asymmetry and verification. The more novel approach to using Islamic financial contract as an alternative modern lending such as payday loan (Salleh et al., 2013) is also part of this growing attention to Islamic microfinance.

These studies suggest that Islamic micro-financial services are robust and in certain cases more efficient that other types of financial services targeting the poor. In the case of El-Komi and Croson (2013), the experiment results show that borrowers using mudarabah and musharakah contracts are more likely to comply with their terms of loans than those under interest based loan arrangement. It is suggested that Islamic microfinance is more efficient where information asymmetry assumption holds. Similarly, Smolo and Ismail (2011) find that Islamic microfinance would be able to resort to more sources of funding than their conventional counterparts, as well as use more variety of products to suit different type of clients.

3.2.2 Evolution of Islamic microfinance

Islamic microfinance originates from the experiment of Mit Ghamr Savings Bank in the Nile delta of Egypt (El-Komi and Croson, 2013). Mit Ghamr was essentially a cooperative designed to serve rural farmers and traders with Shariah compliant financial products i.e. non-interest that are suitable to the local community, hence it is also claimed as the first experiment of Islamic bank. Mit Ghamr was established by an economist Ahmad Al-Najjar, who upon returning from his graduate study in Germany wanted to

provide the poor in his hometown with access to financial services. He was driven by his belief that a rural bank should invest in socially driven activities, such as educating customers on savings and the importance of capital accumulation (Mayer, 1985). Al-Najjar borrowed some of the structure of Mit Ghamr experiment from German local savings banking Sparkassen, which impressed him during his stay as PhD student in Koln, Germany (Çizakça, 2011, p.135). In its short life span from 1963 to 1967, Mit Ghamr was able to demonstrate that non-interest banking was possible.

However, Rahman (2007) and Dusuki (2008) point out that despite strong historical legacy, microfinance has been missing in the development of Islamic banking across the Muslim world until several years ago. Likewise, Shahinpoor (2009) provides a convincing accounts on the already existing platforms within Islamic banking that allow the sector to offer microfinancing products and services. The nature of Islamic finance and banking products, which are based on risk sharing principles encourage financial institutions to work with any type of customers, not only those with collaterals. In fact, most of the Islamic banking contracts do not require collaterals hence feasible for the banks to finance microenterprises or the poor. The nature of Islamic banking itself is also more than just a commercial entity, since working with the poor is a natural outlook of an Islamic bank (Dusuki, 2008).

While these studies propose to expand the reach of Islamic banking to micro entrepreneurs, the interest from Islamic finance industry at large has been discouraging, at least until several years ago. The establishment of several key institutions offering shariah-compliant micro loans to the poor in majority Muslim countries highlighted the emergence of IMFIs. As Table 1 indicates, there have been some encouraging development since Mit Ghamr, and in fact the first purpose-built IMFI is Amanah Ikhtiar Malaysia, which was founded by the Malaysian government in 1987.

Table 1 Notable Islamic microfinance institutions

No.	Islamic MFI	Legal structure	Country	Year established
1	Mit Ghamr Savings Bank*	Rural Bank	Egypt	1963
2	Agriculture Bank of Sudan	Bank	Sudan	1975
3	Baitul Mal Wat-Tamwil (BMT)[2] Teknosa	Cooperative/ BMT	Indonesia	1984
4	Amanah Ikhtiar Malaysia	NBFI	Malaysia	1987
5	Akhuwat	NGO	Pakistan	2001

Source: MIX Database, various source. * Mit Ghamr was closed in 1967 due to policy/political change in Egypt.

3.2.3 Characteristics of Islamic microfinance

Islamic microfinance is unique due to its ability to use variety of contractual arrangements available in Islamic finance sector. As has been explained by Smolo and Ismail (2011), there are three main contracts used in Islamic microfinance, namely partnership or equity based, trade finance-based and charity based. They are similar to the contracts being used by other Islamic financial institutions such as Islamic bank. Islamic microfinance products and services will have similar characteristics as the other IFIs, namely risk sharing based, deferred payment, rental or leasing based, and some form of guarantee schemes. The only additional product available for IMFIs is mobilization of funds through charitable arrangements, such as *zakat* (obligatory alms tax), *sadaqah* (voluntary donation), and *waqf* (perpetual trust endowment).

3.2.3.1 Partnership and risk sharing contract

Partnership contract consists of two types, namely musharakah and mudarabah. Musharakah is an equity partnership that involves two or more parties, in which all parties contribute capital to the business with the agreed proportion (Ayub, 2007). There are also other variants of musharakah where partners can also contribute other assets to the venture, such as good will *(shirkah al-wujuh)* and fixed assets. Likewise, mudarabah is a partnership between investors or those who bring money/capital to the venture *(rabb al-mal*) with those who manage the venture or *mudarib* (Ayub, 2007).

[2] BMT is a generic name for IMFIs in Indonesia, which normally formed as a cooperative. Some BMTs operate as NGO or foundation.

Although partnership contract of musharakah is seen as the most suitable for Islamic microfinance institutions (Harper, 1994, Akhtar, 1997), most of the IMFIs still rely on non partnership schemes such as murabahah or qard hasan. Similarly, mudarabah is also considered as a viable alternative for IMFIs (Rahman, 2010a), however the application of mudarabah in the Islamic microfinance sector is still limited. One of the factors causing IMFIs to neglect partnership contracts is their complexity and lack of customers' knowledge of the product. Musharakah or mudarabah requires the poor customers to maintain their business records properly, in order to produce profit or loss statements regularly. For clients of many IMFIs, mudarabah and musharakah are not easy to understand or comply.

3.2.3.2 Trade based or deferred payment contract

Murabahah is essentially a trading contract that allows the buyer to pay the good in instalment at a marked-up price. It is often referred to as cost plus sale or financing (Ayub, 2007). In principle, the client will request the IMFI to finance its purchase or inventory or capital goods in return for marked-up payment in series of instalments (Smolo and Ismail, 2011). The IMFIs will then order the goods from the third party and pay it in cash (or any other arrangement it may have with the supplier) and request the goods to be delivered to the client. The profit margin gained by the IMFI, mode of delivery, and the terms or duration of payment by the client must be agreed upon before the signing of financing contract.

3.2.3.3 Rent or leasing

Ijarah is a form similar to leasing, that offers an important form of Islamic finance contract to provide customers and financial institutions with an option for a flexible contract, i.e. earning revenue from an asset without losing its ownership rights (Ayub, 2007). Ijarah constitutes both financial and operating lease, and can be further classified into simple ijarah (rent or leasing throughout the duration of the contract) and ijarah that leads to transfer of ownership *(ijarah wa iqtina)*. This is not possible if the bank or MFI use credit contract. In the case of Islamic microfinance, ijarah could be used to finance purchase of small shop or machinery for the micro entrepreneurs (Smolo and Ismail, 2011).

3.2.3.4 Forward sale of Salam

Salam is a forward delivery sales contract and traditionally used in agriculture financing. In this contract the buyer will pay the seller i.e. farmer for a produce to be delivered at a particular date in the future i.e. once the produce is ready to harvest (Ayub, 2007). In microfinance sector, this contract has been proposed for the use in agriculture financing in Pakistan (Kaleem, 2007), but real application is currently unavailable. Despite its lack of application, salam is an important product for IMFI in rural areas where poor farmers have little access to banking services. Salam could be used to finance supply of seeds or fertilizer in exchange for the produce at a later date.

3.2.3.5 Forward sale of Istisna'

Similar to salam, istisna' is also forward delivery sale contract. The main difference is in the nature of delivery; whereas in salam the delivery is on a particular date in the future i.e. harvest time, while in istisna the delivery can take place in many stages (Ayub, 2007). Hence salam is more suitable for such goods as agriculture produce and istisna' is more suitable for processed goods such as manufactured products. Also, istisna' is a contract that is feasible for application, but has not been used in practice so far.

3.2.4 Technical differences with conventional MFIs

The definition of Islamic finance by Mirakhor and Zaidi (2007) offers a clear perspective on the main differences between Islamic and conventional microfinance. They suggest that, "…(under conventional system) the interest rate is either fixed in advance or is simple linear function of some other benchmark rate, whereas in the (Islamic banking), the profits and losses on a physical investment are shared between the creditor and the borrower according to a formula that reflects their perspective levels of participation (Mirakhor and Zaidi, 2007, p.49) "

The other features of Islamic microfinance can be discussed in light of some technical aspects as suggested by Ahmed (2002), namely a) source of funds, b) mode of financing, c) outreach (financing the poorest), d) funds transfer, e) deduction at inception of the contract, f) target group, g) objective of targeting women, h) liability of the loan, i) work incentive of employees, j) dealing with default, and k) social development program.

3.2.4.1 Source of funds

The sources of funds for IMFIs derive from several sources, some of which are similar to their conventional counterparts such as external funding from donor agencies, savings of the clients, commercial loans from banks or other financial institutions; and the rest are unique to IMFIs namely charity and trust endowment.

3.2.4.2 Mode of financing

Mode of financing in Islamic microfinance are various, sometimes developed as combination or extension of three or four basic contracts, which are sales *(murabahah, salam, istisna)*, partnership *(musharakah, mudarabah)*, leasing *(ijarah)* and benevolent loan *(qard hasan)*. Most of IMFIs use murabahah or cost plus sales contract for commercially driven loans and *qard hasan* or benevolent loan contract for poverty alleviation driven loans.

3.2.4.3 Outreach

With the integration of charity into microfinance operations, IMFIs have the advantage of focusing on outreach using charitable funds without any restriction on cost or profit considerations. This will enable IMFIs to improve their depth and, possibly also, breadth of outreach. For the conventional MFIs, they may have to face a dilemma or trade-off and choose between outreach and sustainability.[3]

3.2.4.4 Deduction of loans received

An IMFI will not be able to deduct the amount of loan received by a client or impose any other restriction, mainly because the Islamic financing mechanism requires MFI is handing over the good as required by the client and not cash.

3.2.4.5 Target group

IMFIs generally emphasizes on family as the main beneficiary and client, which is shown in the financing or loan structure where a husband is always part of the liability borne by women's borrowing, although not applied in the reverse situation. The purpose of loan also directed towards empowerment of the family as the smallest unit in a society. While gender affirmation is also acknowledged and supported, as more than 60 percent of clients in Islamic microfinance are women, the focus is slightly broader.

[3] This advantage of not facing trade-off is hypothetical.

3.2.4.6 Objective of targeting women

The preference of women clients to man is guided by their availability and feasibility to work on the financing received from the MFIs. Most of the women clients already have micro business at home and necessary skills to advance the business, which may not always be the case with their husbands who either already working as farmers, day labourer or other occupation.

3.2.4.7 Liability of the loan

The spouse is also responsible for the loan his wife is receiving, hence provides a higher sense of responsibility to properly utilize the loan.

3.2.4.8 Work incentive of employees

For micro-entrepreneurs, working in the business to earn an income for the family is considered religious duty. This may motivate IMFIs clients to be more responsible and work with higher motivation, compared to only working for money as may be the case for borrowers of conventional MFIs.

3.2.4.9 Dealing with default

In the case of default the clients of IMFIs can resort to charitable funds to help them with debt, where they are unable to pay the loan. Charity funds such as zakat, in this case, can function as a buffer of safety net for IMFIs.

3.2.4.10 Social development program

Islamic microfinance is driven by both social and to a degree religious responsibility. This may lead to incorporation of religious sentiment in the microfinance programme, such as using mosque as a place for disbursement and collection in the case of Akhuwat. This was done to create a sense of religious responsibility in managing the money received as loan, i.e. to be diligent with its use and repay it on time. This approach has not been introduced by conventional MFIs.

The following table summarizes the differences between Islamic and conventional MFIs, which have been discussed above.

Table 2 Differences between Islamic and conventional MFIs

No.	Main Features	Islamic	Conventional
1	Source of funds	External funds, savings of clients, commercial banks, and Islamic charitable sources (i.e. *zakat, waqf*)	External funds, savings of clients, commercial banks
2	Mode of financing	Islamic financial instruments	Credit on interest
3	Outreach (financing the poorest)	Poorest can be included by integrating zakat with microfinancing	Poorest are discretionally left out. No inclusive system in place.
4	Funds transfer	Good transferred	Cash given
5	Deduction at inception of the contract	No deductions at inception	Part of the funds deducted at inception
6	Target group	Family	In most cases, women
7	Objective of targeting women	Ease of availability	Empowerment of women (gender affirmation)
8	Liability of the loan	Recipient and spouse	Recipient
9	Work incentive of employees	Monetary and religious	Monetary
10	Dealing with default	Group/centre/spouse guarantee, and Islamic ethics	Group/centre pressure
11	Social development program	Religious (includes behaviour, ethics and social)	Secular behavioural, ethical, and social development

Source: Ahmed (2002)

3.2.5 Islamic microfinance in Islamic financial system

Islamic finance can be defined as financial system whose objectives and operations are based on Islamic principles (Warde, 2000). This definition implies that the financial institutions operating within the jurisdiction of Islamic finance should refrain from taking interest (or *riba*, meaning usury or simply interest) which is prohibited in Islam, avoid speculative or risky transactions (*gharar*, or uncertainty), and more generally promote justice and other religious/ethical goals. In practical sense, the operations of Islamic financial institutions will be based on two main features, namely a) relying on risk sharing or trade related products and services i.e. profit and loss sharing, and b) upholding specific business practices to promote broader economic and social objectives.

In theory, the use of risk sharing method and more specifically profit and loss sharing in the form of *mudarabah*, according to Presley and Sessions (1994), will lead to an increase in capital investment as both investors and businesses are presented with greater number of information on the venture. Interestingly, *mudarabah* scheme is very

similar to *commenda,* which is practiced widely in the Medieval time and recognized in the Scholastic tradition (Islahi, 2014). However, in practice, Islamic finance has not fully embraced the profit sharing mode of financing, and offer largely trade based financing schemes such as deferred sale contract (*murabahah*), rent or leasing (*ijarah*), and similar financing mechanisms.

Shahinpoor (2009) provides a convincing account on the responsibility and capacity of Islamic banking to offer microfinancing products and services to the poor, which constitute a large segment of the Muslim world. The nature of Islamic finance and banking products, which are based on risk sharing principles encourage financial institutions to work with any type of customers, not only those with collaterals. In fact, most of the Islamic banking contracts do not require collaterals hence feasible for the banks to finance microenterprises or the poor. The nature of Islamic banking itself is also more than just commercial entity; working with the poor is a natural outlook of an Islamic bank (Dusuki, 2008).

In this context, Islamic microfinance is defined as one component of the Islamic financial system that offers financial services to the poor and microenterprises (Smolo and Ismail, 2011). The main characteristic of an Islamic microfinance is the use of variety of contracts similar to Islamic banking. There are at least three types of contracts available is Islamic finance, namely equity based or micro-equity, trade finance-based or micro-credit, and charity based. Of these modes of financing or contractual arrangements, the partnership contract of *musharakah* is seen as the most suitable for microfinance institutions.

In *musharakah*, both IMFI and its borrower are conceptually partners in a business venture, where sharing of equity or profit/loss is agreed upon at the beginning of contract. To many researchers, this form of contract provides adequate commercial incentive for MFIs and banks (Akhtar, 1997), while at the same time protects the borrowers from inflation pressure on their investment (Abdalla, 1999), and it could also provide a basis for sustainable form of financing (Harper, 1994). However, *musharakah* is not yet feasible for most IMFIs, and hence many are still using *qard hasan* and *murabahah*, as suggested by Ahmed (2002).

Further, Smolo and Ismail (2011) also attempts to define Islamic microfinance based on the analysis of two economic models, namely financial intermediation and production function following Ramsey-Solow growth theory. In the former the authors are looking at the financial contracts of the IMFIs, i.e. the use of equity based financing, trade

or mark-up financing, and charitable schemes in microfinance; while in the later the authors use an adaptation of Solow-Ramsey model on the role of capital (Islamic mode capital) to the production process of the microenterprises. In both analyses, the authors find that Islamic microfinance would be able to resort to more sources of funding than their conventional counterparts, as well as use more variety of products to suit different types of clients.

In both analyses of financial intermediation and production function, the definition and operational description of Islamic microfinance are very much influenced by the way Islamic banking is defined and operated. It seems that the association between Islamic banking and Islamic microfinance goes beyond historical context of Mit Ghamr bank in Egypt. As Mit Ghamr may signify the birth of Islamic banking, and to a degree the emergence of Islamic microfinance, current theoretical framework of Islamic microfinance is governed by Islamic banking and finance concepts.

3.2.6 Development approach of Islamic microfinance

The development path of conventional microfinance sector can be divided into welfarist and institutionist, which have been discussed in earlier section. This dichotomy is also partly true for Islamic microfinance, as evident from different models emerged among IMFIs to be discussed in the following section. This section deals with distinctive approach of Islamic microfinance in lieu of a debate between socio-economic objectives or idealism versus contractual formality approach or legalism. Socio-economic idealism and commercial/transactional legalism emerge from the discussion between two approaches represented by two scholars at the early stage of Islamic finance development, Ahmad al-Najjar and Baqir Al-Sadr (Hegazy, 2007).

Socioeconomic approach suggests that the main objective of any Islamic financial institution is social justice or economic welfare. The islamicity of the institutions is not the main concern for the proponents of this approach. As the case of Mit Ghamr shows, it was not called an Islamic rural bank as such rather a social savings bank. Unfortunately, following a dispute with the government, socioeconomic institution of Mit Ghamr was closed down in 1967. For many years, this model of Islamic financial institutions remains non-existing in many countries. Instead, following the oil boom and successful experiment of Mit Ghamr and Malaysia's Tabung Haji, from mid 1970s to early 1980s some new forms of IFIs were established in the Gulf Region and South East Asia, namely Dubai Islamic Bank, Islamic Development Bank and Bank Islam Malaysia Berhad (Ariff, 1988).

Unlike Mit Ghamr, these new institutions emphasize more on the permissibility of their products and not in achieving socio-economic objectives of their institutions. They adopt what Hegazy (2007) suggested as legalistic approach. This emphasis on contractual or transactional aspects follow the model developed by Al-Sadr in his book *Iqtisaduna* or Our Economics (Hegazy, 2007). He suggests that Islamic financial institutions should adopt the conventional financial structure while attempt to ensure the products and operations are in compliance with Islamic teachings or shariah. In a way the model emphasises on form over substance as a formula for developing an Islamic financial institutions.

This has been the case for many years and in many countries developing Islamic finance. However, this view has been criticised by many scholars. The focus on form over substance has sacrifices the social nature of Islamic finance and banking, as the important of Shariah compliance has overtaken the social objectives of the institutions as prescribed in the *maqasid as-shariah* or higher objectives of the Islamic law (Rahman, 2007). To Dusuki (2008), this approach of banking is against the natural outlook of Islamic finance, as microfinance or financing the poor is 'not alien to Islamic banking'.

In a similar tone, Asutay (2007) suggests that the 'form over substance' phenomenon as social failure of Islamic banking and finance, to which he cites the case of many Islamic banks and financial institutions that have diverged from the ideal of Islamic economics. By this he means a divergence from the ideas of economic system that is founded upon social justice and human-centred economic development. To overcome this impasse, Asutay proposes that Islamic financial institutions need to move into the 'third stage of development' through institutionalisation of social banking in overcoming social failure and creating economic value added for social justice.

Although the debates over welfarist vs. institutionist, or between socio-economic idealism versus transactional legalism will continue for decades to come, some practitioners of Islamic finance have overcome this debate and move on to establish different forms of Islamic financial institutions to serve the poor. The departure point for most of these pioneers in Islamic microfinance is very similar, which is to address acute poverty level in their communities and respective countries. The stories of Akhuwat in Pakistan (Harper, 2012), Amanah Ikhtiar Malaysia (Saad, 2012), Baitul Mal wat-Tamwil in Indonesia (Riwajanti, 2014) and many others are about financial institutions trying to serve the poorest segment of their communities in an effort to uplift dignity among the poor and perhaps also to re-establish social justice.

The following section will highlight some of the models, and stories, of IMFIs from few notable Muslim countries. These stories will serve as an example of how different development approach can and may co-exist in the field of Islamic microfinance.

3.2.7 Delivery methods of IMFIs

The operational methods adopted by the IMFIs are similar with the lending models of conventional MFIs, namely group and individual lending models. Similarly, the arrangement of self-help group model, village banking, cooperatives or credit union and banking model are also used by IMFIs. Within this operational aspect, there are few IMFIs or group of IMFIs that operate within conventional typology of lending methods but with some variation in lending or operational strategy.

Lending methodology is important in determining product design, clients selection, loan or repayment procedure, portfolio management, risk management (Ledgerwood et al., 2012, p.214). Therefore, proper and careful selection of lending methods or models is crucial for all microfinance institutions, including IMFIs.

Most of the existing methods can be grouped into two categories, namely group and individual lending. Group lending is an approach where the MFI lends the money to either the group itself or to individual members of the group. Based on this selection, group lending can be further classified into several varieties implemented by different microfinance institutions, namely a) Grameen model, b) Solidarity groups and c) Village banking model. It is essentially the model that is well known and discussed extensively in the literature, including a seminal work by Stiglitz (1990) and Ghatak and Guinnane (1999). In the case of Islamic microfinance institutions, all the three variation of group lending are flourishing, as will be discussed below and in the succeeding chapter.

On the other hand, individual lending model is more straightforward and much closer to the commercial banking model. In fact, this lending method is generally used by microfinance unit of commercial banks or by Non-Governmental Organizations (NGOs) that has specific lending structure designed to them by their donors. Both of these cases are available in the Islamic microfinance sector.

3.2.7.1 Group lending models

As mentioned earlier, there are three variations emerged from group lending methodology. Grameen model is characterized by small sub-group membership (usually five), a centre of up to six sub-groups constitutes the lending group of the MFI, and finally

each member in the sub-group guarantees the loan of other member while in turn the centre acts as secondary guarantee. Likewise, Solidarity groups consist of slightly larger membership (up to 10 members) per group and each member guarantees each other's loan in the group. Finally, Village banks are formed by 15 to 50 people that make loans to the members. The loan usually comes from the savings of the members or other sources externally (Ledgerwood et al., 2012).

A prominent and successful adoption of Grameen in the form of Islamic microfinance is Amanah Ikhtiar Malaysia (AIM), which was established in September 1987 by David Gibbons and Sukor Kasim, two Economics professors from University Sains Malaysia. The main difference with AIM is its pricing scheme that uses non-interest mechanism, i.e. using *qard hasan* or benevolent loan, in adherence to Islamic principle (Hulme, 1990). One of the key success factors for AIM is its ability to maintain large number of customers who have graduated from poverty, and significant government support due to its success. As such, AIM manages to earn more income by lending larger amount and to better off clients. AIM is the largest microfinance programme in Malaysia (Hulme, 1990). The government of Malaysia designed its poverty alleviation program around the model used by AIM, hence allowing AIM to design large scale program with full government support (Ismail, 2001, Saad, 2012).

The second variety of group lending is Solidarity Groups. This model is similar to Grameen, except the group membership may be larger and the guarantee scheme may operate differently. Some of the Baitul Mal wat-Tamwils (BMTs) in Indonesia adopt this lending model. Although majority of BMTs lend individually, the Solidarity groups also featured successfully (Hadisumarto and Ismail, 2010).

The village banking model is used extensively by FINCA, a large microfinance group operating mostly in Latin America, Sub-Saharan Africa, and Middle East and North Africa (MENA) regions. It has been a subject of few studies on group lending and village banking, notably by Karlan (2007) and Perez et al. (2011). Of these village banks, FINCA has also introduced Islamic microfinance scheme in Afghanistan and Jordan using village banking model. The main difference between Islamic village banking introduced by FINCA with other village banks is the use of Islamic financial products, mainly *murabahah* and *qard hasan*.

3.2.7.2 Individual lending model

There are three forms of individual lending introduced by organizations offering Islamic microfinance, namely a) qard hasan loan, b) commercial banking model and c) Islamic cooperative model.

The first model is currently offered by mostly NGOs or non-profit organization offering soft loans to the poor. The most notable example of this model is Akhuwat, an NGO based in Lahore, Pakistan. Since its establishment in 2001, Akhuwat has disbursed US$13 million and reach over 125,000 clients. One of the unique feature of Akhuwat is its mass disbursement and collection system, which is conducted mainly at the mosques or churches (Harper, 2012). While this is not specifically prescribed in the Islamic teaching, the disbursement system is hitherto unique to Akhuwat. The system seems to be working well with the *qard hasan* mode of lending used by Akhuwat. *Qard hasan* is a type of loan in Islamic financing where the borrowers are only liable to pay back the principal; in fact, if they are genuinely not able to pay the loan, the creditor should allow them some times, or write the loans off (Harper, 2012).

In contrast to mass disbursement, commercial banking model is also an emerging model in the Islamic microfinance sector. One such example is Family Bank in Bahrain, which is a new generation of commercial bank focusing exclusively on small and medium enterprises and micro banking. It was established in 2009 in a country with relatively few poor families. Per capita income of Bahrain population is about US$10,000, where poverty incidence is 2%, or representing only 120,000 of 6 million people. As a commercial entity, the bank works with Grameen Trust as strategic partner. Apart from providing commercial micro loan, averaging between US$ 500 to US$ 5,000, the Grameen program is targeting loans with the average take of US$ 100 to US$ 500. Family Bank is not the only commercial micro bank in the Muslim world, similar institutions have recently sprang up in Pakistan, Indonesia, Bangladesh and perhaps much earlier in Sudan, although not really known as the country has become a closed economy.

Baitul Mal wat-Tamwil is uniquely Indonesian model. BMT itself is an acronym from Arabic terms, which can be translated freely as fiscal and financial institution (Hadisumarto and Ismail, 2010). Although it is Arabic, there is no parallel of BMT in the Arabic speaking countries. BMT was initially religious institution introduced by Islamic organization in Indonesia to help facilitate business activities of its members. Because there was no specific regulation on MFI during that period, the BMT was formally registered as a cooperative. There was a problem then, as cooperative can only serve

members. Because most of the customers of BMT are not necessarily want to be a member, they are being registered as applicant for membership (or expected member), which is permissible under the cooperative act.

Despite this limitation and imperfect regulatory setting, BMT has grown to more than 3,000 by the end of 2013. Some recent studies on Islamic microfinance have looked at the cases of BMTs in Indonesia (Sakai, 2010, Hadisumarto and Ismail, 2010, Riwajanti, 2014), especially as the country is adopting a more strategic approach to Islamic microfinance development. Similar to Akhuwat, some BMTs use *qard hasan* as their primary mode of financing, with some others also use a commercial mode of financing *murabahah* (Hadisumarto and Ismail, 2010), which is a purchase transaction with pricing based on cost plus margin. One unique feature of BMTs is its ability to mobilize savings and voluntary donation from members or public.

3.2.8 Sources of funding for IMFIs

As the sector grows and competition intensifies, securing funding for the fast growing number of clients is among the key ingredients for future success and survival of IMFIs. While funding sources might not be limited, for now, selecting the one that suits internal strategy and targeted group of beneficiaries are crucial.

Savings and deposits that are designed to mobilize funding from clients or other third parties remain important instruments for many MFIs. For instance, in 2010 MIX Market (www.mixmarket.org) recorded that deposits and savings account for nearly half (47.56 percent) of the funding structure for most MFIs in the world. Debt and equity follow suit with 28.79 percent and 18.29 percent contribution to the total funds raised by MFIs. Further, Maisch et al. (2006) find that 65 percent of these MFIs are relying on deposits, while the remaining sources are borrowing from international institutions (27 percent), shares or equity (20 percent), and only a fraction of 1.7 percent based on bonds (long term debt). Deposits constitute 74 percent of time deposit, 26 percent savings and negligible 0.1 percent from checking account

For Islamic microfinance, shariah-compliant funding instruments are widely available and should provide alternatives for IMFIs. One such example is sukuk, which in recent years has been considered as an attractive way to raise funds, but yet to be launched, to support the expansion of microfinance institutions. The main obstacle in attempting to issue sukuk is a long and demanding process and procedure, despite an obvious demand and the fact that many investors are already familiar with sukuk structure. However, in the

long run, this method should be considered as a feasible and possibly the least costly mode of funding for microfinance. Other than these traditional products as above, the following alternatives are worthy of mentioned and discussed.

3.2.8.1 Zakat and charity

There are three modes of charity in Islam, namely zakat or compulsory alms tax, sadaqah or voluntary charity, and waqf or perpetual charity in the form of trust endowment (Sadeq, 2002). These forms of charity have existed from the beginning of Islamic history, and they are used as a method of wealth distribution. Zakat is an obligatory contribution collected from the wealth of higher income individuals to be used for eight specific purposes or beneficiaries, or according to Iqbal and Lewis (2014) it is "the only divinely ordained levy in Islam". Bonner (2005) defines zakat as institutional or involuntary alms tax imposed on the Muslim community. Although obligatory, zakat collection is not mandatory as tax collection in many Muslim countries. Zakat is treated similar to other charitable donations made only by those aware of its nature as religious obligation or those who live in countries where its collection has been made mandatory or integrated with tax.

The beneficiaries of zakat are mostly the poor with specific circumstances, such as those who are in destitute, very poor, in severe debt, travelling or striving for a better life or in education, and new converts to Islam. Traditionally, zakat can only be collected by government or officially appointed religious institutions, however with the advance of Islamic financial institutions and their ability to penetrate remote areas, they have been given limited opportunity to mobilize and manage zakat from the community.

For IMFIs, this opens up an opportunity to raise religious funds that can be used to support their microfinancing programmes, such payment of debts to loan sharks, as a soft loan (with *qard hasan* or grant) to the poor prior to engaging them with productive types of loan. Zakat and other charities could also be used by IMFIs as safety nets in the event of default by the poor clients (Kaleem and Ahmed, 2009). However, this allocation of zakat funds should only be used with strict adherence to guidelines stipulated in Islamic law, as zakat is a religious obligation with specific rules in its collection and allocation.

In recent years, there have been some attempts to incorporate zakat and other charitable funds into microfinance (Obaidullah, 2008). Zakat and other charitable funds could be raised from charity organizations owned by the government or private organizations. For instance, large charities in the Gulf or other oil rich countries have been

allocating generous portions of their funds to microfinance programmes across many regions, including North Africa, South Asia, and South East Asia.

3.2.8.2 Waqf and trust funds

Waqf or trust is another important component of voluntary sector that could be linked with Islamic microfinance. A detailed discussion on the origin and development of waqf is provided by Kuran (2001), who examines the history of waqf and explores its limitation and implication to modern economic settings.

Some Islamic microfinance models using waqf or *awqaf* have been proposed by among others Obaidullah (2008), Kaleem and Ahmed (2009) and Haneef et al. (2015). Waqf is primarily used as a mechanism in the mobilization of funds (Ahmed, 2007). For instance, donors could allocate their waqf funds and put them into a trust, which will then be used by the trustee or IMFI to invest in financing to the poor or microenterprises. The main advantage of waqf is its perpetuity, where IMFIs could use the waqf fund for many years or as long as its use is within the prescribed objectives of the trust fund and with the approval of the trustee, hence ensure sustainability. The other advantage is to designate waqf for exclusive allocation or use to help the poor through microfinancing, where all the waqf funds that are raised or set aside are used to fund microfinance. In this instance, waqf can be allocated as capital as well as funding of the IMFIs, and the use of waqf can in fact reduce the cost of capital (Haneef et al., 2015).

Similar approach has been used in corporate waqf model, where private companies like Sabanci in Turkey or Johor Corporation in Malaysia set up an endowment fund and use any profits generated from investment of the fund to support social and educational activities (Mohsin et al., 2016). In fact, waqf can be found is all Muslim countries with different degree of sophistication and various size or forms. In microfinance, some IMFIs in Indonesia and Pakistan have adopted waqf as a funding mechanism, although still early days to assess its success or limitation (Mohsin et al., 2016). The awqaf microfinance model is indeed a new frontier that should be further studied and in time to be extended to more countries.

However, the use of charity as source of funding may not be sustainable in the long term, due to the voluntary nature and irregularity of charity. However, when managed properly and used as complement to other source of funds such as deposits, IMFIs will benefit from this almost free source of funds.

3.2.8.3 Social Enterprises

The involvement of corporate entities and private companies in poverty alleviation becomes more prominent with the global recognition of Grameen Bank as champions of microcredit and the fight against poverty. Many corporations around the world wanted to associate themselves with Grameen for social and profit making purposes. These ensuing joint ventures later on gave birth to social business movement (Yunus and Weber, 2007). The social business model is defined as a self-sustaining company that sells goods or services and repays its owners for their investments, but whose primary purpose is to serve society and improve lives of the poor. In this model, companies and Grameen typically establish organizations that produce special products to serve specific markets in Bangladesh or elsewhere, for instance the case of Grameen Danone that provides affordable dairy products to the poor in Bangladesh

The other notable organizations that are developing social enterprises include BRAC and ASA in Bangladesh that has been using this model to develop its relief operations in the 1970s to a global development organization as today (Mannan, 2009, Rahman et al., 2012). In the case of Islamic microfinance, the only notable case is Bab Rizq Jameel, an IMFI established by Abdul Latif Jameel Foundation of Saudi Arabia that operates vocational training centres and microfinance programmes in the Middle East (Altman et al., 2009).

3.2.8.4 Investment Funds

A similar model to social business is social impact investment (or impact investment). In this model, fund managers or private equity firms create specific microfinance funds and then raise money from investors. The proceeds are then invested typically in baskets of MFIs in developing countries. For investors, impact investment is regarded the same as emerging markets, the term referred to as a class of portfolio investments (Kloppenburg, 2007). As most MFIs are operating with high margin, prolong profitability, and high repayment rate, the funds are very attractive to many global investors.

In this ‘genre’, there are also companies that behave less like fund manager but like real investor. This investment model has consequences to many Islamic microfinance operations. First, the funds only invest in MFIs that have some track records (outreach, profitability) and future income possibility, i.e. generating profit for certain period of time. This may require a change in the microfinance programme management, mainly a shift

from social orientation to profit (mission drift). Second, and most importantly, it requires a major change in the capital and governance structure of the microfinance institutions. With the injection of new funds, investors may request rights of ownership or management change (Matthäus-Maier and Von Pischke, 2006).

According to a survey by Symbiotic (www.syminvest.com) on Microfinance Investment Vehicles (MIVs), the total assets of these funds in 2014 have reached more than USD10.4 billion, with a growth rate of about 16 percent in total assets. Although there is no dedicated shariah compliant or Islamic microfinance fund currently available or recorded, yet the prospect and demand are certainly there in the market.

3.2.8.5 Peer-to-Peer and crowd funding Model

Crowd funding is an important innovation in finance that brilliantly embraces internet platform of sharing and collaboration. Person-to-person, or peer-to-peer (P2P) loan was made popular by most prominently Kiva.org in 2005, as a way to facilitate individual lender to support the poor with a small but usually repeating loans. Kiva and other platforms have also been featured in research publication, among others Flannery (2007), Ly and Mason (2012), and Bruton et al. (2015). The simplicity of online platform used by Kiva has attracted 1.3 million individual lenders from many countries since its launch, and together they have provided small loans in more than 80 developing countries. Currently, Kiva works with more than 300 field partners or MFIs, including IMFIs in interest fee based loans.

The use of crowd funding in Islamic finance is also encouraging, and fits well with the nature of partnership concept in Islamic financing (Taha and Macias, 2014). An Islamic equivalent to Kiva is Wafaa (www.wafaalend.org), which was launched in in 2008. Wafaa is currently based in London and provides financing to poor Muslim countries or Muslim communities in crisis-affected countries. To date, Wafaa has managed to finance 3,530 micro entrepreneurs with accumulated projects worth of USD 12.2 million in six countries. The number for micro lenders has reached nearly 600 individuals.

3.3 Empirical studies of IMFIs

3.3.1 Early experience

The earlier studies that explain the operations of Islamic microfinance are in a country context like Sudan by among others Harper (1994) and Abdalla (1999). These studies advocate the applicability of Islamic microfinance in the context of rural financing

for microenterprises and agriculture sector. This is in line with the first recorded experiment in Islamic banking in Egypt, which is a rural bank called Mit Ghamr established in 1963 and regarded as the first Islamic bank, and more appropriately the first IMFI (Dusuki, 2008).

However, there are some notable studies on Islamic microfinance emerging in recent years. Among these attempts are case studies of individual MFIs such as Islami Bank Bangladesh's Rural Development Scheme (Rahman and Ahmad, 2010), Sudan's Agricultural Bank, which successfully increased formal credit supply to the agriculture sector through profit sharing financing scheme (Elhiraika, 1996), and Akhuwat group lending model in Pakistan (Harper, 2012). Akhuwat is a unique and successful microfinance model, in which the disbursement is usually made to a large number on clients in the mosque or church, for non-Muslim borrowers (Harper, 2012). While it is effective in reaching out to a large poor population, the model seems to be unsustainable, as it relies heavily on voluntary donations for funding and volunteer staffs for disbursement and clients' management.

Beyond these individual cases, there is hardly any notable study on the performance of IMFIs, especially using recent cross country datasets that are available from institutions such as MIX Market database or other organizations.

3.3.2 Recent experience and experiment

In recent years, there are several attempts that explore the application and applicability of Islamic financing schemes to microfinance, such as housing finance using Islamic cooperative scheme targeted for the poor (Ebrahim, 2009), or an experiment on the repayment behaviour of Islamic microfinance borrowers as tested by El-Komi and Croson (2013). The latter study uses experimental economics to confirm the feasibility of Islamic microfinance in the context of information asymmetry and verification.

Both studies suggest that Islamic micro-financial services are robust and in certain cases more efficient that other types of financial services targeting the poor. In the case of El-Komi and Croson (2013), the experiment results show that borrowers using profit sharing and joint-venture schemes, both represent *mudarabah* and *musharakah* contracts respectively, are more likely to comply with their terms of loans than those under interest based loan arrangement, for all enforcement and verification conditions *ex-post* the loan cycle. It is suggested that Islamic microfinance is more efficient where information asymmetry assumption holds.

Beyond these two studies, which are published in three stars journal, there are very few empirical papers published in reputable journals on Islamic microfinance. This has created a gap in the literature that could explain the contribution of Islamic microfinance i.e. to financial inclusion in the developing countries, or more importantly the relative performance of IMFIs vis-à-vis other types of MFIs.

3.3.3 Comparative studies: conventional and Islamic

There are very few studies available that explore the relative difference or performance between conventional or mainstream with IMFIs. This paper is among the first attempts to fill this gap. In so doing, this research looks at existing studies that compare Islamic financial institutions, especially banks, with conventional institutions. Fortunately there are quite a number of papers that have recently been published on this subject.

Empirical studies that compare Islamic financial institutions with their conventional counterparts may provide some hints on the context or comparability of IMFIs and conventional or mainstream MFIs. Among these studies include comparative expositions on banking by Ariss (2010), Bourkhis and Nabi (2013), Beck et al. (2013), Elnahass et al. (2013), and Johnes et al. (2013), as well as on other institutions such as capital markets by among others Ho et al. (2013) and Jawadi et al. (2014).

3.4 Islamic microfinance and impact on poverty

The role of microfinance in poverty alleviation is well documented, particularly in a context of rural development (Khandker, 2005), region or country case studies (Weiss and Montgomery, 2005, Nawaz, 2010, Al-Mamun et al., 2012), financial inclusion (Cull et al., 2013) and improvement in the income of poor household (Imai et al., 2010), although some of the conclusion have more recently been strongly contested (Duvendack and Palmer-Jones, 2012). One recent study examine this issue more broadly, using a significantly large dataset from 61 countries (Imai et al., 2012). The authors use cross section data from 48 countries in 2007, as well as panel data from 61 countries for 2003-2007 to examine the effect of microfinance outreach (measured in Gloss Loan Portfolio per capita) on poverty incidence of these countries. The study suggests that microfinance loan per capita or Gross Loan Portfolio (GLP) has indeed a significant negative relationship with poverty.

Microfinance may also be able to address an issue of financial inclusion in many developing countries. For instance, Johnston and Morduch (2008) analyse the prospect of financial access expansion to the poor in Indonesia using primary data on creditworthiness from 1,438 households in six provinces. The study concludes that a) unbanked does not mean unqualified to access banking services: about 40 percent of the poor were judged to be creditworthy, but only 10 percent had borrowed from MFI/bank; and b) although they were judged able to service loans reliably, most poor households desired small loans. The authors suggest that, given the cost structure and banking practices, MFIs would logically avoid lending to these households or else risk losing money for lending in such small amounts.

In a different context, D'Espallier et al. (2013) use cross-section analysis to examine how unsubsidized MFIs cope with their social mission. The study suggests that there are about 23 percent of global MFIs are currently being subsidized, and that the lack of subsidies has worsened the social impact or performance of many MFIs. This study is further supported by an experiment conducted by de Mel et al. (2008) to measure the impact of external support to microfinance, which is verified again after several years (de Mel et al., 2012). The authors did not measure subsidy the MFIs, instead they generate shocks to capital stock of 400 microenterprises in Sri Lanka. The study finds that the average real return to capital of the enterprises is indeed higher than the market rates charged by MFI loans and the role of entrepreneurial ability and wealth are verified by the study. These studies suggest that MFIs and microenterprises are still dependent on external supports to be sustainable.

The contribution of Islamic microfinance sector in reducing incidence of poverty is an important prospect to study. According to a CGAP study, there are more than 600 million of Muslims who live with less than $2 a day, of whom nearly half would not accept financing support or loan from interest based institutions (El-Zoghbi and Tarazi, 2013). This is certainly an important number to consider, and a significant incentive to create IMFIs.

Although there are some studies that assigned the role of poverty alleviation to the more developed Islamic banks, such as an important report by Dhumale and Sapcanin (1999) in the Middle East and North Africa, the different needs of micro-entrepreneurs and the poor make it harder for Islamic banks to serve this segment. The creation of specialised IMFIs is seen as a necessity, and there are evidences that linked these MFIs with poverty alleviation (Kaleem and Ahmed, 2010, Rahman, 2010a). At the current stage where IMFIs constitute only a fraction of the microfinance movement, attribution to poverty reduction is

still questionable. However, the IMFIs have the potential to contribute poverty alleviation in many Muslim countries, as the scale of the industry increases over time (Rahman, 2010a).

At country level the role of Islamic microfinance programme of institution is gradually being acknowledged, especially in countries where microfinance is near maturity such as Bangladesh (Rahman, 2010b, Rahman and Ahmad, 2010) or Indonesia, the largest Muslim country in term of population. In a recent survey to microenterprises in Indonesia, Riwajanti (2014) claims that IMFIs are able to improve sales and income level of their microenterprises clients, and at the same time contribute positively to employment creation in the area. However, the author finds that there are many improvements required from the IMFIs, especially in terms of outreach, customer education and product delivery innovation. In a case study on Malaysian based Islamic MFI Amanah Ikhtiar Malaysia (AIM), Ismail (2001) studies the social impact of the MFIs program in two States in Malaysia involving 100 respondents. She finds that AIM 'was not very successful in uplifting households out of poverty', based a study conducted in 1993. The study however concludes that there is an evidence of income improvement among the borrowers of AIM.

There are also studies that look at the nature of Islamic microfinance products *vis-à-vis* economic development. The islamicity of IMFIs or the strong adherence of the poor to their religion is certainly not a hindrance for them to engage with financial institutions or strive in poverty alleviation. In fact, according to Noland (2005) religion and in particular Islam 'does not appear to be a drag on (economic) growth', which at the same time disputes other studies on the subject matter such as Morris and Adelman (1980) and (Pryor, 2007). The role of IMFIs in reaching out the poorest segment and hence contributing to poverty alleviation efforts is also shared with MFIs that are based on other beliefs, such as Christianity (Mersland et al., 2013).

A more robust assessment on the impact of Islamic microfinance to poverty is urgently required. At the same time, Islamic microfinance sector should be developed further to create any meaningful impact. Where IMFIs constitute only a fraction of the microfinance sector or industry, any attribution to poverty reduction of a country or a community can still be debatable. What many observers have agreed is that the IMFIs have the potential to contribute to poverty alleviation in many Muslim countries, since the scale of Islamic finance sector would increase over time.

3.5 The global presence of Islamic microfinance

Islamic microfinance has enjoyed a relatively strong growth in the past ten years, along with the 'booming' of Islamic banking and finance. Unlike Islamic finance, which is driven mainly by such financial centres as Dubai, Kuala Lumpur and London, Islamic microfinance is emerged in developing countries (Karim et al., 2008). It flourishes in the developing economies of South Asia (Pakistan, Bangladesh), South East Asia (Indonesia, Malaysia) and Sub-Saharan Africa (Sudan). Among the front-runners are Islami Bank Bangladesh, Akhuwat in Pakistan, Amanah Ikhtiar Malaysia and Agricultural Bank of Sudan.

Today, IMFIs can be found in more than 15 countries, as in Table 3, across Asia (Afghanistan, Indonesia, Bangladesh, Pakistan, and Malaysia), Middle East and North Africa (Bahrain, Egypt, Iraq, Jordan, Lebanon, Palestine/West Bank, Sudan, and Yemen), Central Asia (Kazakhstan, Kyrgyzstan) and Eastern Europe (Bosnia Herzegovina, Kosovo). The number of countries is certainly under-represented, as new and more IMFIs are emerging rapidly in regions such as East and West Africa. The table below provides a partial list of IMFIs, and few of them are not yet in the MIX database e.g. Family Bank of Bahrain, BPRS Harta Insan Karimah of Indonesia, and Prva Islamska Mikrokreditna of Bosnia. Hence, they are not included in the dataset of this study.

Table 3 Selective lists of IMFIs

No.	Country/IMFIs	Legal Status	Gross Loan Portfolio (US$)	Number of active clients
1	**Afghanistan**			
	Islamic Investment and Finance Cooperatives	Cooperative	20,424,136	22,711
	Mutahid DFI	NBFI	888,609.9	3,194
	FINCA – Afghanistan	Village bank	14,825,274	29,047
2	**Bahrain**			
	Family Bank***	Bank	3,553,286	572
3	**Bangladesh**			
	Muslim Aid	NGO	6,462,103	39,528
	Islami Bank Bangladesh – Rural Development Scheme***	Bank	267,053,105	569,820
4	**Bosnia Herzegovina**			
	Prva Islamska Mikrokreditna***	NGO	940,208	1,321
5	**Egypt**			
	Bab Rizq Jameel**	NGO	1,943,510	8,577
6	**Indonesia**			
	MBK Ventura	NBFI	58,125,357	492,991
	BPRS Harta Insan Karimah***	Rural Bank	26,832	-
	BMT Ventura (137 BMTs)***	Cooperative	4,734,410	14,316
7	**Iraq**			
	Al-Takadum**	NGO	12,010,759	12,023
	Al-Thiqa**	NGO	33,972,397	15,572
8	**Jordan**			
	FINCA - Jordan	Village Bank	7,599,086	15,416
9	**Kosovo**			
	START Microfinance	NBFI	2,733,593	3,000
10	**Lebanon**			
	Al-Majmoua**	NGO	30,773,890	36,726
11	**Malaysia**			
	Amanah Ikhtiar Malaysia***	NGO	383,101,081	241,965
12	**Pakistan**			
	Akhuwat	NGO	24,986,066	235,517
	Wasil	NGO	1,087,899	4,537
13	**Sudan**			
	Family Bank	Bank	63,056,518	58,909
	Pased	Bank	1,291,425	6,006
14	**Syria**			
	Jabal al-Hoss**	NGO	1,118,960	1,128
15	**Yemen**			
	Al Amal Microfinance Bank	Bank	63,056,518	58,909

Source: Author's estimate from various sources, including latest MIX Market Database (www.mixmarket.org), Sanabel Network (www.sanabelnetwork.org)** and individual MFIs annual reports***.

3.6 Conclusion

Studies on microfinance have evolved through the decades, both in conceptual framework and empirical studies. The growing body of knowledge in microfinance is expanded also due to the rapid development of microfinance sector, indicated by the increasing number of microfinance institutions in the past three decades. While the pioneers like Grameen Bank, BancoSol and Bank Rakyat Indonesia remain prominent players in their respective markets, the number of players competing in the microfinance markets has certainly increased significantly. This is evident from the studies highlighted in this chapter, as well as the number of MFIs recorded in microfinance database such as MIX Market.

The same can be said about Islamic microfinance, although to a lesser degree of size and magnitude. As indicated in the 2013 CGAP report cited earlier, Islamic microfinance is an important sub-sector in the overall microfinance movement globally. Among the key reasons is the economic condition of many Muslim countries, where nearly half of the 1.6 billion Muslims live in poverty. There is certainly a growth potential for IMFIs in these countries, as 40 percent of Muslims worldwide that are surveyed by CGAP in 2008 and 2009 have a preference to Islamic mode of financing.

There is a shortage of studies in literature that examine the feasibility and reliability of Islamic microfinance models. The existing literature on the subject is largely conceptual and normative, which provides little information on the current status of IMFIs and even much less evidence on the performance of these institutions. This gap provides an exciting opportunity for many researchers to examine more closely the important and highly debated aspects of IMFIs, such as mission drift issues, trade-off between financial performance and social impact or profit vs. outreach, impact of rising competition from commercial banks, commercialization or even impact assessment.

Going forward, the challenges facing Islamic microfinance sector and its many institutions are coming from various directions. They may include intensifying competition from commercial Islamic banks and conventional banks or MFIs, tightening of regulatory framework governing MFIs in many jurisdictions, securing sustainable funding as many donor funds or government subsidies are evaporating, as well as balancing a prevalent trade-off between poverty outreach and financial sustainability.

Competition is probably the main theme for many providers of Islamic microfinance, in addition to funding sustainability and balancing between the bottom lines or choosing the right lending models that are available. The challenging situation can be

best explained by the state of competition in the sector, whereby up to five key providers can control between 70-80 percent of the market share. In Indonesia for instance, the microfinance sector literally belongs to the big players such Bank Rakyat Indonesia, Bank Mandiri, BTPN and few other commercial banks. The same is true with the dominance of BRAC, ASA and Grameen Bank in Bangladesh; and in a larger scale, multinational groups such as BRAC, FINCA or Accion operate locally in many countries with established lending model and products, as well as access to funding from international markets.

In response to such competition, Islamic microfinance may be forced to embrace commercial path and in turn put aside its mission of poverty alleviation. This will eventually put Islamic microfinance into the same situation currently facing conventional microfinance institutions, which is prone to mission drift, commercialization and in few instances issues related to high indebtedness of their borrowers. What will be interesting for researchers are how will Islamic microfinance institutions deal with these challenges, would they react in the same manner as their conventional counterparts, or come up with different and more effective responses to competition.

The succeeding chapters will attempt to provide insights into some of these issues dealt by Islamic microfinance sector. Of particular interests are issues pertaining to the relative performance of IMFIs vis-à-vis conventional microfinance, risks emanating from commercialization and product design of Islamic microfinance, trade-offs between institutional sustainability and poverty outreach in the Islamic microfinance sector, as well as occurrence of mission drift.

Chapter 4. Performance of Islamic microfinance institutions: Is there any difference with conventional MFIs?

4.1 Introduction

The main promise of microfinance is its ability to reach poor segment of the society and help micro entrepreneurs with an access to capital. The absence of financing mechanism to target this market allows the innovation of microcredit in early 1970s to flourish (Morduch, 1999). Despite high interest rates and conditionality, the poor and micro entrepreneurs are content with the loan they receive from these new institutions. The main reasons for such appeal are immediate access, speed of approval, non-collateral, and most importantly less cumbersome than commercial banks.

Likewise, microfinance institutions are happy with high repayment rates of their loans, healthy growth of customers and a prospect of becoming financially self-sufficient within few years (Balkenhol, 2007), in addition to performing a mission of poverty alleviation. While it sounds noble, the role of microfinance institutions (MFIs) in poverty reduction program cannot be underestimated. In fact, it seems natural for the MFIs to operate within two interwoven objectives (twin goals; double bottom line) of poverty outreach and financial sustainability (Yaron, 1994), which according to (Balkenhol, 2007), placing MFIs somewhere between 'welfare scheme and commercial banking'.

Indeed, microfinance must serve social welfare objectives and at the same time operate as a commercial entity. The high interest rate that MFIs charge is an acceptable fact, given their high operating cost and the high-risk nature of micro lending. The high yield has also enticed commercial banks and fund managers to develop customized products, either directly targeting the poor and microenterprises or indirectly through capital investments in the microfinance institutions (Galema et al., 2011). The dependence of many MFIs to commercial funding is not without a valid reason. As many aid agencies and government programmes become more selective, the increasing availability of commercial funds attract the MFIs, as they are also facing increasing demand from borrowers and requirement by regulation to manage their already high risk. This dilemma makes commercialization of microfinance almost unstoppable (Armendariz and Labie, 2011a).

Commercialization has several consequences. The more optimistic view suggests that commercialization may improve self-sufficiency of the MFIs, which is essential in long-run sustainability and the ability of the MFIs to reach out to larger number of poor people (Hamada, 2010). On the other hand, a more pessimistic view considers commercialization as the reason for many MFIs to neglect its social objective of poverty alleviation and instead pursue profit above outreach, for instance as suggested by Hoque et al. (2011). These opposing views are often classified as 'institutionist' or 'financial systems' in the former versus 'welfarist' or 'poverty' approach, for the latter (Conning, 1999).

Against this backdrop, Islamic microfinance is quietly evolving from an experiment into a niche industry in some Muslim countries, especially Indonesia, Bangladesh, Sudan, Lebanon, Pakistan and Yemen. According a recent survey by Consultative Group to Assist the Poor (CGAP), there are at least 255 Islamic microfinance institutions (IMFIs) in the Muslim world today serving more than 1.28 million clients (El-Zoghbi and Tarazi, 2013). Microfinance has always been an important component in the development of Islamic finance, defined as a financial system that adheres to Islamic principles i.e. avoidance of interest or usury (El-Gamal, 2003).

Unlike its conventional counterpart, Islamic microfinance is relatively under-researched and underdeveloped. Despite its potential, the outreach of Islamic microfinance accounts for just 1-2 per cent of the total microfinance loans in Indonesia and Bangladesh (El-Zoghbi and Tarazi, 2013). Taking Indonesia as a case study, Seibel (2008) finds that IMFIs have yet to prove themselves as efficient and dynamic providers of microfinance services; while other studies on Indonesia have found that conventional MFIs in Indonesia is considered as one of the world's leading examples, especially Bank Rakyat Indonesia (Robinson, 2002, Patten et al., 2001).

With its relatively early stage of development, Islamic microfinance faces some pressing challenges, especially the failure of supervision and intensifying competition (Seibel, 2008). The competition does not only come from conventional MFIs, but also commercial banks that provide almost 90 per cent of microloans in Indonesia (Dar, 2012). This development may also influence IMFIs, similar to what has happened in the conventional sector, and hence commercialization is anticipated.

This chapter aims to shed some lights on the issue of commercialization that may affect Islamic microfinance sector by looking specifically on the financial performance and poverty outreach of IMFIs *vis-à-vis* conventional MFIs. The effect of commercialization

will not be covered in this chapter, although it is tempting to jump straight into the debates between 'institutionist' and 'welfarist'. This particular topic will be discussed in details in other chapter of this thesis. The current chapter is part of a three-paper thesis that examines the impact of commercialization on the aspects of performance, risk factors affecting IMFIs, and finally mission-drift issues resulting from commercialization, which is related to 'institutionist' versus 'welfarist debates mentioned earlier.

Performance of IMFIs is generally assessed by their ability to reach the poor and at the same time keep their financial condition profitable and sustainable. This is often referred to as double bottom line or dual objectives, i.e. high number of poverty outreach and healthy financial profit. This chapter deals with mainly the second part of the objectives, which is profitability and sustainability of IMFIs. While it is evident from the existing literature that there is trade-off between poverty outreach and financial sustainability, this chapter will only cover financial performance, the social or poverty dimension will be discussed in the third empirical chapter of this thesis.

This chapter will proceed as follows. The following section will discuss performance issues in microfinance literature, especially the dual measures of financial performance versus poverty outreach performance, followed by definition and differences of Islamic microfinance with conventional one. The succeeding sections will then deal with data, analysis and discuss results before a conclusion.

4.2 Literature review

4.2.1 Islamic microfinance

The earlier attempt to define Islamic microfinance is by Khan (1994), in the context of rural development and Islamic banking, followed by Ahmed (2002) who elaborates on the experiments of some Islamic microfinance institutions in Bangladesh. In a wider context, Rahman (2007) and Dusuki (2008) point out that microfinance is an important, but hitherto missing, component in the development of Islamic finance and poverty alleviation. Likewise, Smolo and Ismail (2011) explain the contractual framework of Islamic microfinance and its role in providing financing to micro-enterprises, while El-Komi and Croson (2013) use experimental economics to test and confirm the feasibility of Islamic financing in a microfinance setting.

While microfinance is defined as efforts to collect savings and provide small loans or other financial services to the poor (Armendariz and Morduch, 2005), Islamic microfinance is similar to an extent, with the absence of interest as its most salient feature.

Another difference is that Islamic microfinance uses variety of financing modes, i.e. equity, leasing and forward sale (Rahman, 2007). Ahmed (2002) differentiates Islamic microfinance by its ability to mobilize funds from compulsory donations such as zakat, mostly used as soft loans or safety nets in default.

The emergence of Islamic microfinance is strongly linked with the development of Islamic banking. The association between Islamic banking and Islamic microfinance can be traced back to the history of Islamic bank. It is argued that the first Islamic bank was Mit Ghamr Savings Bank founded in 1963, which was a rural savings bank mainly serving farmers and small traders in Nile delta of Egypt (El-Komi and Croson, 2013). Despite this historical connection, microfinance has been missing in the development of Islamic finance across the Muslim world (Dusuki, 2008). While these studies propose to expand the reach of Islamic banking to micro entrepreneurs, the interest from Islamic finance industry at large has been discouraging, at least until several years ago.

Islamic microfinance uses variety of contractual arrangements that are permitted in Islamic laws, like any other Islamic financial institutions (Smolo and Ismail, 2011). There are at least three types of contracts available in Islamic microfinance, namely equity based or micro-equity, trade finance-based or micro-credit, and charity based. Of these modes or contractual arrangements, the partnership contract of *musharakah* is seen as the most suitable for microfinance institutions. In *musharakah*, both IMFI and its borrower are partners in a business venture, where sharing of equity (one can contribute goodwill, cash or other form of assets) or profit/loss is agreed upon at the beginning of contract. This form of contract provides adequate commercial incentive for MFIs and banks (Akhtar, 1997), while at the same time protects the borrowers from inflation pressure on their assets or investment (Abdalla, 1999), and it could also provide a basis for sustainable form of financing (Harper, 1994). However, in practice, most of the IMFIs predominantly use benevolent loan (*qard hasan*) and deferred sale (*murabahah*), as suggested by Ahmed (2002). The main reason is simplicity in the pricing or cost of these contracts compared to other schemes, i.e. profit margin versus profit loss sharing rate.

In recent years, there are few attempts that explore the application and applicability of Islamic financing schemes to microfinance. Two prominent examples are housing finance using Islamic cooperative targeted for the poor by Ebrahim (2009) and an experiment on the repayment behaviour of Islamic microfinance borrowers as tested by El-Komi and Croson (2013). The latter use experimental economics to confirm the feasibility of Islamic microfinance in the context of information asymmetry and verification. Both studies suggest that Islamic micro-financial services are robust and in certain cases more

efficient than other types of financial services targeting the poor. In the case of El-Komi and Croson (2013), the experiment results show that borrowers using profit sharing and joint-venture schemes, both represent *mudarabah* and *musharakah* contracts respectively, are more likely to comply with their terms of loans than those under interest based loan arrangement, for all enforcement and verification conditions over the loan cycle. It is suggested that Islamic microfinance is more efficient where information asymmetry assumption holds.

In contrast, Smolo and Ismail (2011) propose an insight into the theoretical foundation of Islamic microfinance based on two economic models, namely financial intermediation and production function following Ramsey-Solow growth theory. In the former the authors are looking at the financial contracts of the IMFIs, namely the use of equity based financing, trade or mark-up financing, and charitable schemes in microfinance, while in the later the authors use an adaptation of Solow-Ramsey model on the role of capital (Islamic mode capital) to the production process of microenterprises. In both analyses, the authors find that Islamic microfinance would be able to resort to more sources of funding than their conventional counterparts, as well as use more variety of products to suit different type of clients.

The contribution of Islamic microfinance movement in reducing incidence of poverty is an important prospect to study. According to a CGAP report, there are more than 600 million of Muslims who live with less than $2 a day, of whom nearly half would not accept financing support or loan from interest based institutions (El-Zoghbi and Tarazi, 2013). This is certainly an important number to consider, and a significant incentive to create IMFIs. Although there are some studies that assigned the role of poverty alleviation to the more developed Islamic banks, such as an important report by Dhumale and Sapcanin (1999), the different needs of micro-entrepreneurs and the poor make it harder for Islamic banks to serve this segment. The creation of specialised IMFIs is seen as a necessity, and there are evidences that linked these MFIs with poverty alleviation (Rahman, 2010a).

Among the empirical studies, they are case studies of individual MFIs such as Islami Bank Bangladesh's Rural Development Scheme (Rahman and Ahmad, 2010), Sudan's Agricultural Bank, which successfully increased formal credit supply to the agriculture sector through profit sharing financing scheme (Elhiraika, 1996), and Akhuwat group lending model in Pakistan (Harper, 2012). These studies advocate the applicability of Islamic microfinance in the context of rural financing for microenterprises and

agriculture sector. This is in line with the experiment of Mit Ghamr in Egypt, which can be considered as the first IMFI (Dusuki, 2008).

In general, existing literature on Islamic microfinance is sparse and sporadic, unlike the literature on Islamic finance that has flourished and expanded in the past decade. For that reason, this paper also surveys some empirical studies on Islamic finance as a starting point to examine the performance of Islamic microfinancial scheme. One such study is by (Beck et al., 2013), who examine the responses of Islamic and conventional banks to recent financial crisis. The study finds that there are significant differences in business orientation of Islamic and conventional banks, in which the former are less cost-effective, compared to the later; however, Islamic banks tend to have higher intermediation ratio, higher asset quality and better capitalized as a result.

4.2.2 Financial sustainability of microfinance institutions

Microfinance is slowly evolving into a full-fledge micro-financial sector. In the past two decades, the focus of microfinance institutions has shifted from providing only credit to microenterprises to offering diverse financial products to serve the growing needs of the poor, such as savings and insurance (Matin et al., 2002). This has accelerated the development of microfinance sector, assisted by the expansion of the scope of financial sector and emergence of new researches in a wider academic community. It stems from a promise that microfinance could play an important role in poverty reduction programmes in many developing countries. In addition, microfinance is increasingly mandated to also achieve an intermediary objective of financial inclusion (Ledgerwood et al., 2012, p.1).

This development provides an impetus for healthy growth of microfinance literature. In addition to increasing popularity and alleged success of many microfinance institutions, the availability of data in recent decades has been the main reason for this surge (Brau and Woller, 2004). This is evident from recent studies that take stock of what have been researched in microfinance in the last two or three decades, by among others, Armendariz and Labie (2011b), Banerjee et al. (2013a) and Cull et al. (2013).

One important area of microfinance research is its impact on poverty or well being of the poor. A large number of studies claim that microfinance or microcredit to the poor However, Banerjee et al. (2015) find that there is no effect of microcredit to the well-being of the poor, especially in terms of health, education or women's empowerment. Trade-off between sustainability and poverty outreach is another important and one of the most widely discussed aspects of the microfinance studies. The debate is triggered among others

by potential implications these studies could have on policy and structural design of microfinance programmes. If the trade-off is indeed established and valid, microfinance stakeholders must choose one that is most suitable for their circumstances. If the main objective is reaching out as many poor people as possible, then they must sacrifice or bear with potential lack of profitability or sustainability, and vice versa.

One of the reasons for trade-off is the differences in views many stakeholders have in developing their respective microfinance model, which could be classified as 'institutionist' or 'welfarist' (Morduch, 2000, Brau and Woller, 2004). Although this classification of perspective is not a clear demarcation line, it reveals a fundamental difference of approach in the way stakeholders engage with microfinance sector. Institutionist approach is to pursue sustainability in order for the MFIs to reach and serve more poor clients over a longer period of time, while welfarist approach is to focus on targeted outreach of the poor even at the cost of higher subsidy and lower profitability (Conning, 1999).

There are three positions emerged from trade-off debates in the literature, first is the one that refute trade-off between outreach and sustainability; the next one asserts the prevalence of trade-off, and finally the view that advocates the importance of balance between outreach and financial sustainability. The first group of studies suggest that focus on outreach would not reduce profitability or sustainability of microfinance institutions. These studies find little or no evidence of trade-off between financial sustainability and poverty outreach, either in single country context (Piot-Lepetit and Nzongang, 2014) or cross country analysis (Kar, 2011). In fact, Quayes (2012) finds a positive and complementary relationship between outreach and financial sustainability.

The second group finds that there is a trade-off between outreach and performance, which include studies at country specific or cross-countries (Cull et al., 2007). Similarly, there are studies that find a negative relationship between outreach and other performance indicators or proxy to sustainability, such as efficiency (Hermes et al., 2011, Abate et al., 2014). In this category, there are also studies that vaguely admit the presence of trade-off or find limited trade-off between outreach and sustainability, for example by Cull et al. (2009) as well as Mersland and Strøm (2008).

Finally, there is also growing number of recent studies that have tried to bridge the trade-off gap and provide a different perspective on the debates. They assert that MFIs can still maximize its outreach targets while maintaining a decent rate of profitability. This can be achieved in certain circumstances, such as where financial sector in the country is

underdeveloped or prevalent of subsidy. Vanroose and D'Espallier (2013), for instance suggest that MFIs could reach more poor clients and remain profitable if they operate in the market where (commercial) banking sector development is low. This view is supported by Assefa et al. (2013) who finds that when competition is high, it may reduce poverty outreach and repayment performance of MFIs. Similarly, Conning (1999) suggests that MFIs can still target poor clients and remain profitable without reliance on external funding or leverage by carefully mitigating contract design problem and high monitoring cost.

An extension to trade-off analysis is mission drift literature, which looks at how MFIs are deviating from its original objective of poverty alleviation. As in the trade-off debates, the existing literature offers no definite conclusion on mission drift. One part of the literature suggest quite strongly that mission drift does occur, for instance as alluded by Copestake (2007), Hamada (2010), and Serrano-Cinca and Gutiérrez-Nieto (2013). According to these studies, mission drift may occur as a result of commercialization (Hamada, 2010) or high operational cost to serve the poor (Serrano-Cinca and Gutiérrez-Nieto, 2013).

4.3 Hypothesis development

This chapter seeks to address the first research question of the thesis as outlined in the introductory chapter, i.e. whether there is any significant difference between the performance of IMFIs and conventional microfinance institutions, especially in terms of financial performance and poverty outreach. The research adopts the notion that microfinance serves dual purposes or double bottom line of profit and poverty outreach. Given some significant differences between Islamic and conventional microfinance, it is suggested that there will also have a difference in their bottom line figure.

This research compliments existing studies, which unfortunately still very few, on the empirical analysis of the performance of IMFIs across different markets and regions. This study benefits from the most recent dataset produced by MIX Market, which is the same source of database used by main microfinance studies in the literature. The use of large dataset may assist in the analysis and hopefully produce credible results.

The current chapter also aim to test hypotheses that emerge from exploring the research question in more details, and more specifically to addressing the following questions.

4.3.1 Are IMFIs more profitable than conventional MFIs?

Profitability is an important and desirable outcome for a financial institution, including IMFI. Profit is both an intermediate target to sustain the operations and as primary motive for some of the MFIs. Both Islamic and conventional MFIs have a comparable combination of the MFIs with either profit oriented or non-profit oriented. The dataset suggests that there is more non-profit status than for-profit among IMFIs, a ratio of 65% non-profit versus 35% in the form of for-profit. In contrast, non-profit status is 59% for conventional MFIs while those with for-profit status are 41%.

However, profit orientation does not guarantee better financial performance or higher profit, as suggested by Roberts (2013) who finds that a stronger profit motive only lead to higher interest rates. In fact, profitability of MFIs in general are influenced by both higher interest rates and manageable capital cost (Cull et al., 2007). Size or scale of operation is also relevant to microfinance (Kar, 2013a).

In the case of Islamic financial institutions (IFIs), although profit is recognized, majority of them including IMFIs are religiously and socially driven, hence a strong preference to socio-economic objectives such as poverty alleviation or social welfare. Likewise, cost factors are particularly high and restrain financial performance of many Islamic banks and other IFIs, especially their efficiency and stability (Beck et al., 2013). In addition, many IMFIs are not economically viable due to high administrative cost and shortage of funds (Ahmed, 2004).

The size of Islamic microfinance sector or industry is significantly smaller than conventional microfinance sector, although arguably both emerged at about the same period in the early 1970s. Individually, average size of IMFI is also relatively smaller than an average conventional MFI. Many IMFIs have not reached their economies of scale level, and many are relying heavily on subsidies and grants from government or donor agencies for funding and operations. This dependency on subsidy may affect the performance of IMFIs as they are competing in the markets where conventional MFIs are much larger and possibly more efficient.

IMFIs also engage with customers who are mostly poorer than the average customers of conventional MFIs, and often these customers live in the areas or regions that are prone to natural disasters and (not unlikely, also prolong armed) conflicts. In addition, IMFIs operating in difficult regions must employ field officers who are not only capable to mitigate hostile working environment, but also equipped with sufficient understanding of Islamic financial transactions. Unfortunately, this type of workforce is not easy, nor cheap,

to find. In the end, IMFIs must operate at a much higher overall cost than their conventional counterparts or other competition.

Therefore, the first hypothesis is as follows:

$H1_0$: The is no difference in the profitability of Islamic and Conventional MFIs

$H1_A$: IMFIs are less profitable than Conventional MFIs.

4.3.2 How sustainable are IMFIs compared to conventional MFIs?

As suggested by Islamic finance literature, Islamic financial institutions are socially and religiously driven, which means they may have strong preference towards social objectives and less inclination to commercial gain. The formation of the first Islamic bank was motivated by the lack of shariah compliant financial services accessible to devout Muslim farmers in rural Egypt, hence the establishment of Mit Ghamr Bank in 1963 (El-Komi and Croson, 2013). The same motive to improve welfare of the Muslims and serve their needs for interest-free financial services was the main driving force behind the establishment of succeeding Islamic financial services, including Tabung Haji in Malaysia (1969), Islamic Development Bank (1974), and Dubai Islamic Bank (1975).

This close association with the well-being of their customers has also motivated the subsequent creation of IMFIs (Elhiraika, 1996, Harper, 1994). An inclination towards social objective should drive IMFIs to concentrate on poverty alleviation and aim to serve as many poor clients as possible. This is also supported by the nature of funding sources of IMFIs. According to Ahmed (2004), large numbers of IMFIs are funded by donors, government programs, and increasing Islamic charitable instruments such as obligatory alms giving *(zakat)*, and trust endowment finds *(waqf)*.

It is therefore appropriate to classify IMFIs into 'welfarist' type of microfinance, as oppose to 'institutionist'. Welfarist microfinance is characterized by an overall objective to alleviate poverty and improve the well being of the poorest segment in the community, hence propagates outreach as the primary goal of microfinance institutions. On the other hand, institutionist microfinance emphasizes the important of sustainability and long term operations of microfinance institutions with the aim to serve larger number of poor people for a much longer period (Morduch, 2000, Hermes et al., 2011).

The objective of many IMFIs is to serve the poorest among Muslim communities and gradually improve their sustainability (Ahmed, 2002). There is however a growing acceptance that a compromise between the two is possible, which is to say that MFIs could target the poorest community or focus on outreach but at the same time achieve financial

sustainability, at least conceptually (Morduch, 2005) or in limited country study of Islamic microfinance in Thailand (Tawat, 2014). Thus, IMFIs are going to pursue outreach *vis-à-vis* sustainability, at least they will maintain a relatively smaller loan size and target higher percentage of women borrowers but not in terms of numbers poor customers to be served.

IMFIs are relatively smaller in their scale of operations, having shorter history, and equipped with less capital than conventional microfinance sector, hence they may not be able to pursue both sustainability and outreach at the same time, unlike conventional MFIs. This condition suggests that IMFIs may have lower operational sustainability than conventional MFIs. However, what they lack in operational or financial strength, they could potentially make up with the intensity or depth of outreach i.e. by serving the poorest or the most marginalized segment of the customers.

Sustainability can be measured using ratios such as Financial and Operational Self Sufficiency (FSS and OSS) of the IMFIs. However, following Kar (2011), this paper will use only OSS as the main proxy to sustainability as it measures self-sufficiency of IMFIs in terms of operating revenue against operating expenses. The second hypothesis can be postulated as the following:

$H2_0$: The is no difference in the sustainability of Islamic and Conventional MFIs

$H2_A$: IMFIs are less sustainable than conventional MFIs.

4.3.3 Is the cost lower for IMFIs?

Cost has been identified as a key component in microfinance performance (Cull et al., 2009, Kar, 2011), especially transaction and monitoring costs of reaching out to the poor. Other important cost includes personnel, i.e. loan officers who will provide borrowers with advice and maintain their micro-accounts on a very regular basis. A proxy to all the costs mentioned earlier is cost per borrower (CPB), which encapsulates all expenses incurred to IMFIs in serving their borrowers. CPB is measured as a ratio between operating expenses to average number of active borrowers. CPB also accounts for cost management of the MFIs, as it measures the value of total inputs required to generate a given level of output or number of borrowers (Kar, 2011).

Both transaction cost and monitoring cost for IMFIs are relatively higher compared to conventional financial institutions. Monitoring cost is relatively higher due to the need to monitor and ensure compliance to financial regulation and, most importantly, shariah guidelines. This compliance is usually monitored and managed by an additional board structure or department within compliance unit, which is not available at conventional

financial institutions. In an Islamic banking study, Beck et al. (2013) find that Islamic banks are facing higher cost-income ratio than conventional banks. This higher cost leads to negative ROA for Islamic banks in all measures, except when a comparison is made during financial crisis 2008-2009. Having the same financing mechanism with Islamic banks, the higher cost phenomenon would also affect IMFIs.

Similarly, in a study on the transaction cost paid by rural households accessing financing in Iran, Hosseini et al. (2009) finds that transaction of Islamic financing is higher, with a ratio of transaction cost to total financing varies between 6 to 15 percent. This transaction cost covers charges related to administrative or paper work, guarantee or collateral, travelling, monitoring, and opportunity cost. As financial institutions in Iran are all Islamic entities, monitoring and other costs cover both costs that are common to all financial institutions or MFIs and those costs that are unique, such as shariah compliance. Shariah compliance not only entails extra personnel for IMFIs, but also requires additional training for their human resources that are not the case for conventional MFIs.

Therefore, the final hypothesis of this chapter is as follows.

H3$_0$: The is no difference between cost factors of Islamic and Conventional MFIs

H3$_A$: Cost factors of IMFIs are higher than conventional MFIs.

Finally, based on the findings after testing all the hypotheses, this chapter and more generally the overall study will contribute to a better understanding of Islamic microfinance sector *vis-à-vis* its conventional partners. In particular, this chapter will shed some lights on the differences between the two counterparts in their financial performance and potential contribution to financing or empowering the poor and microenterprises.

4.4 Research design

4.4.1 Data

The chapter uses secondary data from MIX Market (www.mixmarket.org), a non-profit organisation based in the United States. It is currently the most reliable provider of microfinance database and covers more than 2,400 MFIs globally, in which 38 of them are IMFIs. Although it has a growing number of IMFIs in its database, the current MIX dataset does not provide a fair representation of the Islamic microfinance industry. For example, it has only seven IMFIs from Indonesia, while in reality there are more than 3,000 IMFIs and cooperatives in Indonesia. The same goes to other countries like Pakistan and Bangladesh. The reason for lack of comprehensive coverage is not necessarily the fault of MIX market.

Most of the data and information are self-reported by the MFIs with some of them are reviewed and ranked by MIX Market before presented in an online database and its various publications. Therefore, only IMFIs or MFIs that see the benefit, i.e. exposure and access to international funding sources, will be submitting their information to MIX. Despite this limitation, MIX Market is the only reliable choice at present and a decent starting point for this research. Most of the recent and relevant studies in microfinance have used MIX Market as their main source for data of MFIs, including Cull et al. (2007), Hermes et al. (2011), Kar (2011) and Vanroose and D'Espallier (2013).

The data for both Islamic and conventional MFIs have been collected for all countries, and filtered to include only regions that have at least one IMFI in the region. The data is classified into types of MFIs, namely Islamic and conventional, which is not done by similar studies. The analysis will be conducted using IMFI *(MFItype – Islamic)* dummy variable as the main independent variable. The regressions will test this variable and other independent variables with three groups of dependent variables, profitability, self-sufficiency, and cost. With this method, it is hoped that the analysis will be comprehensive to infer the existence and differences of financial performance between IMFIs and conventional MFIs.

The dataset is unbalanced panel data that consists of performance data from 1,320 microfinance institutions from four regions, namely East Asia and Pacific, South Asia, Middle East and North Africa and Eastern Europe and Central Asia. From this sample, there are 38 MFIs that are found to offer Islamic microfinance products, mostly operating as full-fledged IMFIs and there are few of them offering Islamic microfinance as a window operation. The IMFIs represent about 2.88 percent of the total MFIs in the dataset, and in terms of data observations the IMFIs constitute only 3.48 percent as shown in Table 4, or 266 out of 7,653 observations. This is slightly higher than what is reported in a recent literature that suggest the market share of Islamic microfinance in between 1-2 percent in Muslim countries (El-Zoghbi and Tarazi, 2013).

Table 4 Regional distributions of MFIs

Region	MFI Type		Total
	Conventional	Islamic	
East Asia and the Pacific	1,888	32	1,920
Eastern Europe and Central Asia	2,832	13	2,845
Middle East and North Africa	484	151	635
South Asia	2,449	70	2,519
Total	**7,653**	**266**	**7,919**

Source: MIX Market

The MFIs disperse quite evenly across different regions in the world, with notable exception of MENA. Although it only represents 8 percent of overall MFIs in the dataset the number of IMFIs in MENA region is nearly 60 percent. This fact might be crucial in the analysis as the region is predominantly Muslim, which could be an incentive for IMFIs to flourish. Two regions that have no IMFIs have been removed from the sample, namely Africa and Latin America and the Caribbean (LAC). As Table 4 suggests, IMFIs are located mostly in the MENA region, with South Asia and East Asia and the Pacific follow far behind. IMFIs in the dataset consist of 38 MFIs originated from 14 countries, as summarized in the appendix.

However, as with other studies i.e. El-Zoghbi and Tarazi (2013), the dataset has an obvious limitation as the coverage of IMFIs is very limited and does not represent the reality. For countries like Indonesia, Bangladesh and Pakistan, where the number of IMFIs are rapidly growing, only very few are listed in the current MIX Market database. This is due to the nature of MIX database that is self-reporting. MFIs that submit data to MIX usually to comply with funding requirement or as part of global organizations that set higher disclosure and exposure standards. While majority of IMFIs in Muslim countries are independent IMFIs and owned by small religious or non-governmental organizations, hence they have little incentive to voluntarily submit financial and outreach data to MIX or other similar international organizations.

4.4.2 Summary Statistics

The summary statistics of all variables measured in the research is presented in Table 5. The table summarises the mean and basic statistics of all relevant variables for the estimation models. The first striking difference is positive return on assets for conventional MFIs and negative return on assets for Islamic ones. It may suggest that IMFIs are operating at significantly disadvantage position *vis-à-vis* conventional MFIs, however we shall confirm this status with the regressions. Likewise, the variation in return on equity (ROE) is even much higher, with the average ROE is also slightly higher than average ROA

The second noticeable difference is with average loan balance/size, in both nominal term and ratio to income per capita. The average loan size per borrower of conventional MFIs is more than USD4200, or more than four times that of IMFIs at just above USD900, while the Average Loan Balance per Borrower to GNI/Capita is nearly three times that of IMFIs. The main contributor to this important different is the size of conventional MFIs in

the dataset, which include some of the largest MFIs in the world including Bank Rakyat Indonesia and Grameen Bank.

Table 5 Summary of statistics for Conventional and IMFIs

Variable	IMFIs			Conventional MFIs		
	Obs.	Mean	Std. Dev.	Obs.	Mean	Std. Dev.
MFI type – Islamic	266	1	0	7653	0	0
MFI type – conventional	266	0	0	7653	1	0
Return on assets	207	**-0.03**	0.17	5764	**0.01**	0.16
Return on equity	206	**-0.04**	1.51	5728	**0.39**	14.27
Operational self sufficiency	239	1.25	0.44	6399	1.15	0.88
Cost per borrower	196	**184.95**	254.89	5297	**226.70**	687.78
Log cost per borrower	196	4.60	1.18	5266	4.22	1.52
Number of active borrowers	246	**45,379.94**	116781.40	6974	**90,255.39**	504556.00
Log number of active borrower	246	8.92	1.88	6948	8.71	2.30
Avg. loan balance per borrower	245	**911.23**	1117.73	6914	**4268.12**	145883.20
Avg. loan balance per borrower to GNI/Capita	242	**0.58**	0.78	6868	**1.58**	46.81
Percentage of female borrowers	191	0.56	0.23	5180	0.62	0.26
Yield on gross loan portfolio (real)	125	0.26	0.13	4293	0.24	0.16
Log borrowing	176	14.16	2.34	4798	14.57	2.28
Log deposits	201	**4.40**	8.05	5308	**6.48**	8.80
Portfolio at Risk > 30 days	209	**0.12**	0.40	5846	**0.06**	0.15
Portfolio at Risk > 90 days	159	0.05	0.05	4604	0.05	0.09
Write off ratio	186	0.01	0.05	5172	0.01	0.07
Age – new	258	0.25	0.43	7354	0.20	0.40
Age – young	258	0.29	0.45	7354	0.22	0.42
Age – mature	258	0.47	0.50	7354	0.57	0.49
Profit status orientation (non)	260	0.65	0.48	7212	0.59	0.49
Profit status orientation (for)	260	0.35	0.48	7212	0.41	0.49
Legal status – bank	263	0.16	0.37	7587	0.13	0.34
Legal status – Credit Union	263	0.06	0.25	7587	0.18	0.39
Legal status – Non Bank/NBFI	263	0.27	0.44	7587	0.29	0.46
Legal status – NGO	263	0.51	0.50	7587	0.34	0.47
Legal status – rural bank	263	0	0	7587	0.03	0.18
Legal status – other	263	0	0	7587	0.02	0.12
Region – East Asia & Pacific	266	0.12	0.33	7653	0.25	0.43
Region – East. Europe & C. Asia	266	0.05	0.22	7653	0.37	0.48
Region – Middle East & N. Africa	266	0.57	0.50	7653	0.06	0.24
Region – South Asia	266	0.26	0.44	7653	0.32	0.47

Notes: Summary Statistics table shows some notable differences between IMFIs and conventional or mainstream MFIs, especially with respect to profitability, outreach, cost, risk, and deposit. The most important differences are profitability and average loan size.

The other prominent difference is Number of Active Borrowers, which indicates the capacity and ability of conventional MFIs to serve poor customers. NAB for conventional is more than double of IMFIs. The huge gap may be due to the state of conventional MFIs that started much earlier than IMFIs, such as Grameen Bank and Bank Rakyat Indonesia who are pioneers in Bangladesh and Indonesia respectively. This

difference might impair the capacity of IMFIs to compete financially with much powerful conventional MFIs in the current situation.

Finally, the portfolio at risk past dues more than 30 days for IMFIs is significantly higher than conventional MFIs, or 12 percent versus 6 percent. In microfinance literature, any portfolio at risk higher than 10 percent is considered to be risky while any ratio lower or around 5 percent is regarded as healthy or reasonable. The higher portfolio at risk indicates that IMFIs have more borrowers who delay their loans instalments for more than a month, or in practice constitutes 4-5 weekly payment cycles.

The descriptive statistics table suggests that overall there are some differences between Islamic and conventional MFIs, although the differences are generally not too significant or fundamental. This preliminary data is consistent with the hypothesis of this study and the existing literature that compare Islamic financial institutions with conventional financial institutions, such as Beck et al. (2013) and Johnes et al. (2013).

4.4.3 Empirical model

The objective of this chapter is to measure financial performance of Islamic microfinance institutions *vis-à-vis* their conventional counterparts and find any evidence of differences in financial performance, i.e. profitability or sustainability. This research uses Pooled OLS regression to analyse financial performance of Islamic type of MFIs, which is the main dummy variable. This method is used for its suitability with the research enquiry, while alternative methods are also used to ensure the results are robust and reliable. Random Effects (RE) will also be used to test results. The model follows Kar (2011) and Cull et al. (2007) with slight modification, where these authors classify the analysis based on lending methodology of the MFIs, this research classifies the analysis based on the type of MFIs either conventional or Islamic. The MFI type is presented as an *MFIType_Islamic* or IMFI and *MFIType_Conventional* dummies and examined against sustainability indicators as well as outreach indicators.

The estimation methods used is as follows:

$$Y_{it} = \alpha + \beta_1 IMFI_{it} + \beta_2 Yield_{it} + \beta_3 Outreach_{it} + \beta_4 Cost_{it} + \beta_5 PortfolioQuality_{it} + X_{it} + \varepsilon_{it} \quad \ldots.(2)$$

Y is vector of dependent variables consist of indicators that measure profitability and sustainability of IMFIs as suggested by Armendariz and Morduch (2005) and following Kar (2011). The main objective of the regressions is to determine whether there is any difference between Islamic and conventional microfinance institutions, especially in

their financial performance. Variables on the right hand side are independent variables that consist of four main explanatory variables, a set of control variables, and error term. Details of these variables will be discussed as follows.

4.4.3.1 Dependent variables

Financial performance indicators measure profitability and self-sufficiency of the IMFIs. Indicators that measure profitability are Return on Assets (ROA) and Return on Equity (ROE), while Financial and Operational Self Sufficiency (FSS and OSS) are used to estimate self-sufficiency or sustainability of the IMFIs. This research focuses only on ROA and OSS as key indicators for profitability and sustainability, mainly because they are more appropriate to estimate financial performance of IMFIs, as also suggested by Anduanbessa (2009) and used by Kar (2011) in a similar study. Likewise, Cost per borrower (CPB) is included to account for cost management of the IMFIs, as it measures the value of total inputs required to generate a given level of output or number of borrowers (Kar, 2011).

ROA is a profitability measure that provides an indication whether IMFIs are making enough returns or not, given a certain size of total assets. OSS illustrates whether IMFIs are self-sufficient or not; 100% OSS indicates that the IMFIs are fully self-sufficient, and any figure below 100% demonstrates IMFIs' inability to produce enough revenues to support their operations. While ROA is ratio between net profits over total assets, OSS is a ratio of operating revenue to operating expenses. On the other hand, CPB is a ratio between operating expenses to average number of active borrowers and reveals how cost efficient the MFIs are in delivering loans to their borrowers. CPB indicates whether the cost involved in serving each client is reasonable or not.

4.4.3.2 Explanatory variables

Similar to Kar (2011) and Cull et al. (2007), the explanatory variables consist of yield or return indicator, outreach to the poor, cost, portfolio quality, and a set of control variables as well as an error term.

Return or yield is the most important contributor to profitability of financial institutions including MFIs, and at the same time represents interest charges or borrowing cost for the clients. Yield is measured in term of interest and fees received on loan portfolio, either nominal or the ratio between interest and fees and average gross loan portfolio, or real, which is nominal yield adjusted to inflation rate. For IMFIs, yield is in the form of profit margin or other *shariah* compliant pricing mechanism. This research

uses the real yield on gross loan portfolio or *YieldonGLP_Real*, following some establish literature such as Cull et al. (2007) and Kar (2011).

Outreach is a proxy to measuring poverty alleviation impact of microfinance intervention, although a more rigorous survey should be taken to assess any meaningful impact of microfinance to poverty. Outreach can be examined in two aspects, namely scale or breadth of outreach and depth of outreach. The former is measured mainly such indicators as Number of Active Borrower or Gross Loan Portfolio (GLP). Depth of outreach aspect measures whether microfinance is really targeting the poorest segment of the community, through indicators such as loan size to the gross national income per capita and percentage of female borrowers. These variables function as proxies to the borrowing pattern of the poorest or vulnerable, i.e. small size of loan and higher percentage of loans given to female borrowers. The smaller the loan size, the poorer the borrowers normally are, and *vice versa*. Likewise, the higher the percentage of women borrowers in the MFI's portfolio, the closer it is to the more marginalized segment of the community.

Cost indicators consist of variables that have been tested in relevant literature, especially Kar (2011), namely cost variables related to cost per borrower and funding activity i.e. deposits and borrowings. Cost per Borrower represents operational cost, while Deposit and Borrowings represent funding mobilization activity for the IMFIs. The costs of borrowing and deposits for IMFIs include charges imposed by the lenders and profit sharing to the depositors, respectively. These variables will indicate how much the cost of funds has incurred at IMFIs in serving micro loans.

Portfolio quality may also affect the performance of MFIs as has been suggested by Cull (2007) or Kar (2011). The most commonly used measure of portfolio quality is Portfolio at Risk, either for those loans that have been due for 30 days or 90 days, or PAR>30 days and PAR>90 days. The other indicator is Write Off Ratio. While PAR represents potential risk of default, write off ratio represents *ex-post* situation where the MFIs have recorded the loans as default. This research considers both *ex-ante* and *ex-post* situations.

The final group of independent variables and applicable to all models are control variables X_{it}. The control variables are Age, to control effects of age of the IMFIs to the models, next is the differences in legal status of IMFIs, differences in respective regions where IMFIs are located, and finally differences in profit orientation of the IMFIs (non-profit versus for-profit). These variables have been used in existing literature, especially Cull et al. (2007) and Kar (2011).

Finally, ε is error term, where individual effect assumption of $\varepsilon_{it} = 0$ is expected to hold. It is included to accommodate any other factors that may affect the model but unaccounted for.

4.5 Results and discussion

Sustainability is an important determinant in the performance of all MFIs, regardless of their type, governance, age and location. The absence of sustainability indicators, i.e. profitability, operational self-sufficiency, or cost efficiency, may result in the IMFIs having financial difficulty to cover their operational expenses or having less ability to create meaningful impact in poverty outreach. The lack of profitability and inappropriate cost management could further weaken the financial base of IMFIs to sustain their operations in the long run. The importance sustainability, and most importantly profit, has been emphasized by among others Conning (1999) and Quayes (2012). This regression examines three aspects of financial and sustainability measures for IMFIs, namely profitability or return on assets, operational self-sufficiency, and cost per borrower.

Summary of regression results is presented in Table 6.

Table 6 Regression results of IMFIs financial performance

Variables	Return on assets	Op. self sufficiency	Log cost per borrower
MFI type – Islamic	**-0.053****	**0.191*****	**0.360*****
	(0.024)	(0.056)	(0.120)
Yield on GLP – real	0.009	0.027	**-0.282****
	(0.015)	(0.105)	(0.115)
Log no. of active borrowers	**0.016*****	**-0.026****	**-0.424*****
	(0.003)	(0.013)	(0.025)
Average loan balance per borrower to GNI/capita	**0.004*****	-0.002	**0.091*****
	(0.001)	(0.005)	(0.024)
Percent. of female borrowers	-0.002	**-0.138****	-0.065
	(0.009)	(0.060)	(0.080)
Log total borrowings	**-0.011*****	**0.023****	**0.296*****
	(0.002)	(0.010)	(0.023)
Log total deposits	-0.0004	**-0.004*****	**0.017*****
	(0.000)	(0.002)	(0.003)
Portfolio at Risk > 30 days	-0.070	0.012	-0.005
	(0.056)	(0.051)	(0.076)
Write off ratio	-0.057	0.0340	**2.377*****
	(0.058)	(0.130)	(0.833)
Age – young	**0.0291****	0.0651	**-0.223*****
	(0.014)	(0.054)	(0.084)
Age – mature	**0.0321****	0.0396	**-0.178****
	(0.013)	(0.049)	(0.080)
Profit status – for	-0.005	-0.058	0.054
	(0.009)	(0.037)	(0.067)
Legal status – bank	0.090	0.010	**0.397***
	(0.055)	(0.148)	(0.218)
Legal status – NBFI	0.0819	0.133	**0.541****
	(0.054)	(0.145)	(0.210)
Legal status – rural bank	0.069	0.125	0.336
	(0.056)	(0.151)	(0.224)
Legal status – NGO	0.0701	-0.035	**0.605*****
	(0.051)	(0.150)	(0.210)
Legal status – credit union	0.060	-0.031	**0.493****
	(0.052)	(0.147)	(0.213)
Reg. – E. Asia & Pacific	**-0.032*****	**0.097****	**-0.840*****
	(0.008)	(0.048)	(0.074)
Reg. – M. East & N. Africa	-0.00297	0.024	**-0.582*****
	(0.009)	(0.042)	(0.092)
Region – South Asia	**-0.066*****	0.022	**-1.818*****
	(0.009)	(0.038)	(0.070)
Constant	-0.036	**1.114*****	**4.321*****
	(0.056)	(0.181)	(0.304)
N	1478	1490	1425
Adjusted R-squared	0.123	0.030	0.780

Standard errors in parentheses: * p<0.10, ** p<0.05, *** p<0.010

4.5.1 Profitability of IMFIs

The proxy to profitability is return on assets or ROA, as it exemplifies the ability of IMFIs to generate positive returns with the given total assets. The regression result in Table 6 shows that profitability of IMFIs is significantly lower than conventional MFIs, indicated by ROA of -5.3 percent. This result is predicted as the hypothesis suggests that IMFIs are less profitable than conventional MFIs, hence we reject the null hypothesis. Negative ROA could be explained by higher operational cost or lower revenue, given that operational expenses of typical IMFIs would be similar with any number of borrowers, while inadequate amount of financing or lack of quality loans in IMFIs portfolio could limit revenue generation. It also appears that outreach, borrowings, and age are significantly influential to the lower profitability of IMFIs.

The following indicators explain lower profitability of IMFIs. The first set of variables that is significant to the model is outreach indicators, namely number of active borrowers and average loan balance to GNI/capita. The significantly positive coefficients of number of active borrowers (Log NAB) and average loan balance to GNI/capita (Avg. Loan balance to GNI/capita) signify that profitability of an IMFI is determined strongly by higher or positive loan size and number of borrowers. An increase in Log NAB and Avg. Loan balance to GNI/capita by 1 percent will increase ROA by 1.6 percent and 0.4 percent, respectively. The result confirms a claim that serving larger number of borrowers and more specifically richer clients with larger loan size would contribute to profitability of IMFIs. As the profitability of IMFIs is lower, the results imply that IMFIs are currently serving less number if active borrowers and lower average loan size.

While NAB is a proxy to scale or size of poverty outreach, average loan balance to GNI/capita is an indicator to depth of outreach that measures whether IMFIs are serving the poorest segment or the richer among the poor. If the average loan balance is smaller than the conventional, then IMFIs are still favouring the poorest, while if the average loan balance is higher, it simply means they are side-lining poorer clients with richer or well to do borrowers who demand larger size of loans.

The second indicator that explains lower ROA is borrowing cost. Borrowing is significantly negative to return on assets, as expected. The result shows that an increase in Borrowing by 1 percent will reduce ROA by 1.1 percent. Funding cost and other related expenses in serving borrowers are the main cost components for microfinance institutions. In fact, higher cost of funds and higher transaction costs (Hosseini et al., 2009) have led IMFIs to having lower economies of scale and poor overall performance. The dependence

of IMFIs on personal visits to clients and a need for field offices near the borrowers are crucial for IMFIs success, although this activity is costly.

The other important factor is monitoring cost that requires each field officer to maintain and monitor loan performance of every client. The cost of monitoring or enforcing contracts is high relatively for IMFIs (Suzuki et al., 2013), which caused their operational cost to be higher than the competition. Another related cost component is cost of funds through mobilisation and maintenance of deposits. However, the result shows that deposit is negative and not significant to ROA. It suggests that increase in deposit would decrease profitability of IMFIs, which confirms deposits as costly source of funds.

In general, the results of profitability are similar to a conclusion made by Beck et al. (2013) who compare performance of Islamic with conventional banking. Beck et.al find that Islamic banks are facing higher cost-income ratio that leads to negative ROA in all instances, except when a comparison is made during financial crisis 2008-2009. However, this study disputes other studies on Islamic microfinance institutions that reported a positive performance of IMFIs, such as a study on country specific like Bangladesh (Ahmed, 2002).

4.5.2 Operational self-sufficiency

The second sustainability indicator shows that the operational self-sufficiency of IMFIs is significantly higher than conventional MFIs by 19.1 percent. Higher OSS indicates that despite a higher percentage of IMFIs being non-profit, they are self-sufficient and able to cover all of their operational expenses. Positive coefficient denotes that the ratio of operating revenue to operating expenses for IMFIs is more than 1, which suggests they are fully self-sufficient. Since IMFIs are not dependent on deposits or internal capital sources, this operational self-sufficiency may be driven by large contributed from their external donors or donation from charitable institutions. More detailed explanation as follows.

Higher self-sufficiency can be explained by significantly lower number of active borrowers, lower percentage of female borrowers, higher borrowing, and negative changes in deposits. However, this regression result does not clearly explain why IMFIs still enjoy high operational self-sufficiency, despite recorded lower or negative profitability as indicated by negative return on assets in the previous section. We will address this issue in later section.

The first significant determinant to OSS is Log Number of Active Borrowers (Log NAB). Number of active borrowers represents number of poor people that are currently receiving loans or financing from IMFIs, hence a proxy to poverty outreach. In addition, large number of active borrowers also represents outstanding loans and asset, which provides IMFIs with revenues. The result shows that the relationship between Log NAB and OSS is significantly negative, which implies that an increase in Log NAB by 1 percent will decrease OSS by 2.6 percent. In other words, if OSS is lower than 1 or negative, IMFIs will not be self-sufficient.

Likewise, percentage of female borrowers also has a significantly negative relationship with OSS. The result indicates that 1 percent increase the Percentage of Female borrowers (PFB) will decrease OSS by 13.8 percent. This relationship is not supported by the hypothesis. It is assumed that lower PFB lessens self-sufficiency of IMFIs, either through lower repayment rate or higher write offs. As suggested by D'Espallier et al. (2011), higher PFB is associated with improved repayment i.e. lower portfolio at risk, lower write offs, or higher repayment rate, and hence improved financial performance. Consequently, this result shows that OSS of IMFIs are not dependent on either scale of outreach (Log NAB) nor on depth of outreach (PFB).

Further, the other significant factors to OSS are borrowing and deposits. The regression reveals that borrowing is positively related to OSS by 2.3 percent, while deposits is significantly negative or lower by 0.4 percent. This different result suggests that OSS of IMFIs is mainly supported by borrowings, and less by deposits. As discussed in earlier section, deposits constitute a small part of funding mechanism for IMFIs, mainly due to regulatory restrictions to mobilize savings or deposits imposed on NGO based IMFIs, which is the majority. Hence, most of the IMFIs must resort to non-deposits for their funding.

Testing the sources of funding for these IMFIs, we find that large number of funds received by IMFIs is in the form of grants or soft loans from external donors or charity organization. Hence, the nature of this funding allows IMFIs some flexibility in their financing and enable them to maintain high operational sustainability, despite suffering a lost or operating at relatively lower or negative return on assets (ROA).

4.5.3 Cost per borrower regression

Finally, the regression result shows that cost per borrower for IMFIs is significantly positive by 36 percent. Cost has been identified as key component in microfinance

performance (Cull et al., 2009, Kar, 2011), especially transaction and monitoring costs of reaching out to the poor, providing them with advise, and maintaining their micro-accounts on a very regular basis. Monitoring cost is also inclusive, which represents the need to monitor and ensure compliance to financial regulation and Islamic principles. A proxy to these cost components is Cost per Borrower (CPB), or a ratio of operating expenses to average number of active borrowers. The result in Table 6 reveals that CPB is significantly positive, and this coefficient suggests that operational cost to serve one borrower at IMFIs is higher than the same service provided by conventional MFIs.

The first explanation to higher cost per borrower is Yield on Gross Loan Portfolio (GLP). Yield, nominal or inflation adjusted/real, represents profit (or in conventional context, it is interest) income or revenue to IMFIs from extending micro loans or financing to the poor. Hence, a significantly negative coefficient of yield on GLP implies that higher cost per borrower is due to significantly lower yield on loan portfolio of IMFIs. In other words, an increase in Yield by 1 percent will reduce Cost per Borrower by 28.2 percent. This result can be explored further, as follows.

Most of the Islamic microfinance products are moderately priced using mostly two type of contracts, namely cost plus mark-up (*murabahah*) by about 65.76 percent and 'benevolent loan' *(qard-hasan)* by 24.84 percent (El-Zoghbi and Tarazi, 2013). Although *murabahah* is a commercial contract where IMFIs typically finance the purchase of goods for the poor clients; cash disbursement is normally not allowed with murabahah, unless a special arrangement is made where IFI delegates the client to purchase goods on its behalf. As a rule, *murabahah* allows IMFIs to charge a substantial and agreed-upon mark-up on the sales of goods they finance to the poor. However, the mark-up or profit rate is usually modest and unlike the interest rate charged by most MFIs (conventional).

On contrary, *qard hasan* allows the clients to borrow and receive cash, and IMFIs are entitled to charge minimum and usually fixed administrative fees on every loan. However, as its name suggest, this type of loan will generate a very minimum income for the IMFIs and borrowers should be forgiven in the event of default. Hence, according to El-Zoghbi and Tarazi (2013), *qard hasan* loans are often dispersed as charity funded by charitable source of funds such as voluntary donation of the Muslims *(zakat)*.

Secondly, a higher Log CPB may also indicate a lower number of active borrowers of IMFIs as shown by negative Log NAB in Table 3. This result shows that is Number of Active Borrowers increases even by 1 percent, the Cost per borrower will reduce 42.4 percent. Hence, lower outreach may be related to a higher cost per borrower of IMFIs.

Lower NAB may be due to difficulty in recruitment of clients or due to more stringent procedure imposed on IMFIs by Islamic guidelines or principles. In addition, a relatively smaller size IMFIs prevents their outreach to larger number of borrowers or clients. Indeed, the significantly negative relationship between Log NAB and Log CPB indicates that higher number or borrowers will reduce cost burden of IMFIs.

However, depth of outreach or the ability to serve the poorest segment of the poor is working against the cost performance of IMFIs. Average loan size is positively related to CPB, which suggest that when IMFIs raises the Average loan size by 1 percent, or serving loans/financing to better-off poor, the cost will increase by 9.1 percent. This result is counter intuitive and inconsistent with the hypothesis. The increase in average loan size i.e. serving better off poor clients allows IMFIs to charge higher rate and lowers default risk, as well as to reduce cost or CPB (Quayes, 2015).

Further, both borrowing and deposits have a significantly positive relationship with cost per borrower. This relationship is consistent with the literature that suggests borrowing and deposits constitute expensive sources of funding for IMFIs. While higher deposits could improve long-run sustainability the IMFIs, they are still costly to mobilize in the short run with most IMFIs still operating in small scale and in remote areas. Likewise, borrowing cost is also burdensome for IMFIs, especially for non-profit or NGO based IMFIs that offer mainly benevolent loans or *qard hasan* to their clients.

Finally, portfolio quality is also an important determinant to cost structure of IMFIs. Although portfolio risk or Par>30 days is not significant to the Log CPB, write off ratio is significantly positive to cost or Log CPB. This relationship suggests that an in crease in Write off Ratio will push cost upwards by 237.7 percent, and the presence of higher write off ratio at IMFIs will affect overall efficiency of IMFIs, as expected.

4.6 Conclusion

This chapter has attempted to assess the performance of IMFIs against conventional microfinance institutions, using latest data from MIX Market. The chapter finds that there is a significantly negative relationship between IMFIs with profitability indicator (ROA), while significantly positive with other key indicators of sustainability (OSS) and cost structure (Log CPB). Negative ROA is due to higher operational cost or lower revenue of IMFIs, given inadequate number of clients or lack of quality loans in IMFIs portfolio. It also appears that lower outreach and high cost of borrowings are significantly critical to the lower profitability of IMFIs.

This result is not unexpected. Recent studies in Islamic banking literature suggest that Islamic financial institutions are suffering from lower returns. The results of profitability are similar to a conclusion made by Beck et al. (2013) who compare performance of Islamic with conventional banking. Beck et.al find that Islamic banks are facing higher cost-income ratio that leads to negative ROA in all instances, except when a comparison is made during financial crisis 2008-2009.

The dependence of IMFIs on personal visits to clients and a need for field offices near the borrowers are crucial for IMFIs success. The other important factor is monitoring cost that requires each field officer to maintain and monitor loan performance of every client. The cost of monitoring or enforcing contracts is relatively high for IMFIs (Suzuki et al., 2013), which caused their operational cost to be higher than the competition, and hence lower profit. In addition, an operational cost is the most important factor in determining effective interest rates for MFIs (Gutiérrez-Nieto et al., 2016), which in the case of IMFIs will be essential in setting profit margin. Consequently, higher pricing will reduce loan portfolio of IMFI as many borrowers will be discouraged with high margin or rates.

However, by its nature, IMFIs should be able to deliver socio-economic objectives of poverty alleviation and at the same time meet financial objectives of profitability and sustainability. It is evidence that IMFIs may have achieved the first objective i.e. sustainability, but not the second one i.e. profitability.

The results from this analysis have some limitation, mainly smaller number of IMFIs in the dataset (only 3 percent), which may have affected the quality, and strength of the analysis and this research. However, as the Islamic microfinance industry is steadily growing, and more data becomes available we would hopefully be able to revisit this analysis at a later stage and compare results. As for the current chapter, the results are consistent with existing literature and somewhat support the hypothesis that IMFIs are different from conventional MFIs, at least on one front i.e. profitability. This difference is mainly contributed by unique characteristics of Islamic microfinance products and cost implication that these products have on financial performance of IMFIs.

Institutional logic can also be used to explain the results produced by regressions in this chapter, as elaborated by Im and Sun (2015), Kent and Dacin (2013) and Battilana and Dorado (2010) in their studies on MFIs. Institutional logic dictates that at the beginning of its operation, MFIs will be adopting development or welfare logic, which is primarily the attainment of poverty alleviation objectives. However, as the institutions started to deal with financial matters and with an increasing exposure to other financial institutions for

funding, financial or banking logic enters the institutions. Gradually, the use of financial ratios to measure performance and their ability to obtain poverty alleviation objectives, have MFIs to ‘displace’ development with financial logic (Kent and Dacin, 2013). However, the alleged overtaking of banking logic in the development of Islamic microfinance can only be explained after considering outreach performance of IMFIs, which is the subject matter of the other chapter of this thesis.

Chapter 5. Portfolio and default risk of Islamic microfinance institutions

"Microfinance: not as risky as you think", FT, 25 May 2007
"Microfinance: Risky and Expensive", WSJ, 23 June 2010

5.1 Introduction

Microfinance institutions (MFIs) are thriving in many developing countries and increasingly becoming an important instrument in serving development agenda, particularly poverty alleviation and financial inclusion. The success of many MFIs rests on effectiveness of loan delivery, high interest rate, and even higher repayment rate from the borrowers. Repayment rate of most MFIs are remarkably high, often above 90 percent, depending on how they manage repayment cycles and collections (Godquin, 2004).

Microfinance has created opportunities for the poor and microenterprises. It is claimed that microfinance has helped millions of poor people moving out of poverty, with a moderate estimate suggests that over 200 million clients have been reached by microfinance institutions worldwide (Maes and Reed, 2012). This figure represents about 17 percent out of 1.2 billion poor people who live with less than US$1.25 a day, based on the World Bank estimates as suggested by Olinto et al. (2013). Although, there are debates on the impact of microfinance on poverty reduction, the opportunity created by microfinance to the poor has enabled them to venture into microbusiness or use the loan to meet immediate needs.

In relations to risk and vulnerability, Swain and Floro (2014) claim that involvement in microfinance such as through self-help group membership has reduced the poor's households vulnerability caused by market liberalization and poverty. At the minimum, loans from MFIs have helped poor families to meet their immediate needs, or often referred to as income smoothing loans. At the other end of the value chain, microfinance as an investment portfolio or asset class is also considered of high value, as studies have noted that microfinance could provide investors with attractive returns (Galema et al., 2011), reduced portfolio volatility (Krauss and Walter, 2009), and investment opportunity with stable returns and lower total risk than other assets class (Janda and Svárovská, 2010).

Islamic microfinance is unique in relation to the nature of risks it faces, as well as from the type of borrowers that its serves (Rahman, 2007). On the one hand, it faces

multitude of risks that originates from peculiar Islamic financial mechanism and contractual framework, arguably different from risks faced by conventional microfinance institutions, and secondly it also have to deal with nature of borrowers or customers it aspire to serve, who are mostly live in vulnerable regions or countries. In addition, Islamic microfinance must also deal with risks associated with microfinance lending i.e. non-collateral, which are much higher compared to risks facing commercial financial institutions such as banks, which are heavily protected and regulated.

As such, the study of risk in Islamic microfinance deals with issues related to the magnitude of internal hazards facing IMFIs, as well as challenging external risks that many IMFIs face while operating in hostile environment and conflict-laden countries (Segrado, 2005). This paper aims to shed some lights on the study of risks facing Islamic microfinance by looking specifically at risk profile of IMFIs, both at the quality or riskiness of their lending and clients portfolio as well as at the riskiness of IMFIs as investment portfolio. It seeks to address the research questions as follows, a) are IMFIs more risky than conventional MFIs, and if so, how risky? b) what are the determinants of portfolio and credit risk of IMFIs? and finally, c) what are the effects of portfolio risk on the profitability and outreach of IMFIs?

The following section will discuss sources of risk and the issues of portfolio quality in microfinance literature, followed by an overview of IMFIs and their risk profile. The sections that follow will deal with data, analysis and results before a conclusion.

5.2 Risk in microfinance: a survey of literature

Risk has become a critical issue in microfinance, as the sector is growing and evolving into a full-fledged financial industry. The crisis in India is one important case to consider, where local government of Andhra Pradesh closed down 50 branches of two large MFIs in 2006 due to accusation that these MFIs have employed ‘forced loan recovery practices’, which had caused several clients to commit suicide out of shame (Shylendra, 2006). In retrospect, the crisis could have been averted should the authorities and MFIs consider broader risk factor in the district, among others seasonal droughts, ‘frenzy lending’ of MFIs to clients who are used to subsidized loans, and multiple borrowings practice by mostly farmers who used the loans for consumption purposes (Taylor, 2011, Bhandari et al., Mader, 2013).

While microfinance is known for its very high repayment rate, MFIs can still face inevitable and pressing challenges. The unique lending model without any collateral to the

poor, as well as the vulnerability of their clients' businesses due to their small scale and unpredictable market conditions, can create real problems for MFIs. In fact, high repayment rate that is built on classic model where early repayment is encouraged by the group lending mechanism may inhibit growth of microenterprises and limit potential impact on poverty alleviation, as borrowers are prevented from investing in risky or longer term businesses (Field et al., 2013).

This section will identify and explain major risks that could adversely affect all type of MFIs, to be followed by an overview of existing empirical studies that look at the impact of risks on IMFIs. The myth that microfinance lending structure is robust, especially with group lending that guarantees the loans are always repaid, will also be examined. With an increasing number of IMFIs that use individual lending approach, they may no longer be able to rely on inherent resilience of group solidarity, and hence the robust structure will gradually weakened. This development poses IMFIs with range of issues that could damage their performance and reputation. Therefore, in addition to sources of risk with the borrowers and organization or governance of IMFIs, high repayment rate practice will also be reviewed here to understand any potential vulnerability to the microfinance system.

5.2.1 Sources of risk and vulnerability in microfinance

5.2.1.1 Borrowers

Borrowers are the first and possibly the main source of risk in microfinance, particularly related to uncertainty and vulnerability of their micro-businesses in the current economic climate, followed by risk factors within the MFIs such as lack of governance, and other risk factors related to market environment (Lascelles et al., 2014). There are two reasons for this claim. First, most of the borrowers of microcredit do not have any financial security to protect them from any loss of exposure to risks. Small problem with their shop or farm would have devastating consequences to income flows of the poor's family. As demonstrated in the case of Andhra Pradesh, inability to repay debts to MFIs had caused few poor clients to commit suicide (Shylendra, 2006). This tragic outcome could stem from lack of education on the clients part, but ultimately MFIs should recognize and identify ways to minimize and mitigate risks exposed to their clients.

The second argument is the inherent risk in the nature of businesses many micro borrowers have. The money they borrowed from MFIs is often used for trading activities in the market, petty shop at home, or some craftsmanship activities. These are types of

businesses that are vulnerable to both seasonal and business factors i.e. the small scale makes them prone to losses or low sales volume. Should the borrowers fall into slight difficulty, they immediately find themselves unable to repay the loan and meet the weekly or monthly instalments due to MFIs.

For the borrowers, lack of financial security and unpredictability of microbusiness are two main sources of their vulnerability. For borrowers in the rural farming sector, they are also facing other risks related to weather, pests, climate change, and other natural hazards (Isakson, 2015). In general, micro borrowers must also deal with risks related to operations of their microbusiness, effective use of loan, commodity price volatility or adverse market conditions, increasing competitions, and other external factors.

Most of the risks related to internal deficiencies have been addressed in most microfinance programmes, especially through group lending strategy that impose peers pressure and control system among the borrowers. In fact, Crabb and Keller (2006) suggest that group lending methodology reduces risk in microfinance portfolio, while individual lending tends to increase risk for MFIs. Hence, for MFIs that are adopting individual lending system there are still more risks that need to be addressed, especially credit risk.

5.2.1.2 Commercialization and competition of microfinance sector

Commercialization is alleged to be responsible for the rising of risk profile among MFIs. It has invited different kind of risk to microfinance, including the international market risk resulted from the exposure of MFIs to international and commercial funding sources. Some studies suggest that commercialization is responsible to the increase in vulnerability and changes in capital structure of MFIs (Hoque et al., 2011, Wagner and Winkler, 2013). This claim is evident from a slight shift in the literature on the effect of external shocks to microfinance institutions. Most studies in 1990s suggest that MFIs are relatively immune and unaffected by few major financial crises, most notably the Asian financial crisis in 1997/98. For instance, Krauss and Walter (2009) using dataset from 1998 to 2006 find that there is no significant relationship between MFIs and global market movements or external shocks. They suggest that MFIs seems to be ‘detached’ from any shocks affecting global capital markets.

However, there are also competing claim on the impact of commercialization. In a more updated study and using more recent dataset Wagner and Winkler (2013) find the contrary to previous studies i.e. Krauss and Walter (2009). They find that during the global financial crisis of 2008-09, there has been a negative impact on real credit growth of MFIs

across the world, especially those MFIs that enjoyed rapid growth few years before the crisis. This study confirms a presence of boom-bust theory in microfinance.

The prevalent of commercialisation also encourage the emergence of many studies on its impact. This is evident in the increasing interest of many researchers on commercialization and competition in the microfinance sector. Commercialization and subsequent trade-off between sustainability and poverty outreach are among the most widely discussed aspects of the recent microfinance studies. The issue of commercialization has attracted many researchers and observers to explore the topic, for instance Hamada (2010) and Bateman (2011).

These studies have gradually contributed to the emergence of a new sub-topic of its own within microfinance studies i.e. microfinance as asset class or mission drift. The main reason for such growth of this particular subject is the inconclusive outcome from most studies. There is no definite winner in this debate whether a commercialization is ever presence, or whether the MFIs have indeed been drifting away from its main cause, and most importantly whether the commercialization is bad or good for the poor.

The debate is triggered among others by potential implications these studies could have on policy and structural design of microfinance programmes. If the trade-off is indeed established and valid, microfinance stakeholders must choose for one that is most suitable for their circumstances. If the main objective is reaching out to as many poor people as possible, then they must sacrifice or bear with potential lack of profitability or sustainability, and vice versa.

Likewise, the interest of international investors to microfinance, which is considered as an ‘asset class’, is also on the rise. From the commercial investors’ point of view, microfinance is seen as an attractive choice for portfolio diversification measured in terms of risk-return profile (Galema et al., 2011). Specifically, MFIs operating as rural banks are more attractive than other forms such as NGOs for international investors. Undoubtedly, rapid growth in the microfinance industry has intensified competition among MFIs and in the process their exposure to newer and more severe risks. This development sanctions the need for MFIs to consider more sophisticated risk management approach and strategy.

5.2.1.3 External factors: socio-economic and political forces

Microfinance sector may also face external risks such as natural disasters, armed conflicts, war, famine, and macroeconomic difficulties. External risks are still the main

concern for nearly all microfinance institutions in developing countries. Natural disasters and similar risks may lead to business failure or crop failure, whereby many developing countries have suffered from floods, cyclones, or other calamities that destroyed many of the income generating assets of the poor. Localized epidemics and illnesses could also affect the ability to earn a livelihood or to repay the loans. Calamities in the family might result in loan funds being diverted into non-income generating activities.

In a specific case, microfinance sector may also derive risks from its geographical location, as many MFIs operate in the poorest regions in the world, which mostly are also affected by continuous arms conflict, recurring natural disasters, or situated in landlocked countries. For instance, Gunter (2009) and Casselman et al. (2014) illustrate the issues faced by microfinance institutions in post-conflict Iraq, where microfinance is used as both economic re-development tool and peace building apparatus.

5.2.2 Type of risks faced by Islamic microfinance institutions

All types of microfinance institutions face similar forms of risks, to a certain degree, either Islamic or conventional MFIs. As a financial institution, MFI deals with similar risks faced by other financial institutions such as commercial bank. In general, MFIs must deal with such risks as credit or portfolio risk, liquidity risk, interest rate risk, default risk, operational risk, and other types of risk (Ledgerwood and White, 2006, p.37). However, although MFIs might face similar risks to financial institutions, they do have unique features that cause MFIs facing different set or magnitude of risks. What differentiates MFIs from commercial banks is the magnitude of each risk exposed to each one of them.

MFIs are more likely to face less severe risks compared to commercial and large scale banks or investment companies, given the scale of lending MFIs are making. For instance, commercial banks may face massive credit risk from their exposure to volatile the housing sector as the financial crisis of 2008 illustrates. However, smaller degree of magnitude may not necessarily means less catastrophic for the microfinance sector. As will be discussed in later section, exposure to risk in irresponsible lending have lead MFIs in Andhra Pradesh, or other places, to face unprecedented loss and reputational damage (Mader, 2013).

Hence, the number of risks that may affect microfinance can be classified into at least three categories, for instance Steinwand (2000) proposed three main categories of risk, namely a) financial risks, b) operational risks, and c) strategic risks. In a different

arrangement, Ledgerwood and White (2006) suggest that MFIs are prone to such risks as a) ownership or governance risk, b) credit risk, c) liquidity risk, d) operational risk, e) interest rate risk and f) reputation risk. The classification as suggested by Steinwand (2000) is summarised in Table 7.

Table 7 Categories of risk facing MFIs

Financial Risks	Operational Risks	Strategic Risks
a. Credit Risk – Transaction risk – Portfolio risk **b. Liquidity Risk** **c. Market Risk** – Interest rate risk – Foreign exchange Risk – Investment portfolio risk	**a. Transaction Risk** – Human resources Risk Information & technology risk **b. Fraud (Integrity) Risk** – Legal & Compliance Risk	**a. Governance Risk** – Ineffective oversight Poor governance structure **b. Reputation Risk** **c. External Business Risks** – Event risk

Source: Steinwand (2000)

The main risk category that all MFIs are facing is financial risk, and in particular credit or portfolio risk. MFIs face various and endless uncertainties related to credit risk of their borrowers on a daily basis. Although microfinance is known for its high repayment rate, mainly due to peer monitoring in the group lending structure (Stiglitz, 1990), default or payments delinquency due to lack of good governance or poor financial performance may cause MFIs to face serious problems (Ayayi, 2012).

Secondly, operational risk, which includes risk due to information technology malfunction and fraud, has little precedent in microfinance. However, this category is an important risk factor that requires careful mitigation and management. One of the contributors to the microfinance crisis in Andhra Pradesh district of India was irresponsible lending in pursuing 'reckless growth' and loans recovery by field officers of the MFIs in the district (Mader, 2013).

Finally, the main issue in the strategic risk is governance. Governance risk is related to a possible influence of shareholders, donors and even regulators on the performance of the MFIs, either financial performance of social performance. This type of risk is particularly devastating for MFIs operating as non-governmental organizations (NGOs), that are dependent on external parties for funding such as development agencies and donor organization. Empirical studies on governance and ownership also share the same conclusion, that a well-defined governance structure (Mersland and Øystein Strøm,

2009, Tchakoute-Tchuigoua, 2010) and to a lesser degree, ownership (Mersland and Strøm, 2008) are important performance determinants for MFIs.

In addition to these risks, IMFIs and other Islamic financial institutions face unique set of risks unlike their conventional counterparts. In addition to dealing with risks associated with overall banking or financing operations, IMFIs may also face risks relevant only to Islamic financial institutions. IMFIs could face different risks that emanates from its distinct features compared to conventional financial institutions such as use of profit and loss sharing contracts in their funding and financing (Salem, 2013), or the complexity of Islamic financing modes and risk aversion and religiosity of its clients (Abedifar et al., 2013).

These features may expose IMFIs to different kind of financial risks. Such distinctive possible risks for Islamic financial institutions are summarized in Table 8.

Table 8 Specific characteristics and possible risks facing IMFIs

No.	Islamic financial institutions	Conventional financial institutions	Possible risks for IMFIs
1	Must comply with Islamic principles	Non-existent	*1. Sharia compliance risk*
2	Prohibition of riba (usury, interest)	Based on interest rates	*2. Rate of return risk* *3. Mark-up benchmark risk*
3	Lending facilities must be backed by physical assets	Lending facilities are money based on interest rates	*4. Commodity price risk* *5. Increase operational risk for delivering/holding assets or inventory*
4	Variety of contracts, i.e. profit loss sharing (PLS)	Non-existent	*6. Equity investment risk* *7. Increase operational risk (and asymmetric information)*
5	Restriction in requesting collaterals and penalties	No restrictions imposed	*8. Increase credit risk*
6	Investment accounts (deposits) are based on profit loss sharing *(mudarabah)*	All deposits are determined by interest rates	*9. Displaced commercial risk*
7	Restrictions on secondary markets and interbank activities	Secondary markets witness continuous innovations	*10. Increase liquidity risk*

Source: Salem (2013)

More comprehensively, the range of risks confronting Islamic financial institutions are similar with the risks faced by other financial institutions which stem from two types of risks, namely financial risk and operational risk. The former consists of credit risk, market

risk, liquidity risk and equity investment risk, while the later consists of internal operational risks and external or business risks.

As mentioned in earlier sections, IMFIs are facing multitude of risks originated from its unique condition. IMFIs may be affected by risks that come from institutional uniqueness of Islamic financial institutions as discussed earlier and also due to its nature as microfinance institutions, Islamic or otherwise. Further, Islamic microfinance must also confront risks from its geographical location, as many IMFIs are based in the poorest and most vulnerable regions in the world. Countries where IMFIs are located often affected by continuous arms conflicts, recurring natural disasters, and infrastructure bottleneck specific to poor countries. For instance, Gunter (2009) and Casselman et al. (2014) illustrate the issues faced by microfinance institutions in post-conflict Iraq, where microfinance faces tremendous challenges and at the same time opportunity to re-develop the economy and participate in peace building activities.

5.2.3 Impact of risk on microfinance institutions

Microfinance sector is vulnerable to all similar forms of risks affecting financial services industry, especially credit and market risk. Higher indebtedness of the borrowers have caught the attention of researchers and policy makers recently, as the microfinance crisis of Andhra Pradesh district shows (Taylor, 2011). Several cases of suicide in the district were allegedly related to microfinance borrowing, and these incidents had led the local government to freeze all microfinance activities for several months in 2006, until the case was resolved in 2007.

The main problem with Andhra Pradesh was competition and client selection. In pursuit of portfolio growth, MFIs offer loans often to borrowers who already have loans from other MFIs. In turn, this aggressive lending, and subsequently when the borrowers were unable to pay, few of these MFIs resorted to aggressive loan recovery. Shame was used by the collectors, and in many traditional society ‘shame’ is a lethal weapon, which led some borrowers to commit suicide (Mader, 2013). In the end, proper client selection and portfolio management is key to minimize credit defaults, since majority of MFIs have very few defaults or delay in their payments as illustrated by high repayment rate of well-known MFIs such as Grameen Bank. Therefore, the MFIs have the main responsibility in managing their portfolio and clients.

Portfolio quality is indeed important aspect for MFIs. In a study involving 350 MFIs from 70 countries, D’Espallier et al. (2011) find that type of borrowers may have a

different outcome for MFIs and they suggest that lower portfolio at risk and lower write-off rates are associated with higher proportions of women borrowers. Although this finding is not supported in the case of Andhra Pradesh, where clients are women, attention to portfolio quality is key to risk management for MFIs. On the other hand, Zeballos et al. (2013) find that the borrowers at risk of defaulting are not necessarily those investing in risky projects or risk takers. In a study involving 200 borrowers in Bolivia, the authors find that the defaulters are in fact 'take too little investment risk'.

In term of funding source, especially related to exposure to external or international funds, MFIs could also be exposed to events taking place in the international financial markets. Wagner and Winkler (2013) find that the global financial crisis in 2008 to 2009 has had a significant impact on global MFIs, especially in terms of real credit growth extended to their poor clients.

However, Krauss and Walter (2009) suggest that MFIs are not affected by events in the international capital markets, unlike other asset classes in emerging markets criteria. This is due to ownership structure of most MFIs that are privately held with long-term strategic interest and not driven by market forces. MFIs are also less dependent on capital markets for funding, as they are being supported by international development agencies. This ownership and funding structure has created stability with MFIs, at least until quite recently. However, they warn that as the MFIs becoming more commercialised, the stability advantage provided by such ownership and funding structure may deteriorate and their exposure to market risk will increase.

5.2.4 Risk management

As borrowers are the main risk factor, clients' selection and portfolio management are key to risk management for IMFIs. IMFIs could mitigate adverse selection in their lending process by among others impose strict clients selection or risk scoring, as *ex ante* measures in making loans to the poor. Hernandez and Torero (2014) find that non-parametric risk scoring test is a better evaluation method that may prevent including potential 'bad' borrowers from microcredit markets, and at the same time may help include 'good' borrowers into the markets.

In addition, some forms of social risk management and micro-insurance have been proposed, *ex post*, to equip micro borrowers and lenders with some tools to deal with exposure to risks. Multilateral organization such as the World Bank is a keen promoter of social risk management in a broader public finance context, as evident from key

publication such as Holzmann and Steen (2001). In practice, social risk protection takes the form of micro-insurance and in the form of limited liability lending or group lending method employed by majority of IMFIs, which in effect are a combination of prior and post measures of risk management.

In terms of risk management and mitigation, there has also been a surge in studies in the field of microfinance. Some papers suggest a comprehensive approach to risk mitigation. This is due to the fact that IMFIs face multitude of risks, not only credit risk but also risks associated with liquidity management, market conditions, transactions, fraud, governance, and reputation (Khan and Ashta, 2013). Therefore, they suggest that IMFIs should manage all risks by assessing repayment abilities of their clients by using tools such as social collateral, management information systems, and at the same time invest in products and markets diversification, and engagement with all stakeholders.

Financial risk management for microfinance institutions are structured around four main areas of concerns, namely portfolio quality, capital adequacy, liquidity management and asset-liability management or ALM (Ledgerwood et al., 2012). More specifically, Fernando (2007) proposes that risk management is a continuous process as shown by Figure 3.

Figure 3 Risk Management Process or Cycle

Source: Fernando (2007)

Risk management is often also driven or initiated by the borrowers. For instance, Lahkar and Pingali (2014) find that microfinance borrowers may diversify their exposure to risk in a group liability lending model by engaging in multiple borrowing. The study

argues that instead of creating debt trap for themselves, these borrowers become members in different groups to split up the risk into small parts. The core principle of risk management in Islamic finance is risk sharing (Lewis et al., 2014). This is evident from the initial structure of Islamic finance that rest on the profit and loss sharing principles.

5.3 Hypothesis development

This chapter aims to address the main inquiry whether Islamic microfinance institutions are facing different set of risks compared to mainstream microfinance, and to what extend do portfolio and default risk affect performance and sustainability of Islamic microfinance institutions. In particular, the chapter proposes to answer the following questions; a) are IMFIs more risky than conventional MFIs, and if so, how risky? b) what are the determinants of portfolio and default risk of IMFIs? and finally, c) what are the effects of profitability and outreach to risk profile of IMFIs?

Studies of risk in conventional microfinance have evolved from examination of loan use or misuse by poor clients and its impact on MFIs to the vulnerability of MFIs as investment vehicle or asset class. However, studies of risk in Islamic microfinance are still limited, and existing literature provides only general observation on the impact of risks associated with the nature of Islamic financial transactions, i.e. profit-loss sharing mechanism. Although the existing studies do provide important perspectives on the riskiness of Islamic microfinance due to its reliance on risky financing mechanism, i.e. profit and loss sharing, a detailed analysis on how financial or market risks affect IMFIs is still currently missing. This gap prevents proper understanding on the types, and most importantly magnitude, of risks exposed to and created by IMFIs and how they mitigate these risks.

Therefore, the first hypothesis will be developed to answer questions on the nature and magnitude of risk faced by IMFIs, as well as whether these risks are similar or different with conventional MFIs. Once the type of risks is understood, the next hypothesis would be on the factors that determine risks at IMFIs. The final hypothesis will infer the state of portfolio and defaults risks on IMFIs vis-à-vis sustainability and poverty alleviation objectives.

5.3.1 Are IMFIs more risky?

Islamic microfinance and Islamic finance in general is considered more risky than its conventional equivalent. The use of profit and loss sharing mechanism is the main

reason for this claim, where Islamic financial institution and its borrower are entering into profit or loss-sharing contract made for a financial transaction.

The contract can be designed where both bank and clients are sharing financial capital (*musharakah* or partnership scheme) or one being the capital owner while the other party is managing the venture (mudarabah) (Smolo and Ismail, 2011). The key risk feature of these financial contracts rest on the floating of risk and return, and the system does not guarantee any return for the IMFIs or to the depositors or investors, unlike conventional financing.

The other risky aspect of Islamic financing is related to the shifting of credit risks from financial institutions to depositors or investors (Hesse et al., 2008). Hesse et al. argue that profit-loss sharing mechanism also increases the overall risk on the asset side of the balance sheet, because it makes Islamic banks, or for that matter also IMFIs, more vulnerable to risks associated with equity instead of debt.

In addition, socio-economic and political conditions in the countries or regions where most IMFIs operate are fragile and uncertain. In recent years, countries like Sudan, Syria, Iraq, or Afghanistan where many IMFIs are located have been afflicted with prolong armed conflicts or war. The case study of microfinance in Iraq during and post Iraq war by Gunter (2009) provides an insight into the severity of situations the MFIs are facing. Likewise, countries such as Bangladesh, Pakistan, and Indonesia have suffered from severe natural disasters such as floods or tsunami, which set back many of the progress made by numerous IMFIs in these countries.

However, despite this dire situation, Islamic microfinance sector survives and continues to develop in many developing countries in the Muslim world. One explanation for this encouraging development, despite challenges, is that Islamic microfinance being used as a tool to combat conflicts and rebuild communities rather than being treated as an object of disaster or victim of armed conflict (Hudon and Seibel, 2007).

This research covers a period of 1998 to 2014, during which time few major crises have taken place in the countries and regions under study, either armed conflicts or natural disasters. As such, IMFIs in this study have experienced some difficult periods and therefore affected by socio-political risks discussed above, and at the same time they survived the calamities and enjoyed periods of recovery and growth.

Hence, to the first question we argue that IMFIs are relatively more risky compared to conventional MFIs, mainly due to the distinct operational characteristics and product specifications, as well as socio economic characteristics of locations where IMFIs operate.

$H1_0$: There is no difference between risk of Islamic and Conventional MFIs.

$H1_A$: IMFIs have higher risk than conventional MFIs.

5.3.2 What are key determinants of portfolio and credit risks facing IMFIs?

Number of borrowers is the main contributor to performance of any MFIs, as borrowers or clients determine how much revenue or returns will MFIs made for any given period. In relation to this, credibility of borrowers is also important, to ensure consistent repayment schedules and enable all MFIs to use the instalments for new borrowers. This is the backbone of microfinance i.e. rotation of small capital or funds that any IMFIs have to reach out to large number of poor people.

IMFIs engage with customers who are mostly poorer than the average customers of conventional MFIs, hence they would contribute to higher probability of higher risk to IMFIs as explained in the first hypothesis. Therefore, number of active borrowers or scale of outreach will be an important determinant of risk factors for IMFIs.

Likewise, D'Espallier et al. (2011) claim that higher women participation in (conventional) MFIs is associated with lower portfolio at risk, write offs ratio, and also provision to loan loss. Hence, the assumption of this chapter also inline with such study and predicts that percentage of female borrowers will be significant to portfolio at risk and write off ratio indicators.

In addition, availability of funds is critical to the ability of IMFIs to continue making micro loans to the poor. Majority of IMFIs rely on donor or charitable institutions for their sources of funding, thus provide them with less, or often no obligation to return the funds unlike savings or investments from commercial investors. Regardless, cost of funds in the form of borrowings and deposits will contribute significantly to risk profile of IMFIs.

Finally, IMFIs operating in difficult and poor regions must employ field officers who are not only capable to mitigate hostile working environment, but also equipped with sufficient understanding of Islamic financial transactions. Unfortunately, this type of workforce is not easy, nor cheap, to find. In the end, IMFIs must operate at a much higher overall cost than their conventional counterparts or other competition.

However, no indicator that captures this factor in the current dataset. The regional control variable is the only indicator that reflects the impact of socio political risks on microfinance. Although crises, armed conflicts, or natural disasters do not discriminate countries based on their regional locations, unfortunately recent political crises and fatal

disasters tend to concentrate in certain regions. Thus, regional control variable may provide some hint on the determinant of risks, especially socio-political, on IMFIs.

Therefore, the second hypothesis is as follows:

$H2_0$: Portfolio and credit risk are not influenced by any factors.

$H2_A$: Portfolio and credit risk are influenced by outreach and operational cost.

5.3.3 What are the effects of profitability and outreach on portfolio risk?

Higher percentage of portfolio at risk or write off ratio could reduce the ability of IMFIs to extend their outreach, as the funds that are available must be set aside for mitigation, as well an increase in portfolio recovery cost. As previous hypothesis suggests that outreach is an important determinant in measuring portfolio and default risk profile of IMFIs. In addition, profitability will also deteriorate, as IMFIs must deal with risk and increased cost. Therefore, higher portfolio at risk will adversely affect both profitability and outreach of IMFIs.

One of the effects of higher risk profile is increase in the price or interest rate charged (Gutiérrez-Nieto et al., 2016), as MFIs recover their lost from the borrowers. Gutiérrez-Nieto et.al further suggest that high interest rates is unavoidable due to high risk nature of microfinance lending, as well as high cost of funds, high personnel and administrative costs. In addition, risk management and mitigation is even more important for MFIs in dealing with portfolio risk, since *ex post* loan recovery is costly and there is no guarantee of its success.

While this negative causal effect is foreseeable, the main question is whether poverty alleviation or profitability objectives have any effect on risk profile of IMFIs, i.e. whether outreach and return on assets have any effect of portfolio at risk and write off ratio. As IMFIs set out their primary objectives, either outreach or profit – or both, they may inadvertently increase portfolio at risk or even credit risk potentials in their loan portfolio.

It is expected that profit oriented IMFIs will be reluctant to lend to high risky projects and avoid risk-taking borrowers, as suggested by Shahriar et al. (2016). They also claim that for profit oriented MFIs target borrowers who already have established and high turnover businesses, rather than start ups that may have high potentials of failure. Likewise, it is safe to say that non-profit oriented IMFIs will be more likely to finance high risky business ventures and support poor borrowers who use their loans for start up business activities.

These characteristics entail that non-profit oriented IMFIs, thus putting more emphasis on outreach rather than ROA, will likely to have higher portfolio risk and perhaps also credit risk. On the hand, profitability will have negative relationship with portfolio at risk, as profit orientation leads to less risky projects and lower portfolio at risk and write off ratio. Hence, the third hypothesis is as follows:

$H3_0$: No relationship between outreach, profitability with portfolio, credit risk.

$H3_A$: Outreach and profitability will have opposite relationship with respect of portfolio and credit risk.

5.4 Data and estimation methods

5.4.1 Dataset

Data for this research comes for the MIX Market database that is accessible from its website (www.mixmarket.org). MIX database has been used by similar researches and studies, including Cull et al. (2009), Mersland and Strøm (2010), and Kar (2013b), as it is currently the most comprehensive and reliable database provider on global microfinance institutions. The panel dataset covers the period of 1998 to 2014 and include microfinance institutions in four regions that have IMFIs, namely East Asia and Pacific, South Asia, Middle East and North Africa and Eastern Europe and Central Asia.

Table 9 summarises distribution of IMFIs vis-à-vis conventional microfinance institutions across regions. IMFIs constitute only 3.4 percent of the overall samples of MFIs, and they are located in four major economic regions in the developing world. Although the sample of IMFIs is relatively small compared to the total MFIs, it reflects the actual situation where total IMFIs in the world is still relatively small compared to the universe of microfinance institutions. One estimates from recent CGAP study also suggests that the share of IMFIs is still around 2-3 percent compared to the total (El-Zoghbi and Tarazi, 2013).

Table 9 Distribution of MFIs across countries

Region	MFI Type		Total (Obs.)	IMFIs share (Obs.)
	Conventional	Islamic		
East Asia and the Pacific	1,888	32	1,920	1.7%
Eastern Europe and Central Asia	2,832	13	2,845	0.5%
Middle East and North Africa	484	151	635	23.8%
South Asia	2,449	70	2,519	2.8%
Total	**7,653**	**266**	**7,919**	**3.4%**

MIX database classifies MFIs into several categories, based on regional location, legal status, profit orientation, and age. There is also quality of the reports submitted by MFIs into the system, where MIX categorise these MFIs according to the number of diamond each MFI deserves, where 1 diamond for being less reliable and 5 diamonds being the most reliable or verified by audited reports.

However, MIX Market does not classify MFIs into type of business, i.e. Islamic or conventional. This category was introduced into the current dataset, where all of the MFIs are classified into MFI Type Islamic and MFI Type Conventional. This research employs manual method to classify MFIs, where all MFIs that offer Islamic micro financial services and products are labelled as IMFIs, regardless whether their MFIs are fully Islamic (full-fledged IMFI) or partially, where Islamic micro loans are offered in parallel with conventional products and services (often referred to as 'Islamic windows').

5.4.2 Descriptive statistics

The summary statistics of all variables measured in this chapter is presented in Table 10. The variables that have significant differences with each other, i.e. between conventional MFIs and Islamic, are highlighted.

The first striking difference is portfolio at risk past 30 days for IMFIs that is significantly higher than conventional MFIs, or 12 percent versus percent. In microfinance literature, any portfolio at risk higher than 10% is considered to be risky while any ratio lower or around 5 percent is regarded as healthy or reasonable. The higher portfolio at risk indicates that IMFIs have more borrowers who delay their loans instalments for more than a month, or in practice constitutes 4-5 weekly payment cycles.

The second notable difference is the positive return on assets for conventional MFIs and negative for IMFIs. It may suggest that IMFIs are operating at significantly disadvantage position vis-à-vis conventional MFIs, however we shall confirm this status with the regressions.

The other noticeable difference is with Average loan balance/size, in both nominal term and ratio to income per capita. The Average loan size per borrower of conventional MFIs is more than USD4200, or more than four times that of IMFIs at just above USD900, while the Average loan balance per borrower to GNI/Capita is nearly three times that of IMFIs. The main contributor to this important different is the size of conventional MFIs in the dataset, which include some of the largest MFIs in the world including Bank Rakyat Indonesia and Grameen Bank.

Finally Number of active borrowers highlights the capacity and ability of conventional MFIs to serve poor customers, where NAB for conventional is more than double that of IMFIs. The huge gap may be due to the state of conventional MFIs that started much earlier than IMFIs, such as Grameen Bank and Bank Rakyat Indonesia who are pioneers in Bangladesh and Indonesia respectively. This difference might impair the capacity of IMFIs to compete financially with much powerful conventional MFIs in the current situation.

Table 10 Summary Statistics for IMFIs and conventional MFIs

	IMFIs			Conventional MFIs		
Variable	**Obs.**	**Mean**	**Std. Dev.**	**Obs.**	**Mean**	**Std. Dev.**
MFI type – Islamic	266	1	0	7653	0	0
MFI type – conventional	266	0	0	7653	1	0
Portfolio at Risk > 30 days	209	**0.12**	0.40	5846	**0.06**	0.15
Portfolio at Risk > 90 days	159	0.05	0.05	4604	0.05	0.09
Write off ratio	186	0.01	0.05	5172	0.01	0.07
Return on assets	207	**-0.03**	0.17	5764	**0.01**	0.16
Operational self sufficiency	239	1.25	0.44	6399	1.15	0.88
Cost per borrower	196	**184.95**	254.89	5297	**226.70**	687.78
Log cost per borrower	196	4.60	1.18	5266	4.22	1.52
Number of active borrowers	246	**45379.94**	116781.40	6974	**90255.39**	504556.00
Log number of active borrower	246	8.92	1.88	6948	8.71	2.30
Avg. loan balance per borrower	245	**911.23**	1117.73	6914	**4268.12**	145883.20
Avg. loan balance per borrower to GNI/Capita	242	**0.58**	0.78	6868	**1.58**	46.81
Percentage of female borrowers	191	0.56	0.23	5180	0.62	0.26
Yield on gross loan portfolio (real)	125	0.26	0.13	4293	0.24	0.16
Log borrowing	176	14.16	2.34	4798	14.57	2.28
Log deposits	201	**4.40**	8.05	5308	**6.48**	8.80
Age – new	258	0.25	0.43	7354	0.20	0.40
Age – young	258	0.29	0.45	7354	0.22	0.42
Age – mature	258	0.47	0.50	7354	0.57	0.49
Profit status orientation (non)	260	0.65	0.48	7212	0.59	0.49
Profit status orientation (for)	260	0.35	0.48	7212	0.41	0.49
Legal status – bank	263	0.16	0.37	7587	0.13	0.34
Legal status – Credit Union	263	0.06	0.25	7587	0.18	0.39
Legal status – Non Bank/NBFI	263	0.27	0.44	7587	0.29	0.46
Legal status – NGO	263	0.51	0.50	7587	0.34	0.47
Legal status – rural bank	263	0	0	7587	0.03	0.18
Legal status – other	263	0	0	7587	0.02	0.12
Region – East Asia & Pacific	266	0.12	0.33	7653	0.25	0.43
Region – East. Europe & C. Asia	266	0.05	0.22	7653	0.37	0.48
Region – Middle East & N. Africa	266	0.57	0.50	7653	0.06	0.24
Region – South Asia	266	0.26	0.44	7653	0.32	0.47

In general, IMFIs are markedly difference from conventional MFIs in key performance areas, mainly portfolio risk, profitability, outreach, and cost. This descriptive

statistics provides an indication on the area of differences, but this needs to be tested and analysed further in the regressions.

5.4.3 Correlation

The correlation matrix provides an overview of correlation between all variables. The table suggests that there is no serious correlation between key variables.

Table 11 Correlation matrix of key variables

		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	PaR > 30days	1																						
2	PaR > 90days	0.01	1																					
3	Loan loss rate	0.00	0.03	1																				
4	Write off ratio	0.14	0.07	-0.01	1																			
5	Return on asset	-0.14	-0.02	-0.01	-0.18	1																		
6	Yield on GLP – real	-0.04	-0.06	0.00	-0.04	-0.01	1																	
7	Log NAB	-0.03	-0.01	0.01	-0.01	0.00	-0.09	1																
8	Avg. loan balance per borrower to GNI/capita	0.02	-0.02	-0.01	-0.01	0.04	0.01	-0.15	1															
9	Percentage of female borrowers	-0.08	-0.10	-0.05	-0.02	-0.01	0.24	-0.03	0.02	1														
10	Log Cost per borrower	0.03	0.00	0.00	0.11	-0.06	0.02	**-0.51**	0.38	0.04	1													
11	Borrowings	-0.02	-0.01	-0.01	-0.02	0.01	0.00	0.33	0.08	-0.01	0.06	1												
12	Deposits	-0.01	-0.02	-0.01	-0.05	0.00	0.05	0.22	0.16	0.00	0.13	0.45	1											
13	Age – new	-0.05	0.07	0.00	-0.07	-0.12	0.02	-0.19	0.07	-0.05	0.09	-0.08	-0.04	1										
14	Age – young	0.00	-0.02	-0.03	0.04	0.05	0.00	-0.13	0.03	0.01	0.10	-0.04	-0.04	-0.21	1									
15	Age – mature	0.03	-0.03	0.02	0.02	0.04	-0.01	0.25	-0.07	0.03	-0.15	0.09	0.06	-0.50	**-0.75**	1								
16	Profit status – non	0.02	0.02	-0.03	0.08	-0.04	-0.02	-0.03	0.04	0.07	0.12	0.04	0.05	0.00	0.02	-0.02	1							
17	Profit status – for	-0.02	-0.02	0.03	-0.08	0.04	0.02	0.03	-0.04	-0.07	-0.12	-0.04	-0.05	0.00	-0.02	0.02	-1	1						
18	Legal status – bank	0.02	0.02	-0.01	-0.04	0.02	-0.02	-0.04	0.03	-0.15	0.00	0.02	0.00	-0.01	-0.02	0.02	-0.44	0.44	1					
19	Legal status – credit union/coop	0.05	0.10	-0.02	0.02	-0.07	-0.19	0.04	0.01	-0.21	0.01	0.03	0.03	0.00	0.00	0.00	0.27	-0.27	-0.14	1				
20	Legal status – NBFI	-0.05	-0.06	0.03	-0.06	0.08	0.01	0.07	-0.03	-0.09	-0.08	-0.01	-0.02	0.03	0.01	-0.03	-0.48	0.48	-0.22	-0.28	1			
21	Legal status – rural bank	-0.02	0.01	-0.01	0.00	0.00	-0.04	0.00	-0.04	-0.10	-0.06	-0.02	-0.03	-0.03	-0.02	0.04	-0.20	0.20	-0.06	-0.07	-0.11	1		
22	Legal status – NGO	0.00	-0.04	-0.01	0.07	-0.02	0.17	-0.08	0.02	0.37	0.10	-0.01	0.01	-0.01	0.00	0.01	**0.58**	**-0.58**	-0.27	-0.35	**-0.54**	-0.14	1	

5.4.4 Empirical model

This research will use Ordinary Least Squares regression to analyse performance of risk indicators for Islamic microfinance institutions vis-à-vis its conventional MFIs. In addition, Random Effects model will also be used to compare the regression results with OLS and for robustness check. The estimation model follows Abedifar et al. (2013) who employ the same model in their study of risk in Islamic banking.

$$Y_{it} = \alpha + \beta_1 IMFI_{it} + \beta_2 Yield_{it} + \beta_3 Outreach_{it} + \beta_4 Cost_{it} + X_{it} + \varepsilon_{it} \quad ....(3)$$

Y is set of dependent variables consisting of portfolio and default risk indicators, namely; a) Portfolio at risk past dues more than 30 days (PaR>30days); b) PaR>90days; and c) Write off ratio. These dependent variables follow the approach of Cull et al. (2007) and Crabb and Keller (2006) in measuring portfolio quality using Portfolio at Risk past 30 days (PaR>30days), PaR>90days, Loan Loss Rate and Write off ratio. Loan loss rate, which is similar to write off ratio, is not included in this chapter of the thesis.

Portfolio at risk is defined by MIX Market as "the value of all loans outstanding that have one or more instalments of principal past due more than [XX] days. This includes the entire unpaid principal balance, including both the past due and future instalments, but not accrued interest. It also includes loans that have been restructured or rescheduled." Hence, Portfolio at Risk that is due more than 30 days, or PaR>30 days, represents all loans that are due or late in their instalment by the borrowers for thirty days of more with respect to total gross loan portfolio. Such delay in repayment or instalment is considered a warning for MFIs, since MFIs have usually gone through four to five collection cycles. Therefore any loan portfolio that registers persistent PaR>30 days of more than 10 percent from the total loans, or in some cases as low as 5 percent, should send a warning to MFIs.

Likewise, PaR>90 days is an indicator similar to PaR>30 days, but for longer period. As a general rule, any loan portfolio with PaR>90 days of more than 10 percent has more likelihood of default than for shorter period PaRs. Therefore, this indicator represents a more severe situation for IMFIs; the more portfolios that are delayed by more than ninety days, the more risky the IMFIs are.

Finally, Write off ratio represents all loans that have been written off by MFIs during a given period. In the words of MIX Market, "a write-off is an accounting procedure that removes the outstanding balance of the loan from the Loan Portfolio and

from the Impairment Loss Allowance when these loans are recognized as uncollectable." Therefore, Write off ratio (WOR) is a percentage of write off from the total gross loan portfolio at any given period.

Explanatory variables consist of key indicators that influence and determine the level of risk and its determinants for IMFIs, namely a) MFI Type, b) Profitability/Yield, c) Outreach, d) Cost indicators, e) Set of control variables (age, region, profit orientation), and f) Error term.

The dummy variable MFI Type *(MFItype_Islamic)* is the main explanatory variable that measures the relationship between portfolio and default risk and IMFIs. This variable represents all MFIs in the dataset that are offering sharia-compliant microcredit products and services, either as full-fledged IMFIs or as unit/division within conventional MFIs.

The second group of explanatory variables consist of variables that explain the models. This includes a) Yield, b) Outreach, c) Portfolio quality, and d) Cost indicators. These indicators are revenue or real yield to gross loan portfolio *(YieldonGLP_real)*; outreach variables (only for profitability regression) of *log_NAB* or number of active borrowers for scale of outreach and *Avg_loan GNIP* and percentage of women borrowers are measuring the depth of outreach.

Yield is the most important contributor to profitability of MFIs, and it represents interest charges for the clients. Yield is measured in term of interest and fees received on loan portfolio, either nominal or the ratio between interest and fees and average gross loan portfolio, or real, which is nominal yield adjusted to inflation rate. For IMFIs, yield is in the form of profit margin, fees or other *shariah* compliant pricing mechanism. For this research, the yield used in the model is the Real Yield on Gross Loan Portfolio.

Further, outreach is a proxy to the measurement of poverty alleviation impact by microfinance intervention. Outreach can be examined in two aspects, scale or breadth of outreach and depth of outreach. The former is measured by number of active borrowers served by IMFIs. The latter measures whether microfinance is really targeting the poorest segment of the community, through indicators such as Average Loan Balance to the GNI/Capita and Percentage of Female Borrowers.

Cost indicators consist of variables that represent cost factors that are used by IMFIs in their operations. These indicators have been used in relevant literature, especially Kar (2011), namely Cost per borrower, Deposits and Borrowing. Cost per borrower represents operational cost in serving each borrower or client, while deposit and borrowing

represent funding mobilization activities that will incur some costs for the IMFIs, either in term of profit sharing to depositors or investors and cost of borrowing to the lenders.

The third group of independent variables are control variables X_{it}. The control variables are Age, to control effects of age of the MFIs to the models, next is the differences in legal status of IMFIs, differences in respective regions where MFIs are located, and finally differences in profit orientation of the MFIs (non-profit versus for-profit). These variables have been used in existing literature, especially Cull et al. (2007) and Kar (2011).

Finally, ε_{it} is error term, where individual effect assumption of $\varepsilon_{it} = 0$ is expected to hold. It is included to accommodate any other factors that may affect the model but unaccounted for.

5.5 Results and discussion

The main hypothesis of this research is that IMFIs faces a higher exposure to portfolio and credit risks of their clients, due to unique characteristics of Islamic financial products that are more risky and uncertainty in the socio-economic and political situation in many Muslim countries. In essence, portfolio quality of IMFIs is predicted to be lower than conventional MFIs. Portfolio quality constitutes the most important aspect of the performance, sustainability, and survival of IMFIs. The discussions on regression results will centre on some of the characteristics of the portfolio quality of IMFIs as measured by two indicators, namely portfolio at risk past 30 days and portfolio at risk past 90 days. On the other hand, credit or default risk will be measured by Write off ratio, as this indicator represents the percentage of loans in the portfolio that have to be written off.

The variable of *PaR>30days* measures the percentage of gross loan portfolio that is overdue more than thirty days, and the borrowers have not made any payment or instalment of the loans since then. This variable is a useful proxy to potential default, because when the loans are due and past thirty days, it means the borrowers have missed at least four meetings or instalment cycles. PaR>30days indicator is not only an early warning signal, but also a default warning for small and subsidy dependence IMFIs. When there are large number of the clients who are unable to meet instalments schedule more than four times (four weeks/30 days), IMFIs will face significant liquidity problems and inevitable portfolio or credit risk.

Likewise, *Par>90days* also provide similar information and signal for IMFIs, and this variable measures percentage of late payments/instalments for longer period than the

former. In some cases, late instalment by one month may be considered very conservative and inflexible to clients, especially if their micro-businesses are having slightly longer business cycles, i.e. more than one month. Hence, PaR>90days can be used as an extended proxy to potential of default with the gross loan portfolio. Finally, when all precautionary measures have been put in place, there is an ultimate indicator that amount for problems in the portfolio that is Write-offs Ratio. This ratio sums up all the defaults and bad loans in the portfolio, which need to be cleaned and written off from the financial books of MFIs.

The following discussions deal with the magnitude and impact of portfolio risk to IMFIs in details. The discussion will be divided into three parts, namely the magnitude of portfolio quality and default risk faced by IMFIs, the determinants of these portfolio and default risks, and the impact of portfolio and default risks on the sustainability and poverty outreach of IMFIs.

Table 12 Regression results of IMFIs Riskiness

	PaR>30days	PaR>90days	Write off ratio
MFI type – Islamic	**-0.022****	**-0.029****	**-0.010*****
	(0.010)	(0.014)	(0.003)
Return on Assets	**-0.293*****	-0.023	-0.018
	(0.094)	(0.042)	(0.018)
Yield on GLP – real	**-0.035***	-0.016	0.003
	(0.021)	(0.020)	(0.005)
Log no. of Active Borrowers	**-0.018*****	0.004	**0.005*****
	(0.005)	(0.004)	(0.002)
Average Loan Balance per Borrower to GNI/capita	0.003	-0.0006	-0.0005
	(0.003)	(0.001)	(0.000)
Percentage of Female Borrowers	**-0.049*****	**-0.023****	**-0.009***
	(0.016)	(0.011)	(0.005)
Log Cost per Borrower	**-0.015****	0.005	**0.009*****
	(0.007)	(0.007)	(0.003)
Log Total Borrowings	0.003	-0.003	**-0.002****
	(0.003)	(0.002)	(0.001)
Log Total Deposits	**0.008*****	-0.0002	**-0.003*****
	(0.002)	(0.002)	(0.001)
Age – young	0.007	**-0.030****	0.009
	(0.016)	(0.014)	(0.006)
Age – mature	**0.026***	**-0.031****	0.006
	(0.013)	(0.014)	(0.004)
Profit status – for	0.012	0.003	**-0.005***
	(0.008)	(0.008)	(0.003)
Legal status – bank	0.029	-0.089	-0.024
	(0.021)	(0.084)	(0.015)
Legal status – credit union	0.017	-0.070	-0.020
	(0.020)	(0.089)	(0.015)
Legal status – NBFI	0.009	-0.091	-0.022
	(0.018)	(0.085)	(0.015)
Legal status – rural bank	-0.007	-0.067	-0.024
	(0.025)	(0.085)	(0.016)
Legal status – NGO	**0.039***	-0.073	-0.023
	(0.020)	(0.088)	(0.015)
Region – E. Asia & Pacific	**0.024***	-0.012	**0.007***
	(0.015)	(0.012)	(0.003)
Region – M. East & N. Africa	0.007	0.013	0.004
	(0.020)	(0.025)	(0.005)
Region – South Asia	0.003	0.009	**0.015****
	(0.020)	(0.019)	(0.007)
Constant	0.132***	0.157	0.009
	(0.047)	(0.115)	(0.016)
N	746	785	746
adj. R-sq	0.077	0.035	0.062

Robust standard errors in parentheses: * p<0.10, ** p<0.05, *** p<0.010

5.5.1 How risky are Islamic microfinance institutions?

The main regression results in Table 12 suggest that portfolio quality of IMFIs is significantly negative, for all indicators. Portfolio at Risk past 30 days of the IMFIs is lower by 2.2 percent compared to conventional MFIs, while PaR past 90 days is lower by 2.9 percent. Likewise, Write off ratio is significantly negative and lower by 1 percent than other MFIs. The results indicate that despite difficult socio-economic condition in many countries where IMFIs located, they are unaffected as shown by the lower portfolio at risk and write off ratio. However, the results are different with the hypothesis on portfolio quality of IMFIs, which was assumed to be much poorer. The results suggest that IMFIs are less risky than conventional MFIs.

It could be suggested that IMFIs are relatively safe from default, as indicated by lower percentage of Portfolio at Risk (PaR) and Write off ratio (WOR). The negative signs signify that IMFIs have managed their loan portfolio at a healthy level, and reflect the lower riskiness of their borrowers. The results are also different from summary statistics table, where mean values of portfolio at risk for IMFIs are higher than the conventional MFIs. The summary statistics table measures central tendency of all variables, including PaR > 30 days, while panel data regression measures PaR > 30 days in relation to all relevant variables such yield, number of active borrowers, deposit, and more.

Further, the percentage of loans due more than thirty days (*PaR>30days*) is significantly lower by more than 2 percent, and so does the portfolio with more than three months delay of repayment/instalment (*PaR>90days*). This consistently low portfolio at risk, as well as lower write off ratio, implies that the borrowers are neither delaying payments to IMFIs nor avoiding them altogether. The assumption that IMFIs face a higher exposure to portfolio and credit risks of their clients is not evident in this regression, despite unique characteristics of Islamic financial products that are more risky and uncertainty in socio-economic and political situation.

Intuitively, these results suggest that clients of IMFIs have no difficulty to repay their loans in either the short period of one month or in the relatively longer period of three months. Hence, it could be argued that IMFIs are less risky than conventional MFIs. These regression results provide an evidence to suggest that IMFIs are less risky or facing less risky clients than conventional MFIs. The following discussions deal with the determinants and impacts of risk factors to IMFIs in details.

5.5.2 Determinants of portfolio and default risk

For the first model, the results show that IMFIs have a significantly lower short-term portfolio at risk, as indicated by negative coefficient of 2.2 percent. The results imply that portfolio quality of IMFIs is relatively higher than conventional MFIs, possibly resulted from more rigorous portfolio management of the IMFIs or repayment characteristics of their borrowers (El-Komi and Croson, 2013). As mentioned in the earlier section, this lower portfolio at risk is achieved despite unfavourable condition facing IMFIs.

From the regressions, the relationship between profitability and portfolio risk is significantly negative, and as the return on assets increases by 1 percent, the percentage of portfolio at risk will decline by 29.3 percent. The result is consistent with theory and hypothesis, which says that since the profitability of IMFIs negative then portfolio at risk would be higher or positive. Yield on loan portfolio is also significantly negative to the first model of portfolio at risk, which is consistent and similar with the relationship between ROA and PaR>30days.

Further, the result shows that percentage of female borrowers is negatively related to portfolio at risk and write off ratio, which denotes that a decrease in one percentage of female borrowers at IMFIs will increase percentage of portfolio at risk by 4.9 percent, and even default. This result emphasises an important point on the approach of IMFIs that target 'family' rather than commonly targeted women borrowers. The negative relationship implies that if IMFIs were to minimize portfolio risk, they should increase participation of women borrowers in their portfolio. In microfinance literature, the repayment rate and compliance of women borrowers are significantly higher than men, hence it makes sense why women borrowers are less risky in microfinancing (D'Espallier et al., 2011). While the approach of targeting family as a unit has its merit, targeting women borrowers will in the end also assist the family, and perhaps more so because when women participated more actively in economic activities, income and welfare of the family would improve.

Number of active borrowers or outreach is also an important determinant for portfolio quality of IMFIs. The result suggests that an increase in one percent of the number of active borrowers will adversely affect portfolio at risk by 1.8 percent. This negative relationship implies that larger number of clients increase riskiness of IMFIs. This result also suggests that additional clients increase risk profile and potentially portfolio risk of IMFIs. Implicitly, IMFIs should impose rigorous clients selection process, because by

design an increase in number of clients will entail more exposure to portfolio and other type of risks brought by larger and more diverse borrowers.

Similar to PaR>30days, the second model PaR>90days embodies portfolio risk of MFIs for loans that are due and have not been paid by the borrowers. This indicator measures the percentage of loans that could pose potential risk to MFIs, as denoted by the percentage of loans that are due for more than ninety days or three months. This indicator represents a higher risk for MFIs as the delays in payment are more than twelve payment/collection cycles, assuming MFIs are having four weekly group meetings for collection, disbursement, or payment each month. As the IMFIs dummy variable is significantly negative in this second estimate, it means that the percentage of loans that are due more than three months are lower for IMFIs.

Likewise, percentage of female borrowers also adversely affect the portfolio at risk past due 90 days by 2.3 percent, as it does to portfolio at risk past 30 days. This negative relationship highlights the importance of female borrowers to portfolio quality of IMFIs. While the current approach of targeting family as clients has its advantage in terms of broadening clients base, the result merits consideration.

In addition, age of IMFIs is an important determinant. As the institutions begin their journey in microfinance, IMFIs are expected to be more cautious and vigilant in their client selection process. The result suggests that older IMFIs has significantly positive relationship with PaR > 30days by 2.6 percent, but negative by 3.1 percent with PaR>90 days. It means that older IMFIs have higher percentage of portfolio at risk in the short term (over one month) but lower portfolio at risk over a longer-term period (over three months). The borrowers of IMFIs are only delaying their repayment or instalments, and eventually settle their loans. This finding challenges the results of studies on the business cycle of microfinance, for instance Wagner (2012) and Hollis and Sweetman (2001) that indicate more mature MFIs suffer higher risks than the younger ones.

5.5.3 Determinants of default

Performance of IMFIs is also determined by percentage of losses recorded in their book, or write off ratio. The final model summarizes the results of these bad loans and indicates whether write off ratio is detrimental to IMFIs or not. The result shows that write off ratio of IMFIs does not pose any concern, as it is significantly negative. Hence, there is a strong evidence to suggest that write off ratio for IMFIs is lower by 1 percent than their conventional counterparts.

A significantly lower write off ratio can be explained by number of active borrowers, percentage of female borrowers, cost per borrower, borrowings and deposits. The first two indicators represent outreach; both scale and depth of outreach, and the rest of the significant variables represent cost factors. The scale of outreach indicator shows that an increase in one percent of Number of Active Borrowers will increase Write off ratio by 0.5 percent, while an increase in Percentage of Female Borrowers will reduce Write off ratio by 0.9 percent. This different effect of scale and depth of outreach to default risk indicates that depth of outreach is more significant to IMFIs. Percentage of female borrowers is indeed an important factor for portfolio quality of IMFIs, as previously been discussed in PaR>30days and PaR>90days models.

This result confirms that higher participation of women borrowers reduces exposure to risks and default of IMFIs (D'Espallier et al., 2011). Although most of IMFIs do not specifically target women borrowers, this finding suggests that conventional practice of serving only women borrowers has sound empirical support. Probably it is about time for IMFIs to consider their approach in selecting clients.

5.5.4 The effect of outreach and profitability on risk profile of IMFIs

Overall, the main effect of lower poverty outreach or profitability on portfolio at risk and write off ratio is mixed. As predicted, outreach indicators are mainly negative to portfolio at risk and write off ratio, suggesting that increase in number of borrowers, including higher percentage of female borrowers, will reduce portfolio at risk, but not write off ratio. It seems that higher scale of outreach will increase write off ratio. This latter result implies that large number of borrowers in IMFIs loan portfolio are high risk or involved in high risky ventures, which in hindsight is consistent with the hypothesis that non-profit MFIs will take more risk than profit oriented ones. Since most of IMFIs are non-profits, this result is consistent and reasonable.

Further, percentage of female borrowers seems to be an important factor for overall portfolio quality of IMFIs. This proxy to depth of outreach is significantly negative for both portfolio risk indicators and write off ratio. This result confirms that higher participation of women borrowers reduces exposure to risks and default of IMFIs by 0.9 percent. Although most of IMFIs do not specifically target women borrowers, this finding suggests that conventional practice of serving only women borrowers has sound empirical support. Based on this result, IMFIs could consider their approach related to clients selection that involves family unit and not just women.

However, for profitability indicator, the relationship with portfolio at risk and write off ratio is only significant for one model, i.e. portfolio at risk past 30 days. Despite insignificant result, return on assets indicator has a negative relationship with all risk indicators. This negative relationship implies that higher profitability will reduce portfolio and default risk, which is consistent with the hypothesis.

Finally, although the R-squared of the estimation results are very low, unlike previous studies by Cull et al. (2007) or Crabb and Keller (2006), the overall regression results in Table 12 provide some clues on the portfolio quality of IMFIs and its determinants. Profitability, outreach, and cost are certainly the main contributor to portfolio quality and credit risk of IMFIs.

5.6 Conclusion

This chapter aims to shed some lights on the performance of IMFIs and their encounter with portfolio and credit risks. The chapter also examine the response of IMFIs when exposed to different types of risks *vis-à-vis* their primary objectives of poverty alleviation and sustainability. The overall results suggest that IMFIs are facing different but less severe risks than their conventional competition due to funding mechanism and the nature of Islamic financial contracts.

While majority of IMFIs clients are from the poorest segment in the society, often with lower educational level, and live in countries considered to be high risk or have histories of instability, the risk profile of IMFIs remain moderate and manageable. In fact, Islamic microfinance sector survives and thrives in many countries with history of prolong conflict and natural disasters. In some instances, the IMFIs are relatively able to contribute to poverty alleviation in these countries and sustain their operations. The main contributing factors to the resilience of IMFIs are their unique funding mechanism and lack of leverage.

As for the results, this chapter finds that IMFIs are less vulnerable and face lower percentage of payment delays and default. Likewise, determinants or factors contributing to portfolio and credit risk at IMFIs are profitability or return on assets, percentage of women borrowers, and cost of funds. These indicators are important for the survival of IMFIs in the long run, as they will face tougher competition and intense commercialization.

The next chapter will dwell in greater details on sustainability of IMFIs vis-à-vis poverty alleviation objectives, and how do poor financial performance and manageable portfolio risk affect IMFIs in their pursuit of this mission. The issue of mission drift will be

the main focus of the next chapter, while incorporating the results in the previous and current chapters.

Chapter 6. Will Islamic microfinance institutions abandon poverty mission? Analysis of 'mission drift'

"Commercialization has been a terrible wrong turn for microfinance, and it indicates a worrying 'mission drift' in the motivation of those lending to the poor. Poverty should be eradicated, not seen as a money-making opportunity." Muhammad Yunus (The New York Times, 14 January 2011)

6.1 Introduction

The issue of mission drift has attracted many researchers and observers, especially with the emergence and availability of more reliable data and the entry of many commercial financial institutions into microfinance sector, which raised a question on their poverty alleviation mission. Consequently, mission drift research has also evolved into a new sub-topic of its own within microfinance studies. One of the reasons for such rapid growth and interest is the inconclusive outcome from most studies, which further escalates the debate in microfinance and produces no definite winner. The main issue whether a trade-off is ever presence, or whether microfinance institutions (MFIs) have indeed been drifting away from its main cause, and most importantly whether the mission drift itself is bad or good for the poor.

This issue gains more interest, as microfinance is slowly becoming an important sector in the developing economies, primarily as a tool for poverty alleviation and more recently as an instrument for financial inclusion strategy. There is also a strong association of economic development with financial development as established by among others Levine (1997), hence the importance of microfinance in engaging with those outside financial system i.e. the poor or non-banked population. This realisation has also influenced developing countries to adopt a strategy to enhance the role of microfinance institutions or microfinance programmes to be in line with a broader financial development or financial inclusion strategy (Cull et al., 2013).

The move has certainly encouraged the creation of more microfinance initiatives, which is already attractive with its legendary high repayment rate and high returns. According to Microcredit Summit, a body established by United Nations in 2005, there are at least 3,652 MFIs in the developing world, serving more than 205.3 million poor clients in 2012, of which 137.5 million are the poorest and 56.5 percent are women (Reed, 2011). Along with overall development, an important and more subtle development is also taking

place in investment funds dedicated to microfinance sector, or often referred to as impact investment funds. This commercial funding vehicles drives the MFIs to further engage with commercial or profit oriented business activities and open up a possibility for a mission drift.

However, such important topic and development seems to be lacking in the discourse of Islamic microfinance. While Islamic finance studies are increasingly addressing crucial issues faced by the industry, Islamic microfinance researches are largely dealing with legal or contractual issues or *shariah* governance and very few provide robust empirical analysis on the performance or efficiency of IMFIs. As institutions that put forward social and religious missions in their very existence, it is imperative for IMFIs to consider the issue of poverty alleviation impact of IMFIs or mission drift.

This chapter attempts to identify the presence or absence of mission drift in Islamic microfinance institutions. As mentioned by Muhammad Yunus in his New York Times article (Yunus, 2011), commercialization is currently the new and main driving force in microfinance at the expense of poverty alleviation effort. Since more than half of the world's poor are living in the majority Muslim countries, it makes an even important case for this study to identify any deviation from poverty mission among IMFIs.

The chapter finds that there is no clear evidence on the presence of mission drift at IMFIs. Although there is significantly negative relationship between IMFIs with the percentage of female borrowers, the average loan size to income per capita is negative, suggesting a more attention is given to the poorest segment by maintaining or reducing the loan size. The result is similar with existing literature i.e. there is no conclusive evidence of mission drift from existing microfinance institutions as suggested by Mersland and Strøm (2010) and Kar (2013b). However, the result does not conform to the argument that supporting the better-off poor is a necessity, as for instance Navajas et al. (2000) who claim that most of the poor households reached by the microfinance organizations are near the poverty line i.e. the richest of the poor.

The following sections will be arranged as the following. Immediate section will discuss a comprehensive review of literature that covers all key studies on mission drift, both from conventional literature as well as Islamic finance or microfinance researches. The next section will review data and estimation methods, to be followed by discussions on results and analysis. Finally the chapter will conclude with some final thoughts on policy implications, limitation of the current study, and identification of future researches.

6.2 Literature review

The surge in academic papers that discuss microfinance in recent years is unprecedented since the emergence of microfinance institutions in early 1970s. In addition to increasing popularity and alleged success of many microfinance institutions, the availability of data in recent decades has been the main reason for this surge (Brau and Woller, 2004).

The attention of microfinance studies have in recent years shifted from conceptual debates on the feasibility of microfinance to alleviate poverty towards analysis on performance of microfinance institutions, including aspects of efficiency, sustainability, and impact of poverty alleviation. This is evident from recent studies that take stock of what have been researched in microfinance in the last two or three decades, by among others, Armendariz and Labie (2011a), Banerjee (2013) and Cull et al. (2013). This change is in line with the shift in focus of microfinance institutions, which have gradually been moving away from providing only microcredit to offering diverse financial products that serve the growing needs of the poor, such as savings and insurance. As such, the products and services offered are slowly and increasingly targeted to achieve a broader objective of financial inclusion (Ledgerwood et al., 2012, p.1).

These changes have encouraged even more diverse and wide-ranging researches on microfinance. A large number of recent microfinance literature deals with the impact of competition and commercialization on microfinance institutions, such as trade-off between poverty mission and profitability. Trade-off between sustainability and poverty outreach is one of the established aspects of microfinance studies. While in theory, microfinance is suggested to meet double bottom line, some notable empirical studies suggest otherwise. Another extension from trade-off studies is mission drift, or the case where microfinance institutions are deviating from its original objective of poverty alleviation.

The association of microfinance with poverty alleviation cannot be underestimated. Poverty is the main reason for the emergence and the existence of microfinance. In fact, Hishigsuren (2007) posits that for an institution to be called microfinance institution it has to have poverty alleviation mission embodied in its organisation.

One of the conclusions in many studies is that mission drift does occur, for instance as alluded by Copestake (2007). Mission drift occurs as a result of commercialization (Hamada, 2010), or high operational cost to serve the poor (Serrano-Cinca and Gutiérrez-Nieto, 2013). On a positive side, commercialization seems to improve the ability of the MFIs to expand their credit outreach due to its ability to raise cheaper funds from

commercial lines. For instance, Hamada (2010) suggests that many MFIs do have strong social performance measures internally. Therefore, there is a scope for better social performance management, especially through better clients targeting, product design, alignment of organisational goals, and enhancing external relationship with all key stakeholders.

6.2.1 Defining mission drift

Mission drift is a situation where microfinance institutions sacrifice their primary mission of poverty alleviation and instead pursue profitability or sustainability objective. Mission drift occurs when MFI has abandoned its objective of serving the poorest or the most vulnerable segment of the society and instead pursue the more affluent clients. This could happen when MFIs find it more profitable to serve the wealthier borrowers while 'crowding out poor clients' (Armendáriz and Szafarz, 2011). This shifting can be identified by among others an increase in the loan size or average loan balance the MFI is loaning to its poor clients.

As such, mission drift is theoretically assumed to occur when microfinance institutions put more emphasis on financial than social performance, while empirically it is to be found when average loan size increases, as wealthier clients requires larger amount of loan than what poorer clients would normally need (Forkusam, 2014). However, an increase in average loan size may not necessarily means mission drift, but the clients might have graduated or becoming better off financially (Mersland and Strøm, 2010). Therefore, mission drift only occurs when the increase in loan balance or loan size is purely a shift in orientation, and not driven by progressive lending, graduation of existing clients or cross-subsidization reasons (Armendáriz and Szafarz, 2011).

There are two arguments on the origin and driving force behind mission drift in microfinance, one is market force to the MFIs and the other is demand driven. The former takes several forms, such as a) forces of competition from multitude of organisations offering microcredit, mainly from more efficient and larger commercial banks, b) commercialisation of funding, with the influx of funds from ethical or impact investment funds, and c) simply the needs to serve up better off clients as the MFIs are more concerned with long term sustainability. These forces can be summed up as a form of 'financial discipline' imposed by international organisations as the main stakeholders of many MFIs in the developing world (Augsburg and Fouillet, 2010). Interestingly, the same authors also find a much broader activities in microfinance that could lead to mission drift or other negative repercussion, which Fouillet and Augsburg (2007) coined

'microfinanciarization'. The term was published in their conference paper that; "…presents the preliminary results of a long-term study on the geo-economic analysis of microfinance and, more specifically, of microfinanciarization. What is microfinanciarization? In the broadest sense, microfinanciarization is the process of structural change that involves financial inclusion, 'bankarization', or the regulation of informal financial practices, and the utilization of voluntary sector and third sector capabilities in the provision of financial services to people who are excluded from financial and banking institutions – i.e., from 60 to 90 % of the entire population."

On the demand side, clients could also instigate MFIs to move away from serving poverty objectives. In rare occasions, clients who have graduated or moving out of hard core poverty may demand larger size of loans, either because their microbusiness has become bigger or their financial needs have increased. In this circumstance, the MFIs may move along with the higher demand and expectation of their clients. The broader economic development impact may also trigger this demand led shifting in the focus of MFIs, such as the case of Malaysia that has been able to advance economically and hence improve the welfare of its people including the hard core poor. Malaysia's sole IMFIs Amanah Ikhtiar Malaysia has been experiencing such shift, where it is currently offering much higher loan balance to its customers than two decades ago (Al-Mamun et al., 2014).

6.2.2 Views on mission drift

There are three views on mission drift. The first is that it is merely a natural phenomenon of up-scaling, second is due to commercialization that affect cross-subsidization, and finally a corporate governance problem (Abeysekera et al., 2014). In addition, a recent study by Xu et al. (2015) claims that mission drift is not only influenced by MFIs specific factors but it is also associated with macroeconomic context such as foreign direct investment and availability of private credit.

The idea or proposition that microfinance institution will evolve from lending small amount of loans into serving relatively larger amount of financing is ideal, which is the same with the evolution of micro borrowers or micro-entrepreneurs who grow as a borrower and become better-off economically. This idea was tested by some donor agencies through CGAP in cooperation with BRAC and they propose a graduation model (Hashemi and de Montesquiou, 2011). However, as the MFIs are scaling up their operations they could in the process left behind the most needy clients, and hence caused mission drift (Hishigsuren, 2007).

The first view also explain that MFIs remain committed to poverty alleviation model, and their engagement with more wealthier clients does represent mission drift but to allow cross-subsidisation of their operations and ultimately for sustainability of the MFIs and their mission. The argument that economic development or growth support the performance of MFIs also testify this view, especially the evidence put forward bv Ahlin et al. (2011) that suggest microfinance flourishes well in richer or high growth countries. And a positive relationship between economic growth and financial development of a country is an established argument in economic literature, as asserted by among others King and Levine (1993) and Green et al. (2005), as well the reverse relationship i.e. the impact of microfinance or finance to economic development (Ahlin and Jiang, 2008).

The second view follows the trade-off argument that this research is adopting, where mission drift is an effect of intensifying commercialization in the microfinance sector, marked by an influx of commercial based MFIs (banks, NBFIs, etc.) into the sector as well as the emergence of microfinance investment funds, instigated by the rise of ethical and impact investments in developed countries. In addition, the rapid growth of microfinance sector has also launched changes in regulatory regime in many developing countries, where financial authorities are anxious this unprecedented growth and few failure instances such as Andhra Pradesh would escalate and affect the overall financial systems. The trend in many countries is towards a more regulated microfinance sector, which is translated by regulators as requiring the MFIs to operate as formal entity, as opposed to being an NGO.

This development forces microfinance institutions to adapt with a new approach in their daily activities. Gradually, as MFIs convert from NGO into non-bank financial institutions or other formal legal status, they embrace commercial identity and ultimately also a commercial objective in their mission. Hence, a mission drift occurs through the process of adapting the MFIs to an inevitable structural and regulatory changes.

The third view suggest that governance at MFIs is the culprit for mission drift, i.e. the management of the MFIs simply divert financing to the more attractive and arguably more lucrative segment of microloans.

6.2.3 Mission drift in Islamic microfinance

Islamic microfinance adopts a normative approach in its operations. Although profit is important and recognised in Islamic commercial law, Islamic financial institutions (IFIs) are not compelled to pursue profit. Even if they are pursuing commercial interest, the

mechanism of Islamic financial transactions are such that it allows IFIs, or in this case IMFIs, to share the profit with their customers or clients. Hence if IMFIs are using profit and loss sharing, then any mission drift would not necessarily a bad thing for their poor borrowers because they might be able to benefit from additional revenue or profit.

As has been explained by Smolo and Ismail (2011), there are three main contracts used in Islamic microfinance, namely partnership or equity based, trade finance-based and charity based. They are similar to what being used by other IFIs such as Islamic bank. Islamic microfinance products and services will have similar characteristics as the others, namely risk sharing based, deferred payment, rental or leasing based, and some form of guarantee schemes. The other additional product that is widely available for Islamic microfinance institutions is mobilization of funds through charitable arrangements, such as *zakat* (obligatory alms tax), *sadaqah* (voluntary donation), and *waqf* (perpetual trust endowment). Neither Islamic commercial financial institutions nor most of the conventional institutions have this privilege of drawing from religious based charity and almost free source of funds.

This was made possible because the nature of Islamic microfinance is designed to serve the hard core poor in the Muslim society. Islamic microfinance originates from the experiment of Mit Ghamr Savings Bank in the Nile delta of Egypt, which is also claimed to be the first experiment of an Islamic bank (El-Komi and Croson, 2013). Mit Ghamr was essentially a cooperative designed to serve rural farmers and traders with Shariah compliant financial products, i.e. non-interest, that are suitable to the local community. It was established by an economist Ahmad Al-Najjar, who upon returning from his graduate study in Germany wanted to provide the poor in his hometown with an access to financial services. He was driven by his belief that a (rural) bank should invest in socially driven activities, such as educating customers on savings and the importance of capital accumulation (Mayer, 1985). Al-Najjar borrowed some of the structure of Mit Ghamr experiment from German local savings banking Sparkassen, which impressed him during his stay as PhD student in Koln, Germany (Çizakça, 2011, p.135). In its short life span from 1963 to 1967, Mit Ghamr was able to demonstrate that non-interest finance was possible.

However, along the way such initiative and subsequent endeavour to develop Islamic financial institutions that are closed to the society has deviated. For example, Rahman (2007) and Dusuki (2008) argue that despite historical link to rural savings bank of Mit Ghamr, microfinance is simply missing in the development of Islamic finance until several years ago. The focus of Islamic finance had been on the expansion of commercial

banks, insurance, investment banking, and capital markets, despite convincing accounts from Shahinpoor (2009) on the already existing platforms within Islamic finance to allow microfinancing products and services to flourish.

Among the arguments is the nature of Islamic finance and banking that are based on risk sharing principles, that encourage IFIs to work with any type of customers not only those with collaterals. In fact, most of the Islamic banking contracts do not require collaterals, hence feasible for the Islamic banks to finance microenterprises or the poor. The nature of Islamic banking itself is also more than just commercial entity; working with the poor is a natural outlook of an Islamic bank (Dusuki, 2008). Therefore, the apparent neglect by early Islamic financial institutions of the historical practice and the original mission may constitute the real 'mission drift' in Islamic finance in general, and not confined to microfinance *per se*.

Fortunately, this issue of commercialisation and disconnection in Islamic finance has been addressed and discussed. The emerging studies propose to expand the reach of current Islamic banking to micro entrepreneurs, despite the interest from Islamic finance industry at large has been discouraging so far, at least until several years ago. For instance, Mirakhor and Zaidi (2007) attempt to define Islamic finance and offer a clear perspective on the main differences between Islamic and conventional banking. They suggest that: "…(under conventional system) the interest rate is either fixed in advance or is simple linear function of some other benchmark rate, whereas in the (Islamic banking), the profits and losses on a physical investment are shared between the creditor and the borrower according to a formula that reflects their perspective levels of participation (Mirakhor and Zaidi, 2007, p.49)."

This definition resonates well with the features of Islamic microfinance espoused by Ahmed (2002), who among others suggests that Islamic microfinance have some distinctive characteristics that should define the behaviour and qualities of IMFIs. For instance, a) source of funds for IMFIs should derive from several sources, such as external funding from donor agencies, deposits, commercial loans from Islamic financial institutions, and charity or trust endowment; b) with the integration of charity into microfinance operations, IMFIs shall have the advantage of focusing on outreach using charitable funds without any restriction on cost or profit considerations; c) IMFIs generally emphasizes on family as the main beneficiary and client, which is shown in the financing or loan structure where a husband is always part of the liability borne by women's borrowing, although not applied in the reverse situation. Hence, the purpose of loan also directed towards empowerment of the family as the smallest unit in a society; d) in case of

default, clients of IMFIs could resort to charitable funds to help them with debt, where they are unable to pay the loan. Charity funds such as zakat, in this case, can function as a buffer of safety net for IMFIs; and finally e) Islamic microfinance is driven by both social and to a degree religious responsibility. This may lead to incorporation of religious sentiment in the microfinance programme, such as using mosque as a place for disbursement and collection. This was done to create a sense of religious responsibility in managing the money received as loan, i.e. to be diligent with its use and repay it on time.

6.3 Development of hypothesis

This chapter aims to address issues related to whether IMFIs would trade off poverty mission given the challenges of competition and commercialization, and whether poverty alleviation remains an important objective to IMFIs. These issues evolve around research questions identified from the literature, namely what is the impact of modest financial performance and risk profile on IMFIs? Has poverty alleviation mission been sacrificed by IMFIs in their pursuit of profitability and sustainability? If so, what are the reasons behind this departure or 'mission drift' by IMFIs?

More particularly, this chapter aims to determine the extent of outreach of IMFIs and explain the cause of any mission drift that could be useful in the formulation of strategy by IMFIs themselves, donor agencies and the regulators. The drive of commercialization and intensifying competition in microfinance sector are two major forces that have influence MFIs, conventional or Islamic, to adjust their business strategy if they were to continue the mission of effectively alleviate poverty. While mission drift is a measure of depth of outreach, the scale can be used to estimate the magnitude of mission drift and to test the mission drift hypothesis, i.e. mission drift causes number of borrowers (scale of outreach) to increase at the expense of depth of outreach (higher average loan size and lower percentage of female borrowers).

The first hypothesis is related to scale of outreach. Scale or breadth of outreach explains the ability of IMFIs to provide as many loans as possible to the greatest numbers of borrowers or clients. This ability in turn depends on the assets size, capital strength, number of loan officers, and other institutional capacity of IMFIs. The ability of IMFIs is clearly much lower compared to conventional MFIs, as suggested by among others El-Zoghbi and Tarazi (2013), Karim et al. (2008). Therefore, this research conjectures that IMFIs will have lower outreach, indicated by significantly less number of borrowers compared to conventional MFIs.

The objective of many IMFIs is to serve the poorest among Muslim communities and gradually improve their sustainability (Ahmed, 2002). There is a growing acceptance that a compromise between the two is possible, which is to say that MFIs could target the poorest community or focus on outreach but at the same time achieve financial sustainability, at least conceptually (Morduch, 2005) or in limited country study of Islamic microfinance in Thailand (Tawat, 2014). Thus, IMFIs are going to pursue outreach vis-à-vis sustainability, at least they will maintain a relatively smaller loan size and target higher percentage of women borrowers but not in numbers of poor customers to be served. However, in so doing, IMFIs will face constraints in reaching out to larger number of potential clients, and hence could make less number of loans to the poor.

Since IMFIs are relatively smaller in their scale of operations, having shorter history, and equipped with less capital than conventional microfinance sector, they may not be able reach out to larger number of poor people, unlike conventional MFIs. This condition suggests that IMFIs may serve less poor people or lower outreach than conventional. Therefore, the first hypothesis can be postulated as the following:

$H1_0$: There is no difference in outreach of Islamic and Conventional MFIs.

$H1_A$: IMFIs tend to have less outreach than conventional MFIs, especially scale of outreach.

The second question relates to the possibility of an IMFIs to abandon poverty alleviation mission and pursue instead a more profit-oriented objective. As suggested by Islamic finance literature, Islamic financial institutions are socially and religiously driven, which means they have strong preference towards social objectives and less inclination to commercial gain.

The formation of the first Islamic bank was motivated by the lack of shariah compliant financial services accessible to devout Muslim farmers in rural Egypt, hence the establishment of Mit Ghamr Bank in 1963 (El-Komi and Croson, 2013). The same motive to improve welfare of the Muslims and serve their needs for interest-free financial services was the main driving force behind the establishment of succeeding Islamic financial services, including Tabung Haji in Malaysia (1969), Islamic Development Bank (1974), and Dubai Islamic Bank (1975).

This close association with the well being of their customers has also motivated the subsequent creation of IMFIs (Elhiraika, 1996, Harper, 1994). An inclination towards social objective drives IMFIs to concentrate on poverty alleviation and aim to serve as many poor clients as possible. This is also supported by the nature of funding sources of

IMFIs. According to Ahmed (2004), large numbers of IMFIs are funded by donors, government programs, and increasingly charitable instruments such as compulsory alms giving (zakat), or voluntary trust endowment funds (waqf).

It is therefore appropriate to classify IMFIs into 'welfarist' type of microfinance, as oppose to 'institutionist'. Welfarist microfinance is characterized by an overall objective to alleviate poverty and improve the well-being of the poorest segment in the community, hence propagates outreach as the primary goal of microfinance institutions. On the other hand, institutionist microfinance emphasizes the important of sustainability and long term operations of microfinance institutions with the aim to serve larger number of poor people for a much longer period (Morduch, 2000, Hermes et al., 2011).

In addition, most of the IMFIs are relying on subsidised or non-commercial sources of funding, in particular from charitable sources and to a certain extend international development agencies. In comparison, most of the conventional MFIs rely on government subsidies, donor agencies, commercial funding instruments, and increasing by deposits from their clients. Access to charitable funds such as zakat or obligatory time or amount specific donation of the rich, *sadaqah* (ordinary donation), and *waqf* (cash of fixed assets endowments) is relatively unique to IMFIs, that even other Islamic financial institutions are excluded. This funding flexibility and diversity should allow IMFIs to maintain poverty alleviation as their priority mission and *modus operandi.*

Therefore, despite strong commercialization drive in the market and intensifying competition with conventional/commercial micro or large financial institutions, this chapter argues that IMFIs would not be affected by mission drift. Therefore, IMFIs in general would not be compelled to some form or mission drift or abandon their poverty alleviation objectives. A negative Average Loan Balance per Borrower of the IMFIs is expected to support this statement. Hence the second hypothesis will be stated as follows:

$H2_0$: There is no difference in mission drift of Islamic and Conventional MFIs.

$H2_A$: Mission drift phenomenon is less observed in IMFIs than Conventional MFIs.

The other indicator of mission drift is the situation when IMFIs are abandoning certain segment of marginalized clients such as women borrowers. Traditionally, MFIs are serving mostly female borrowers, which have been acknowledged with their consistently high repayment rate, to serve social objectives of gender empowerment and to diversify source of income for the poor family. However, as MFIs move towards a more commercial objective, they might neglect such social affirmation, despite studies that find high

percentage of female borrowers is positively related to high repayment rate or higher returns (D'Espallier et al., 2011).

In the case of IMFIs, the status of female borrowers is slightly different from conventional MFIs. IMFIs emphasise on the family or household as their primary clients, not exclusively women (Ahmed, 2002). This different treatment allows IMFIs to design much broader lending products or empowerment programmes than would otherwise been available by specifically targeting women customers. As such, lower percentage of women borrowers does not mean that IMFIs are experiencing a mission drift or abandoning poverty mission entirely, but only a change in proportion of clients.

However, since the literature considers percentage of female borrowers an important indicator of mission drift, i.e. lower percentage of female borrowers indicates mission drift; this research will maintain this indicator but will define the results slightly differently. As suggested earlier, the percentage of female borrowers for IMFIs will generally be less than conventional MFIs, hence the third hypothesis is stated as follows:

$H3_0$: No difference in customers selection of Islamic and Conventional MFIs.

$H3_A$: IMFIs are less likely to serve female borrowers than conventional MFIs.

6.4 Research design

6.4.1 Data

The paper applies quantitative approach using secondary data from MIX Market (www.mixmarket.org). MIX market provides the most reliable and comprehensive microfinance database that covers more than 2,400 MFIs globally, in which 38 of them are IMFIs. Although it has a growing number of IMFIs, the database covers a fraction of the ever-increasing Islamic microfinance industry. Most of the information are self-reported by the MFIs with some of them are reviewed and ranked by MIX Market before presented in an online database and its various publications. Most of the recent and relevant studies in microfinance have used MIX Market as their main source for data of MFIs, including Cull et al. (2007), Hermes and Lensink (2011), Kar (2011), and Vanroose and D'Espallier (2013).

The data for both Islamic and conventional MFIs have been collected and filtered to include only MFIs from the regions that have at least one IMFIs. The MFIs are classified into two types of MFIs, namely Islamic and conventional. This classification of dataset has not been done by any studies on Islamic microfinance or other similar studies.

The dataset is unbalanced panel data that consists of performance data from 1,320 microfinance institutions from four regions, namely East Asia and Pacific, South Asia, Middle East and North Africa and Eastern Europe and Central Asia. From this sample, there are 38 MFIs that are found to offer Islamic microfinance products, mostly operating as full-fledged IMFIs and there are three of them offering Islamic microfinance as a window operation. The IMFIs represent about 2.88 per cent of the total MFIs in the dataset, and in terms of data observations the IMFIs constitute only 3.48 per cent as shown in Table 13, or 266 out of 7,919 observations. This is slightly higher than what is reported in a recent literature that suggests the market share of Islamic microfinance in between 1-2 per cent in Muslim countries (El-Zoghbi and Tarazi, 2013).

Data analysis will use Islamic MFI dummy indicator *(MFItype–Islamic)* as the main independent variable. Multiple regressions will test this variable and other independent variables with two main groups of dependent variables, profitability and outreach. With this method, it is hoped that the analysis will be comprehensive to infer the existence and differences of trade-off between outreach and sustainability for IMFIs.

Table 13 Distribution of MFIs across countries

Region	MFI Type		Total	I-MFIs share
	Conventional	Islamic		
East Asia and the Pacific	1,888	32	1,920	1.7%
Eastern Europe and Central Asia	2,832	13	2,845	0.5%
Middle East and North Africa	484	151	635	23.8%
South Asia	2,449	70	2,519	2.8%
Total	**7,653**	**266**	**7,919**	**3.4%**

The MFIs disperse quite unevenly across different regions in the world, where MENA region dominates. Although MENA represents only 8 percent in the overall dataset, the number of IMFIs in this region is nearly 60 percent from total number of IMFIs across four regions. This fact might be crucial in the analysis as the region is predominantly Muslim, which could be an incentive to where IMFIs will flourish. Two regions that have no IMFIs have been removed from the sample, namely Africa and Latin America and the Caribbean (LAC). As Table 1 suggests, IMFIs are located mostly in the MENA region, with South Asia and East Asia and the Pacific follow far behind. IMFIs in the dataset consist of 38 MFIs originated from 14 countries, as summarized in Appendix 6.

However, as with other studies i.e. El-Zoghbi and Tarazi (2013), the dataset has an obvious limitation, especially the coverage of IMFIs is very limited. For countries like Indonesia, Bangladesh and Pakistan, where the growing number of IMFIs are operating,

only very few are listed in the MIX Market database. This is due to the nature of MIX database that is self-reporting. MFIs that submit data to MIX usually to comply with funding requirement or as part of global organizations that set higher disclosure and exposure standards. While majority of IMFIs in these countries are independent MFIs or owned by small religious or non-governmental organizations. They find no incentive to submit reports to MIX Market.

6.4.2 Summary statistics

The following table summarises the mean and basic statistics of all relevant variables for the estimation models. The first key variable is Average loan balance per borrower, which is in nominal term and suggests that loan per borrower is reaching an average of $2,053. As proportion to income per capita, the average loan size is 0.94 (94 percent), with maximum of 138.2. Secondly, the percentage of female borrowers across all MFIs is 62.2 percent, which is relatively moderate compare to conventional MFIs that have much higher percentage of female borrowers and many are serving exclusively the women clients such as Grameen Bank. This figure suggests that MFIs in the dataset consist not only of traditional or group based lending programs similar to Grameen Bank, but also other forms of MFIs.

The legal status of MFIs can be classified into six forms, as shown in the Table, namely bank, credit union/cooperative, Non-Bank Financial Institution (NBFI), Non-Governmental Organization (NGO), rural bank, and others. Although bank category (mostly commercial banks) constitutes only 13 percent of the total MFIs, it is a representative of large commercial banks that serve the poor using vast network, large capital base and years of experience such as Bank Rakyat Indonesia (BRI), one of the largest MFIs in the world according to Robinson (2001).

As for other variables such as NAB and total assets or size, the numbers also suggest that the presence of large conventional MFIs such as BRI (Indonesia), Grameen Bank (Bangladesh), SKS (India) in the dataset is quite dominant. This position is further reinforced by a high percentage of mature MFIs (over 8 years old), which consists of 57 percent of total MFIs.

The table also reveals some of the differences between conventional microfinance institutions with IMFIs. The main difference is with Average loan balance/size, both in nominal term and ratio to income per capita. The Average loan size per borrower of conventional MFIs is more than four times that of IMFIs, while the Average loan balance

per borrower to GNI/Capita is nearly three times that of IMFIs. However, this difference does not necessarily mean conventional MFIs are experiencing mission drift, while IMFIs are not.

The other striking differences are Number of active borrowers and Assets, which indicates the capacity and ability of conventional MFIs to serve poor customers, are more than double of IMFIs. The huge gap may be due to the state of conventional MFIs that started much earlier than IMFIs, and in fact in Muslim majority countries like Bangladesh and Indonesia, the early MFIs have been conventional, including Grameen Bank that was established by Muhammad Yunus. As the result, the conventional MFIs have been able to gain momentum and capture significant lead-time and market share, which has resulted in their robust structure and reach. This difference might reduce the capacity of IMFIs to compete financially with much powerful conventional MFIs in the current situation.

Table 14 Summary Statistics by type of MFIs

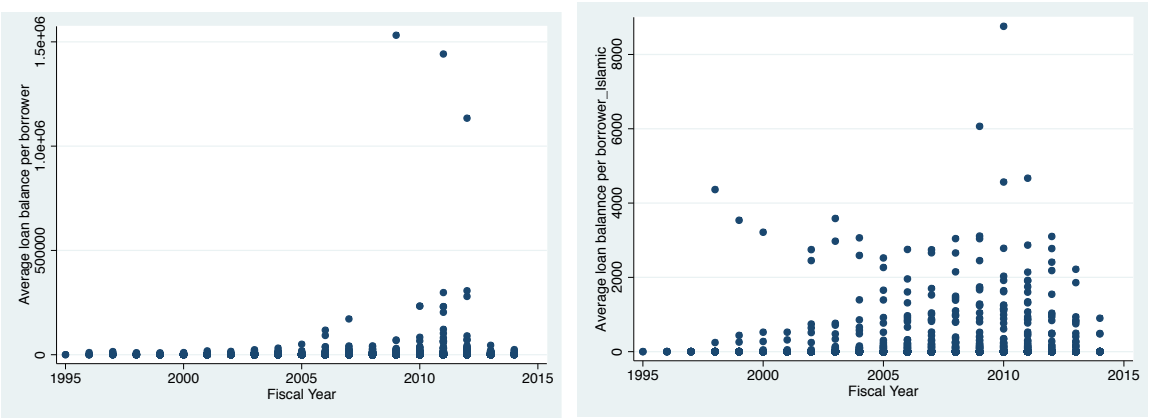
Variable	Conventional			Islamic		
	Obs.	Mean	Std. Dev.	Obs.	Mean	Std. Dev.
Number of active borrowers	6974	**90,255.390**	504556.000	246	**45,379.940**	116781.400
Log Number of Active Borrowers	6948	8.714	2.299	246	8.924	1.882
Avg. loan balance per borrower	6914	**4,268.119**	145883.200	245	**911.233**	1117.733
Avg. loan balance per borrower to GNI/capita	6868	**1.582**	46.806	242	**0.585**	0.780
Percentage of female borrowers	5180	0.619	0.263	191	0.563	0.228
MFI type – Islamic	7653	0	0	266	1	0
MFI type – conventional	7653	1	0	266	0	0
Return on assets	5764	**0.012**	0.161	207	**-0.028**	0.174
Yield on GLP – real	4293	0.243	0.165	125	0.256	0.129
Total assets	7324	**52,400,000**	689000000	253	**20,200,000**	45400000
Log Cost per borrower	5266	4.217	1.523	196	4.60	1.18
Log Borrowings	4798	14.573	2.281	176	14.16	2.34
Log Deposits	5308	**6.48**	8.80	201	**4.40**	8.05
Portfolio at Risk > 30 days	5846	**0.058**	0.150	209	**0.12**	0.40
Portfolio at Risk > 90 days	4604	0.046	0.085	159	0.05	0.05
Write off ratio	5172	0.014	0.068	186	0.01	0.05
Age – mature	7354	0.574	0.495	258	0.465	0.500
Age – young	7354	0.225	0.417	258	0.287	0.453
Age – new	7354	0.202	0.401	258	0.248	0.433
Profit status (for)	7212	0.408	0.491	260	0.350	0.478
Profit status (non)	7212	0.592	0.491	260	0.650	0.478
Legal status – bank	7587	0.133	0.339	263	0.160	0.367
Legal status – credit union	7587	0.181	0.385	263	0.065	0.246
Legal status – NBFI	7587	0.294	0.455	263	0.270	0.445
Legal status – NGO	7587	0.342	0.475	263	0.506	0.501
Legal status – rural bank	7587	0.035	0.184	263	0	0
Legal status – other	7587	0.015	0.123	263	0	0
Region – EAP	7653	0.247	0.431	266	0.120	0.326
Region – MENA	7653	0.063	0.243	266	0.568	0.496
Region – SA	7653	0.320	0.467	266	0.263	0.441
Region – EECA	7653	0.370	0.483	266	0.049	0.216

6.4.3 Graphs of outreach variables

The occurrence of mission drift could be recognized from the graphs in Figure 4, 5, and 6. The first set of graphs is the average loan balance per borrower in US dollar terms or nominal, as presented in Figure 4. The first part 4(a) is the trend of Average loan balance per borrower for conventional MFIs from 1995 to 2014, while the second part 4(b) is depicting the trend for IMFIs. It could be inferred that the rise in nominal average loan size for conventional MFIs in 4(a) is quite obvious despite few outliers, especially from 2005. However, the same conclusion might not be so obvious in the 4(b), which may

suggest why the increase in average loan size as an indicator for mission drift is not substantial.

Figure 4 Average loan balance per borrower (nominal)



The second set of graphs, Figure 5 illustrates the trends in Average loan balance per-borrower to GNI/capita for both conventional and IMFIs. In the regression analysis, this variable is the main proxy to measure mission drift, hence the two graphs 5(a) and (b) are important to understand the mission drift hypothesis of this paper. By ignoring few obvious outliers, we can gauge that Average loan size to income per capita is moving in arbitrary ways, not as linear as previous graphs. The trends could provide a hint at the presence of absence of mission drift at MFIs in this research, especially for IMFIs.

Figure 5 Average Loan Balance per Borrower to GNI/Capita

The final group of graphs depict the scale of outreach of MFIs in term of clients or borrowers they have in their portfolio. The Number of Active Borrowers (NAB) indicator represents the scale of outreach for MFIs. Figure 6(a) suggests that over the years, number of active borrowers served by MFIs has increased, although with varying degree of outreach. Majority of MFIs are serving less than 2 million borrowers, indicated by thick dots just above the axis. Similarly, the number of active borrowers at IMFIs in Figure 6(b) has also been steadily rising, especially from 2005. Unlike the overall microfinance

industry, the average number of borrowers for IMFIs is below 200,000 clients, with few exceptions that could be considered as outliers.

Figure 6 Number of Active Borrowers

6.4.4 Estimation methods

This research uses Ordinary Least Squares (OLS) regression to examine the occurrence of mission drift at Islamic microfinance. Pooled OLS is used for its suitability with research questions this chapter is pursuing, while Random Effects (RE) will also be used to ensure the results are robust and reliable. The chapter follows the models used by Kar (2011), Kar (2013b) and to certain extent Vanroose and D'Espallier (2013).

$$Y_{it} = \alpha + \beta_1 \, IMFI_{it} + \beta_2 \, Yield_{it} + \beta_3 \, Cost_{it} + \beta_4 \, PortfolioQuality_{it} + X_{it} + \varepsilon_{it} \quad \ldots.(4)$$

Where:

Y is vector of dependent variables consisting of indicators that measures depth and scale outreach. The objective of outreach regression is to determine whether there is any evidence of mission drift at microfinance institutions. Y represents dependent variables for two categories:

a. ***Scale of outreach***

Number of Active Borrowers is the main and only indicator used to proxy the scale of outreach of IMFIs in nominal terms. This indicator signifies that the larger the number of borrowers the more poor people are reached and served by IMFIs, regardless of the size of loans or the gender of the borrowers. It is the first indicator to measures the success of IMFIs in providing loans to the poor, as it demonstrates the ability of IMFIs to reach out to poor customers. In some instances, IMFIs do not report this number as it is not a common practice for such IMFIs, especially commercial banks that operate in micro lending

segment. Therefore, the NAB data that is currently available in microfinance databases might understate the actual figure of poor people served and reached by all IMFIs. However, this unaccounted numbers may be compensated by the fact that some borrowers might be reported twice or multiple times as they are clients of more than one IMFIs. Hence, with all its weaknesses NAB is a reasonable proxy to scale of outreach for most IMFIs.

b. Depth of outreach

Depth of outreach signifies the commitment of IMFIs to the poorest and the most marginalized segment of the poor i.e. lending to those that borrow small amount of loan at a time and having higher percentage of women borrowers in the portfolio. Average Loan Balance per Borrower to GNI/Capita or Average Loan Size is the main variable to measure mission drift of microfinance institutions, where a higher Average Loan Size suggests a move away from lending to the hard core poor to the better off among the poor. The higher the loan size, the more capable the borrowers in coping with loan, and this ability may be derived from having larger size business (small to medium) or better value of collateral. Likewise, smaller loan size suggests that the borrowers are typically risk averse and hence using the loan for businesses that reflect their risk preference (Mosley and Hulme, 1998). Therefore, small loan size is not only driven by supply of the microloans, but also dependent on demand, i.e. commensurate with the borrowers' ability and the state of their businesses (micro or small).

Similarly, Percentage of Female Borrowers (PFB) represents the second proxy to depth of outreach. Female borrowers are considered in the literature as marginalized group of borrowers, as they are less active and largely excluded in economic activities throughout the developing world, and hence having higher percentage of women in the loan portfolio of IMFIs is desirable. Most importantly, some IMFIs have studied and concluded that women borrowers are more reliable in term of repayment discipline and lower default rates. As such, PFB not only represents an economic inclusion agenda but also support financial interest of IMFIs.

Explanatory variables consist of key indicators that influence and determine the outreach of IMFIs, namely Return on Assets (ROA), Yield on loan portfolio (real), Cost per borrowers (log), Borrowing, Deposits, Portfolio at Risk past 30 days, and Write off ratio. ROA captures the relative effects of changes in the profitability of MFIs to dependent variables, i.e. depth and scale of outreach. When an increase in profit changes the average loan balance to GNI/capita, it suggests that financial situation could drive a

shift in the direction of microfinance outreach. Although this relationship could also be bidirectional, this chapter will only deal with the effect of changes in profitability to outreach of MFIs, and not the other way around. Similarly, Yield represents earning generated from a given gross loan portfolio of the IMFIs in real term, after adjusted to inflation.

Further, cost indicators consist of variables that are significant to IMFIs namely Log Cost per Borrower, Deposits and Borrowings. The former is an indication to operational cost borne IMFIs of serving one client, while the latter depicts the cost of funds incurred to IMFIs in their financing activities. Although, deposit still a small part of IMFIs funding portfolio, it is becoming more important as donor or government related funds are diminishing. These cost indicators are used in all three models of the study, and suggested in the literature as important cost factors for MFIs, both Islamic and conventional.

Portfolio quality may also affect the performance of MFIs as has been suggested by Cull (2007) or Kar (2011). In this model, portfolio quality is represented by Portfolio at Risk, either for those loans that have been due for 30 days or 90 days, or PAR>30 days and PAR>90 days, and write off ratio. The former denotes percentage of loans that are delayed in their instalments, while Write off ratio represents ex-post situation where the MFIs have recorded the loans as default. All of these indicators provide warning signal for IMFIs to their default situation, hence good proxy to risk level.

The other group of variables in the model are dummy and control variables, namely MFI Type; Age; Profit orientation status; MFI Legal status; and Region. Age is used to control effects of age of the MFIs to the models, while other control variables are useful to control the differences in legal status of IMFIs, differences in respective regions where MFIs are located, and finally differences in profit orientation of the MFIs (non-profit versus for-profit) to affect the models.

More specifically, control variables consist of age of the IMFIs: mature, young; and not new; for-profit orientation IMFIs, and leaving out non-profit IMFIs; legal status, namely, bank, rural bank, NBFI, credit union; NGO and other; and finally region, which are EECA, MENA, EAP, and SA.

Finally, ε_{it} is error term, where individual effect assumption of $\varepsilon_{it} = 0$ is expected to hold. It is included to accommodate factors that will affect the estimation but hitherto unaccounted for.

However, there are some issues with Pooled OLS, such as endogeneity between regressors and unobserved error terms. To deal with these issues, Random Effects model

will be used to test the robustness of this chapter. However, this chapter will only report and discuss tests conducted using Pooled OLS regressions, while Random Effects results will be shown in the appendix.

6.5 Results and Discussion

Regression results in Table 15 show the scale and depth of outreach of IMFIs. Both outreach indicators, scale and depth, explain the ability (scale) of IMFIs in serving poor clients and at the same time the willingness (depth) to serve the poorest members of the poor. The combined analysis of these outreach indicators would also reveal whether IMFIs are experiencing mission drift or not. As discussed in earlier section, mission drift occurs when the MFIs do not perform well in the depth of outreach i.e. having lower average loan size per borrowers and lower percentage of female borrowers.

Table 15 Regression results of outreach, with ROA interaction

Variables	Log number of active borrowers	Avg. loan balance to GNI/capita	Percentage of female borrowers
MFI type – Islamic	**0.347****	**-0.160****	**-0.152*****
	(0.135)	(0.073)	(0.026)
Return on assets	-0.00171	**1.647*****	0.00608
	(0.229)	(0.439)	(0.067)
Yield on loan portfolio – real	**-0.442*****	0.127	**0.250*****
	(0.146)	(0.161)	(0.039)
Log cost per borrower	**-0.690*****	**0.502*****	0.00904
	(0.027)	(0.073)	(0.007)
Log total borrowings	**0.654*****	**0.0554*****	0.00438
	(0.014)	(0.015)	(0.003)
Log total deposits	**0.0324*****	**0.0273*****	0.000266
	(0.003)	(0.006)	(0.001)
Portfolio at Risk > 30 days	-0.0167	0.307	**-0.0593****
	(0.168)	(0.341)	(0.026)
Write off ratio	0.370	-1.098	-0.109
	(1.323)	(0.804)	(0.167)
Age – young	0.0913	-0.331	**0.0393***
	(0.080)	(0.224)	(0.021)
Age – mature	0.107	**-0.440****	0.0310
	(0.074)	(0.224)	(0.020)
Profit status – for	-0.0210	-0.0611	**0.171*****
	(0.069)	(0.053)	(0.019)
Legal status – bank	0.216	-0.0105	**-0.218****
	(0.220)	(0.207)	(0.097)
Legal status – credit union	0.194	-0.121	-0.0520
	(0.216)	(0.187)	(0.096)
Legal status – NBFI	**0.473****	-0.137	-0.0798
	(0.213)	(0.182)	(0.095)
Legal status – rural bank	0.146	-0.0988	**-0.249****
	(0.224)	(0.177)	(0.101)
Legal status – NGO	0.284	-0.0882	**0.184***
	(0.211)	(0.165)	(0.096)
Reg. – E. Asia & Pacific	**0.393*****	**-0.182****	-0.0254
	(0.079)	(0.086)	(0.022)
Reg. – M. East & N. Africa	**0.795*****	-0.106	**0.0440***
	(0.087)	(0.081)	(0.026)
Region – South Asia	**0.154***	**0.405*****	0.0287
	(0.090)	(0.140)	(0.027)
Constant	2.134***	-2.213***	0.365***
	(0.312)	(0.430)	(0.109)
N	1774	1760	1427
Adjusted R-squared	0.814	0.194	0.245

Standard errors in parentheses: * p<0.10, ** p<0.05, *** p<0.010

6.5.1 Ability of serve the poor: scale of outreach regression

Number of active borrowers (Log NAB) represents the scale of outreach of MFIs, and it is the main proxy to measure immediate impact of IMFIs to the poor. The main results in Table 15 imply that IMFIs have a significantly higher outreach than other type of MFIs, or by 34.7 percent. However, the result does not represent the actual number of poor clients served by Islamic microfinance in comparison to the poor reached by conventional microfinance. The number of poor clients and microenterprises served by IMFIs are relatively smaller than what are being served by conventional MFIs, as predicted in the hypothesis development section.

Relationship between profitability and number of active borrowers is significantly negative i.e. when return on assets increases by 1 percent, the number of borrowers at IMFIs decreases by 0.17 percent. This result indicates that profitability adversely affect the scale of outreach for IMFIs; the more profitable the IMFIs, the lesser will they reach out to the poor. This result is counter intuitive, as profitability is claimed to drive IMFIs to increase their lending and conceivably enhance both scale and depth of outreach. However, the negative ROA may also indicate that profit or revenue from the operations is not the primary source of expansion for most of IMFIs. This situation is evident from earlier chapter (Chapter 4) where IMFIs continue to expand their outreach despite lower profitability, mainly because they are not entirely dependent on profits or deposits to expand but also from external sources in the form of grant or donation from Islamic charitable organisations.

Cost per borrower is an important determinant in the performance of IMFIs, as discussed in previous chapter. In relation to outreach, cost per borrower again emerges as a significant determinant to the scale of outreach. The regression result shows that Log of Cost per Borrower is negatively related to the total number of active borrowers, suggesting that as cost in serving borrowers increases by 1 percent the number of active borrowers in the portfolio decreases by 69 percent. IMFIs that are not able to manage their cost will suffer in outreach, as the funds available to create new loans are used to cover higher costs. However, despite operating at higher cost per borrower, IMFIs are still accumulating a higher number of active borrowers. This result is unusual, and the explanation to this anomaly lies in the similarly unusual nature of Islamic microfinance's funding mechanism. Ahmed (2002) suggests that IMFIs are relying heavily on charitable funds, either voluntary donation or obligatory charity that are collected from devout members of the Muslim community.

Finally, the only positive and significantly related variables are borrowing and deposits. This result confirms that IMFIs are still largely relying on external sources of funding, including borrowings, donations, and deposits. It denotes that an increase in borrowings and deposits by 1 percent, number of borowers increase by 65.4 percent and 3.4 percent, respectively. This relationship between borrowing, deposits and number of active borrowers seems to endorse the argument put forward by the proponent of 'welfarists', or those who advocate MFIs to adopt poverty alleviation objectives and not sustainability or profitability, as adopted by 'institutionists'.

Welfare oriented institutions operate differently compared to commercially driven institutions. IMFIs have been mandated to serve the needs of Muslim customers in fulfilling their religious obligation to avoid usury. The main objective is to improve the welfare of Muslim communities, who largely live in poverty. One estimate suggests that nearly two third or about 600 millions of the world's poor are of Islamic faith (El-Zoghbi and Tarazi, 2013). The results confirm the hypothesis that IMFIs are welfarist organisation, i.e. preference to higher outreach. As welfarist, IMFIs are more oriented towards socio-economic and socio-religious objectives, which entail their operations are driven by the objective of poverty alleviation, and not profitability.

6.5.2 Mission drift: depth of outreach regression

Depth of outreach measures the inclination of microfinance institutions to support the poorest and the most vulnerable segment of the poor community. While the scale of outreach can be portrayed as nominal contribution of IMFIs to poverty alleviation, depth of outreach could be interpreted as the real contribution. Depth of outreach is also the main proxy to examine the level of mission drift at any IMFIs by using two indicators, namely Average Loan Balance per Borrower to GNI/Capita and Percentage of Female Borrowers (PFB). It means, any change in the size of loan or shift in the proportion of female customers should indicate a change in the type of clients benefitting from the loans.

6.5.2.1 Loan size per borrower

Average loan balance per borrower to GNI/capita is an indicator to poverty outreach that measures whether IMFIs are serving the poorest segment of the community or the relatively better-off poor. If the average loan balance is smaller than the conventional, then IMFIs are still favouring the poorest, while if the average loan balance is higher, it simply means they are side-lining poorer clients with richer or well to do borrowers who demand larger size of loans.

Average loan balance per borrower is the main proxy to measuring mission drift, and used extensively in the literature (Kar, 2013b, Mersland and Strøm, 2010). In practice, most of the MFIs initially provide loan to poor clients ranging from $50 - $500, per client per cycle. However, since the amount that constitutes microloans or a minimum loan balance for the poor is different from one country to another, depending on the regulation and needs of the borrowers, this research uses more appropriate indicator namely Average Loan Balance per Borrower to the GNI/capita. This variable illustrates that a positive or higher average loan size indicates a possible mission drift or change in focus of IMFIs to richer group of clients than they normally serve. Likewise, a negative average loan balance to GNI/capita will suggest the absence of mission drift, as IMFIs continue to maintain lower level of loan size to their borrowers/clients. Hence, this assumption reinforces the use of average loan size as a proxy to mission drift.

However, some researchers such as Mosley and Hulme (1998) argue that lower loan balance is not necessarily desirable. They argue that persistence of lower loan size may impede the ability of MFIs to create poverty impact, as smaller loans to the very poor borrowers would not normally produce dramatic changes in their income level. In fact, these borrowers face exposure to greater risk of business failure, for lack of economies of scale and have to sell all their assets in the event of crisis.

Nevertheless, they are cases where poor clients are gradually and quite slowly improve their businesses or income level; hence, they demand for higher amount of loan. This graduation from hard-core poverty is indeed a desired possibility. Unfortunately, with the current IMFI's pricing structure and limitation of its products, it may not be efficient for these graduated poor clients to continue borrowing from MFIs. In general, they would receive lower interest or charges and better services from SME or commercial oriented financial institutions, such as banks. Moreover, the graduation from micro loan does not happen very often or to every clients, as suggested by Ahlin and Jiang (2008). They suggest that the key to successful graduation of the borrowers is by encouraging them to save simultaneously in addition to receiving micro-loan.

In general, regression results imply that there is no evidence of mission drift at IMFIs, as indicated by a negative sign of the main indicator of Average Loan Balance per Borrower to GNI/capita. The sign implies that IMFIs are more sympathetic to the poorest by continuing to serve lower size of loans to this group. The result suggests that average loan size of IMFIs is 16 percent significantly lower than conventional MFIs. Hence it could be argued that there is no mission drift here. This finding is also consistent with the

hypothesis of the current chapter. Upon close examination of the first model, there are supporting arguments to consider.

Cost per borrower for IMFIs is positively related with average loan balance per borrower to GNI/capita, which means when the cost per borrower increases by 1 perceny the average loan size will increase by 50.2 percent. This relationship denotes that cost may affect the decision by IMFIs to change its poverty mission *vis-à-vis* profitability. When the IMFIs facing significantly high operational cost, i.e. cost per borrower, they may resort to offering loans to better off clients, and in a way abandon poverty mission or sacrifice some of its objectives to serve the poorest to save IMFIs from further losses.

Likewise, cost factors such as cost per borrower, borrowings, and deposits are also positively related with average loan balance per borrower to GNI/capita. It means that when these costs increase by 1 percent, the average loan size will also increase by 5.54 percent and 2.73 percent, respectively. This relationship denotes that costs may affect the decision made by IMFIs to change their poverty mission vis-à-vis profitability. When the IMFIs facing significantly high operational cost, i.e. cost per borrower or cost of funds, they may resort to offering loans to better off clients, and in a way abandon poverty mission or sacrifice some of its objectives to serve the poorest to save IMFIs from further losses.

Write off ratio is negatively related with the average loan balance, although not statistically significant, which means that when there are defaults and the loans are written off the IMFIs will lower down their loan size, and target more clients from the poorest segment. This result is counter intuitive as we would expect IMFIs to target more well-to-do clients when faced with increasing incidents of defaults in order to cover the losses.

6.5.2.2 Percentage of female borrowers

The result in Table 15 also illustrates the second proxy to the depth of outreach achieved by IMFIs. The indicator of Percentage of female borrowers is significantly negative, which suggests percentage of loans are allocated to female borrowers is 15.2 percent lower than conventional MFIs. Generally, a lower or negative PFB implies the occurrence of mission drift, and a higher PFB suggests MFIs are still on course with their poverty mission. Higher allocation of loans to women clients is an important indicator as higher lending to the segment is indicative of gender affirmation and empowerment.

This position is also driven by donor agencies that require MFIs in general to support women among the poor. One of the key reasons is that they support family with an

additional income stream, assuming that men or husbands are also working in the farms or other meagre income-generating activities. Therefore, if PFB is negative, it suggests that IMFIs are not only moving away from supporting marginalised segment of clients but also from supporting the poorest in the society; and hence a sign of mission drift.

However, the result in Table 15 is consistent with the hypothesis that proportion of women borrowers will be lower for IMFIs. As iterated in the hypothesis section, IMFIs are mainly targeting family and not exclusively to women in their financing activities. While in the mission drift hypothesis, negative or lower PFB suggests the occurrence of mission drift. To understand this result and relationship this chapter examines all of the significant indicators in this model, as follows.

Real yield to loan portfolio of IMFIs is positively related to the percentage of female borrowers, which denotes that as the yield from loans increases by 1 percent, the percentage of female clients in the portfolio of IMFIs will also increase by 25 percent. This result suggests that higher yield encourages IMFIs to increase participation of female borrowers, either due to gender empowerment policy of driven by economic incentive.

On the other hand, portfolio at risk is negatively related to percentage of female borrowers. The result suggests that an increase in PaR > 30 days by 1 percent, will reduce Percentage of Female Borrowers by 5.93 percent. This relationship is consistent with earlier analysis in the previous section on risk, which highlights the importance of female clients to portfolio quality of IMFIs. Higher portfolio at risk causes percentage of female borrowers to decrease. IMFIs may consider more female borrowers will worsen the portfolio quality, hence this negative relationship.

On the other hand, For-profit orientation indicator is significantly and positively related to the percentage of female borrowers. It shows that For profit oriented IMFIs have 17.1 percent more of female borrowers than similar group in the conventional MFIs. This result implies that for profit MFIs could have been more methodical or systematic in their client selection, as the stake is higher, hence they find that women borrowers more to meet their criteria.

All types of legal status in the model are significantly negative to the percentage of female borrowers. It means that these MFIs have lower percentage of female borrowers in their portfolio, while the MFIs not included in the control, i.e. NGO and Other, may be the opposite. This result is inconsistent with initial assumption that commercially oriented MFIs such as bank, credit union, rural bank, and non-bank financial institutions, will serve more women customers.

Based on the above relationships between yield or profitability, portfolio quality, age, profit orientation, and legal status of IMFIs with Percentage of female borrowers, we could argue that there is slight evidence of mission drift with IMFIs, although in overall this is not the case. With the unique approach of IMFIs that target family and previous result on Average loan balance, which is significantly negative, the overall regression results support the conclusion that there is no mission drift at Islamic microfinance institutions.

In summary, the third model challenges the hypothesis that IMFIs are significantly far behind conventional MFIs in their outreach to the poor. However, these positive and encouraging results do not indicate an absence of mission drift or that IMFIs have reached their plateau, rather an indication that IMFIs are 'welfarists' organisation. While their ability to mobilise funding and extend microloans to the poor or microenterprises are still limited, most of IMFIs remain motivated to assist the poor.

Overall, the outreach regressions do not confirmed what Mersland and Strøm (2010) have found in their study. They find that MFIs may change over time, where at early stage they focus on poverty outreach and as they get older or bigger they shift away to more profitable financing, i.e. less to women borrowers. However, the result is consistent with Mersland and Strøm (2010) on scale of outreach.

Based on the above preceding results, it can be argued argue that there is no evidence of mission drift at IMFIs, as indicated by significantly lower Percentage of women borrowers and at the same time lower Average loan size per borrower to GNI/capita. However, this conclusion needs further explanation to satisfy the claim as a convincing evidence. First, the two findings contradict the argument for mission drift, i.e. the presence of higher Average loan balance per borrower and lower Percentage of female borrowers. Finally, although the results are inconsistent with the hypothesis that there is no mission drift at IMFIs, they are consistent with literature i.e. there is no clear evidence of mission drift from existing microfinance institutions.

6.5.3 Interaction terms for return on assets with IMFIs

To measure whether there is any impact on outreach when the return on assets is interacted with IMFIs, the following regression is presented in Table 16. The table suggests that there are no changes in the outreach regressions, nor is the interaction term significant for the models. The result also implies that there is no different between IMFIs

and conventional MFIs with regards to mission drift status, as profitability of IMFIs is not significant to all outreach indicators of IMFIs.

Table 16 Outreach regression with interaction term

Variables	Log number of active borrowers	Avg. loan balance to GNI/capita	Percentage of female borrowers
MFI type – Islamic	**0.344****	**-0.176****	**-0.152*****
	(0.138)	(0.075)	(0.027)
Return on assets	0.0167	**1.754*****	0.00890
	(0.267)	(0.482)	(0.074)
ROA x MFI type – Islamic	*-0.0797*	*-0.467*	*-0.0208*
	(0.440)	(0.299)	(0.136)
Yield on loan portfolio – real	**-0.441*****	0.132	**0.251*****
	(0.146)	(0.162)	(0.039)
Log cost per borrower	**-0.691*****	**0.502*****	0.00902
	(0.027)	(0.073)	(0.007)
Log total borrowings	**0.654*****	**0.0554*****	0.00437
	(0.014)	(0.015)	(0.003)
Log total deposits	**0.0324*****	**0.0273*****	0.000268
	(0.003)	(0.006)	(0.001)
Portfolio at Risk > 30 days	-0.0150	0.317	**-0.0590****
	(0.169)	(0.345)	(0.026)
Write off ratio	0.374	-1.069	-0.109
	(1.322)	(0.806)	(0.167)
Age – young	0.0915	-0.330	**0.0393***
	(0.080)	(0.224)	(0.021)
Age – mature	0.107	**-0.439***	0.0311
	(0.074)	(0.224)	(0.020)
Profit status – for	-0.0205	-0.0583	**0.171*****
	(0.069)	(0.053)	(0.019)
Legal status – bank	0.215	-0.0185	**-0.219****
	(0.221)	(0.211)	(0.097)
Legal status – credit union	0.194	-0.124	-0.0521
	(0.216)	(0.190)	(0.096)
Legal status – NBFI	**0.471****	-0.145	-0.0800
	(0.213)	(0.185)	(0.095)
Legal status – rural bank	0.145	-0.108	**-0.249****
	(0.224)	(0.180)	(0.101)
Legal status – NGO	0.283	-0.0938	0.184*
	(0.212)	(0.168)	(0.096)
Reg. – E. Asia & Pacific	**0.393*****	**-0.181****	-0.0254
	(0.079)	(0.086)	(0.022)
Reg. – M. East & N. Africa	**0.796*****	-0.104	**0.0442***
	(0.087)	(0.081)	(0.025)
Region – South Asia	**0.154***	**0.405*****	0.0286
	(0.090)	(0.140)	(0.027)
Constant	2.134***	-2.212***	0.365***
	(0.312)	(0.431)	(0.109)
N	1774	1760	1427
Adjusted R-squared	0.814	0.194	0.244

Standard errors in parentheses: * p<0.10, ** p<0.05, *** p<0.010

6.5.4 Interaction of Age with type of MFIs (IMFIs)

Similar to the previous section, the regression with interactions terms below measures the outreach when IMFIs are interacted with Age of IMFIs, especially new and mature (or old) IMFIs. The results in Table 17 indicates that outreach of new IMFIs (1 to 3 years of age) is lower that that of older IMFIs (mature or over 8 years). However, since the results are not statistically significant, they cannot be used to explain the mission drift phenomenon at IMFIs.

Table 17 Outreach regression with interaction terms (Age of IMFIs)

VARIABLES	Log NAB	Avg Loan	PFB	Log NAB	Avg Loan	PFB
MFI Type_Islamic	0.217	-0.215	-0.198***	0.404**	-0.155*	-0.150***
	(0.248)	(0.133)	(0.036)	(0.150)	(0.069)	(0.029)
Return on Assets	-0.027	1.636***	-0.000	-0.048	1.643***	0.005
	(0.236)	(0.430)	(0.068)	(0.239)	(0.427)	(0.068)
IMFI x Age Mature	**0.244**	**0.103**	**0.091**			
	(0.276)	**(0.159)**	**(0.050)**			
IMFI x Age New				**-0.291**	**-0.022**	**-0.009**
				(0.345)	**(0.183)**	**(0.063)**
Yield on loan portfolio – real	-0.448***	0.125	0.248***	-0.444***	0.127	0.250***
	(0.146)	(0.163)	(0.039)	(0.146)	(0.162)	(0.039)
Log cost per borrower	-0.691***	0.502***	0.009	-0.691***	0.502***	0.009
	(0.027)	(0.072)	(0.007)	(0.027)	(0.073)	(0.007)
Log total borrowings	0.653***	0.055***	0.004	0.653***	0.055***	0.004
	(0.014)	(0.015)	(0.003)	(0.014)	(0.015)	(0.003)
Log total deposits	0.032***	0.027***	0.000	0.032***	0.027***	0.000
	(0.003)	(0.006)	(0.001)	(0.003)	(0.006)	(0.001)
Portfolio at Risk > 30 days	-0.006	0.311	-0.055*	-0.028	0.306	-0.060*
	(0.176)	(0.341)	(0.028)	(0.170)	(0.339)	(0.026)
Write off ratio	0.368	-1.098	-0.108	0.336	-1.100	-0.110
	(1.325)	(0.806)	(0.168)	(1.324)	(0.810)	(0.167)
Age – young	0.089	-0.332	0.038	0.078	-0.332	0.039
	(0.080)	(0.225)	(0.021)	(0.080)	(0.230)	(0.021)
Age – mature	0.097	-0.444	0.027	0.094	-0.441	0.030
	(0.076)	(0.229)	(0.020)	(0.075)	(0.230)	(0.020)
Profit status – for	-0.020	-0.061	0.172***	-0.021	-0.061	0.171***
	(0.069)	(0.053)	(0.019)	(0.069)	(0.053)	(0.019)
Legal status – bank	0.213	-0.012	-0.221*	0.215	-0.011	-0.219*
	(0.220)	(0.208)	(0.097)	(0.220)	(0.207)	(0.097)
Legal status – credit union	0.198	-0.120	-0.050	0.196	-0.121	-0.052
	(0.216)	(0.186)	(0.097)	(0.216)	(0.187)	(0.096)
Legal status – NBFI	0.475*	-0.136	-0.079	0.474*	-0.136	-0.080
	(0.213)	(0.181)	(0.095)	(0.213)	(0.182)	(0.095)
Legal status – rural bank	0.149	-0.098	-0.248*	0.148	-0.099	-0.249*
	(0.224)	(0.176)	(0.101)	(0.224)	(0.176)	(0.101)
Legal status – NGO	0.289	-0.086	0.186	0.286	-0.088	0.184
	(0.211)	(0.164)	(0.096)	(0.212)	(0.164)	(0.096)
Reg. – E. Asia & Pacific	0.391***	-0.183*	-0.026	0.390***	-0.182*	-0.025
	(0.079)	(0.086)	(0.022)	(0.079)	(0.086)	(0.022)
Reg. – M. East & N. Africa	0.796***	-0.106	0.044	0.793***	-0.106	0.044
	(0.087)	(0.081)	(0.025)	(0.087)	(0.080)	(0.026)
Region – South Asia	0.150	0.404***	0.026	0.149	0.405***	0.028
	(0.090)	(0.139)	(0.027)	(0.090)	(0.139)	(0.027)
Constant	2.148***	-2.207***	0.372***	2.155***	-2.212***	0.366***
	(0.311)	(0.427)	(0.110)	(0.314)	(0.430)	(0.110)
Observations	1,774	1,760	1,427	1,774	1,760	1,427
Adj. R-squared	0.814	0.194	0.244	0.814	0.194	0.246

Standard errors in parentheses: * p<0.10, ** p<0.05, *** p<0.010

6.6 Conclusion

This chapter attempts to explore the occurrence of mission drift at IMFIs using the latest available data. Mission drift is defined as the change in focus of microfinance institution from its primary objective of poverty alleviation to a more pragmatic objective of profitability or sustainability. Using Pooled OLS, this chapter finds that there is no evidence of mission drift among IMFIs.

Although, the conclusion requires some explanations, as it is not clear-cut across dependent variables being used as proxy to mission drift, it is supported by a significantly negative coefficient of Average loan size in the second model, but not by Percentage of female borrowers in the third, which is supposed to be positive. This chapter does not anticipate such outcome, as the results defy earlier hypotheses.

Nonetheless, the results are consistent with existing literature i.e. there is no clear evidence of mission drift from existing microfinance institutions, as alluded by Mersland and Strøm (2010) and Kar (2013b), although they do not endorse the argument that supporting the better-off poor or having some mission drift is necessary. Weiss and Montgomery (2005) assert that "whilst microfinance clearly may have had positive impacts on poverty it is unlikely to be simple panacea for reaching the core poor….None the less, reaching the "better-off" poor or potential micro-entrepreneurs with microfinance services remains an important element in a poverty reduction strategy".

In addition to financial ability that supports higher outreach, Mosley and Hulme (1998) also suggest that larger or financially sustainable MFIs such as BRI and BancoSol, have higher poverty impact due to the following reasons; a) these MFIs charge relatively high rates of interest, hence deterring borrowers that have low rates of return; b) they offer not only loan but also attach saving scheme to the loans, which provide some sort of insurance and can discourage borrowers without financial discipline; and c) these MFIs collect repayments to their loans more frequently and directly at the borrowers' premises. These features are costly and requires large number of loan officers, and therefore not suitable for most IMFIs.

Finally, this chapter suffers from few limitations that would be addressed in other researches, among which is the smaller number of IMFIs in the dataset (3%) that may affect the quality and strength of the analysis. This deficiency will be addressed in the future researches as the data becomes more available. At the current stage, the chapter could be useful for microfinance operators, donors, regulators, and other stakeholders to design appropriate strategy in addressing any possible occurrence of mission drift in

IMFIs. As warned by Muhammad Yunus, mission drift may derail the very mission of microfinance in helping developing economies addressing poverty issues; '*poverty should be eradicated, not seen as a money-making opportunity.'*

Chapter 7. Conclusion and Research Direction

7.1. Introduction

Research on microfinance has never been more exciting than the current period. With the world economies and development agencies celebrate the end of Millennium Development Goals (MDGs) and the adoption of new and more ambitious global development agenda Sustainable Development Goals (SDGs), the momentum to seriously asses the tools that the world has in poverty alleviation goal is vital. This research aims to take part in this conversation and hope to contribute to a better understanding of what are the available tools in addressing global poverty, especially in the Muslim world where poverty is acute and leads to series of other problems including corruption, extremism, armed conflicts, and unsustainable economic development.

On one hand, Islamic microfinance sector is growing at the rate of 20 to 25 percent in 2014, which more countries are looking into the advantages it offers to help countries alleviate poverty and deprivation. On the other hand, IMFIs are not operating at efficient or profitable level, as this research has showed. They do not also align themselves with global microfinance movement, indicated by extremely low number of IMFIs in the global network such as CGAP or MIX Market.

This thesis sets out an objective to examine sustainability and poverty mission of IMFIs, namely through financial performance *vis-à-vis* conventional microfinance, portfolio and default risk, and finally the presence or absence of mission drift in Islamic microfinance institutions. Pooled OLS is used as the main estimation method due to its suitability with the data and types of analysis performed following the literature, primarily Cull et al. (2007), Kar (2011).

Islamic microfinance is an important component of the Islamic financial system that offers shariah-compliant financial services to the poor and microenterprises. The main characteristic of Islamic microfinance is the use of variety of contracts similar to Islamic banking. There are at least three types of contracts available in Islamic finance, namely equity based or micro-equity, trade finance-based or micro-credit, and charity based. Of these modes of financing or contractual arrangements, the partnership contract of *musharakah* is seen as the most suitable for microfinance institutions.

In *musharakah*, both IMFI and its borrower are partners in a business venture, where sharing of equity (one can contribute goodwill, cash or other form of assets) or profit/loss is agreed upon at the beginning of the contract. To many researchers, this form of contract provides adequate commercial incentive for IMFIs and Islamic banks, while at the same time protects the borrowers from inflation pressure on their assets or investment, and it could also provide a basis for sustainable form of financing. However, in practice, most of the IMFIs predominantly use *qard hasan* and *murabahah*.

The definition and operational description of Islamic microfinance are very much influenced by the way Islamic banking is defined and operated. It seems that the association between Islamic banking and Islamic microfinance goes beyond historical context of Mit Ghamr rural bank in Egypt. As Mit Ghamr may signify the birth of Islamic banking, and to a degree the emergence of Islamic microfinance, current practice of Islamic microfinance is strongly governed by theoretical, institutional and legal framework of Islamic banking.

7.2. Empirical chapters: results and significance

This research addresses three interrelated topics that are important to microfinance institutions, namely financial performance and poverty outreach, portfolio risk, and occurrence of mission drift. The main objective of this research is to examine sustainability and poverty mission of IMFIs, namely through financial performance *vis-à-vis* conventional microfinance, state of portfolio and credit risk, and finally the presence or absence of mission drift in Islamic microfinance institutions.

7.2.1. Empirical chapter one

In the first part, this research finds that there is a significantly negative relationship between IMFIs and profitability measures such as ROA, and on the other hand positively related with other two key indicators of self-sufficiency and cost structure. The research find an evidence that IMFIs have not achieved profitability objective although they may have achieved part of poverty mission i.e. outreach to the poor. Based on this result, the research confirms the main hypothesis that IMFIs are able to serve poverty alleviation mission, although operationally suffering with lower profit (often with loss) and sit on inefficient territory in terms of operational cost per borrower.

7.2.2. Empirical chapter two

In the second part, the research examines risk regressions and finds that IMFIs are facing relatively lower risks than their conventional competition. This result is not consistent with the expectation, that since IMFIs are working in some of the poorest countries in the world with frequent natural disasters or armed conflicts, their risk profile would be constrained. In fact, they are, less vulnerable despite their clients are from the poorest segment in the society, often with lower educational level, and the nature of their products are relatively unknown to most clients. Many of the IMFIs and their clients live in countries considered to be high risk or have histories of instability, either politically or economically. Despite all these adverse conditions, Portfolio at Risk and Write off Ratio of IMFIs are significantly lower than conventional MFIs.

7.2.3. Empirical chapter three

Finally, despite generally poor financial performance, the research finds in the outreach regressions that IMFIs are still relatively consistent in their poverty alleviation mission, as signified by positive poverty outreach. The Number of active borrowers or scale of outreach is significantly positive, while the depth of outreach indicators are significantly negative, i.e. Ave. Loan GNIP and PFB. Hence, we find that there is no evidence of mission drift among IMFIs.

This conclusion is supported by a significantly negative coefficient of Average Loan per Borrower to GNI/Capita in the first model, but not by Percentage of Female Borrowers in the second model, which is supposed to be positive. The research did not anticipate such outcome, as the results are not in consistent with earlier hypotheses. Nonetheless, the results are consistent with existing literature i.e. there is no clear evidence of mission drift from existing MFIs, as suggested by Mersland and Strøm (2010) and Kar (2013b), although they do not endorse the argument that supporting the better-off poor or having some mission drift is necessary.

7.3. Policy and strategic implication

7.3.1 Reorientation of IMFIs business model to improve performance

One of the strategic and policy implications of this research is reorientation by the IMFIs of their business model and choice of profit orientation status. This research has identified few areas of concerns, namely lack of cost efficiency among IMFIs and weak profitability performance, despite intensive outreach. The fact that 65 percent of IMFIs in

the sample are non-profit does not necessarily mean that they should not be profitable. The nominal or actual number of poor people reached out by IMFIs is far less than conventional MFIs, given the size of the latter and their stronger capital based, hence a good reason for IMFIs to grow in size, outreach, and eventually create real impact on poverty alleviation.

Islamic microfinance is evolving and growing constantly in all markets across developing countries. IMFIs will continue to play an increasing role in these countries' attempt to alleviate poverty and improve financial sector development. One of the most important encounters would be a significant role in the global development initiatives such as Sustainable Development Goals (SDGs). The launch of SDGs by the United Nations (UN) in 2015 offers Islamic microfinance sector an opportunity to engage and participate in a global initiative to end poverty.

Islamic microfinance is a resilient sector as demonstrated by its continued success and survival in many countries where it operates, despite war, natural disasters, and prolong armed conflicts. In countries where poverty becomes a prophecy and persistent conflicts afflict poor population, the instinct to survive and provide sustenance for the family drive millions of poor people in the developing world into any kind of labour or productive activities. In this environment, the demand for Islamic microfinance products and services could not be greater.

7.3.2 To enhance poverty outreach to a larger scale

Poverty is the primary reason for the introduction of Islamic microfinance in the first place. Therefore, poverty and Islamic microfinance studies should provide some explanation to the resilience and importance of microfinance in general and Islamic microfinance in particular. The World Bank in its *World Development Report 2001* defines poverty as a situation where the poor people are facing a) lack of opportunity, b) insecurity and vulnerability and c) powerlessness. It is in the first category that finance has been identified as source of a problem, as well as solution to poverty.

This realization triggers institution such as the World Bank, Islamic Development Bank and other multilaterals to introduce poverty alleviation programs with microfinance or access to finance as the main component. These interventions by the multilaterals rest on an assumption that the key opportunity not available to the poor is their lack of access to credit or financial services i.e. due to market failure. As such, access to finance is an important narrative in the international development financing and economics literature on

development and poverty studies. In fact, in recent years the narrative has been broadened to include financial inclusion as the main objective of creating access to financial services for the poor.

However not everyone is convinced that microfinance is a solution to poverty alleviation. For instance, Karnani (2011) argues that microcredit does not reduce poverty, mainly because a) side-streaming of loans to consumption by the poor customers and microenterprises, b) most of the borrowers are not entrepreneurs and they lack skill to run a business, c) lack of economies of scale and low productivity of the businesses, leading to low earning, and d) high interest rate that further indebt the poor borrowers.

Similar critics have been addressed to Islamic microfinance, especially to Islamic banks and other Islamic financial institutions (IFIs) for their 'failure' to serve the 600 million poor in the Muslim countries (Dusuki, 2008, Rahman, 2007, El-Komi and Croson, 2013). However, the emergence of IMFIs in early 1980s and their continued expansion, did rescue the reputation of IFIs, and this momentum continues to develop today as the Islamic microfinance sector is currently serve the poor in more than 18 countries globally.

Despite these challenges, there are many opportunities for Islamic microfinance in the SDGs' framework, or more generally in confronting the problems of poverty in the Muslim world. While the government and international donors may come in to address political or socio-economic and regulatory issues, IMFIs themselves must play their part and deal with organizational challenges.

Islamic microfinance has been acknowledged as an important component for economic development of a country, at least to countries with predominantly Muslim population. This has among others noted in the World Bank's *Global Financial Development Report 2014,* with a special coverage on Islamic finance and financial inclusion (World Bank, 2014). The report highlights the important role of Islamic finance in improving financial access in the Muslim countries, where majority of the population shy away from financial institution for religious reason i.e. avoidance of interest (*riba*). The earlier chapter on Islamic microfinance suggests that such preference is explained by high religiosity of the Muslims, especially those residing in the countries that are members of the Organization of Islamic Cooperation (OIC).

The need for Islamic microfinance to embrace financial inclusion is also highlighted by Abedifar et al. (2015), who suggest financial inclusion is an important development agenda for the whole Islamic finance industry, including Islamic banking and certainly Islamic microfinance. Most interestingly, Abedifar et al. suggest that alternative

Islamic microfinance practices in the form of mutual savings-lending or financial cooperative are important approach vis-à-vis the widely used murabahah, which they consider merely concealing interest or usurious practice beneath such contract or 'subterfuge'.

7.4. Future research agenda

The use of technology in banking and microfinance has increased significantly in the past decade, especially the use of mobile banking and Internet to serve customers in remote areas. In addition, integration between financial services with digital technology, or known as 'fintech', is becoming an important force to recognize. While many existing IMFIs are still using simple tools such as spreadsheet to manage their clients' portfolio, the challenge of not adopting such technological tool or innovation now will be too great in the future.

While tools such as spreadsheet are serving these IMFIs well today, to a certain level, it is time consuming and burdensome for the back office or manager of these institutions to produce any standard financial or and portfolio reports. Another example is the use of technology as part of delivery channels. Majority of IMFIs are still relying on traditional disbursement and collection through regular meetings with borrowers. This method, as has been illustrated by lack of efficiency with many MFIs, including IMFIs, could hinder a much-needed rapid expansion of Islamic microfinance. Many successful MFIs are now relying on variety of technology based delivery channels to mitigate high operational costs and reach out to more customers in remote areas.

Although not many IMFIs have financial capability to invest in simple MIS, mobile banking, or other technology-based infrastructure, but ignoring the importance of technology is imprudent and might be more costly in the longer term. A recent report in *Microfinance Barometer 2015*, which is published annually by Convergences, a European microfinance working group based in France, suggests that the role of technology in microfinance will be more influential to increase outreach and at the same time achieve sustainability and profitability. The successful example of M-Pesa in Kenya and other examples in South Asia exemplify how technology can enhance the capability of MFIs to serve the poor.

The other possible area of concern is funding sustainability for IMFIs. Islamic microfinance needs to increase diversity of its funding sources There have been some efforts to tap a growing significance of crowd funding, such as by a fully Islamic platform

Wafaa, and also Kiva, through its dedicated shariah compliant funding product. However the other source that needs to be considered more seriously is impact or ethical investment funds, which has grown to more than $50 billion of funds under management in recent years.

In more specific cases, the following issues would be interesting research areas that extend current thesis.

7.4.1 Dealing with socio-economic challenges

There are many IMFIs that are working in fragile states or regions with large enclave of vulnerable and marginalized communities. These regions or countries are often avoided by other MFIs or development organizations, due to the high cost nature of such interventions. It is in such fragile environments that many IMFIs decided to work and tries to create an impact for the most distressed communities. For instance, a leading relief organization in the UK has its microfinance institutions located in the regions that are affected by conflicts, famines, and disasters. It is no surprise that IMFIs face tremendous challenges, socially and economically.

The current state of many Muslim countries provides IMFIs without a choice but to continue their best to fight poverty and serve the poor. IMFIs are not only working in an economically or politically demanding environment, i.e. high poverty or unemployment rate, but also providing services in hostile environment caused by prolong armed conflicts or recurring natural disasters. In addition, most of the countries in which IMFIs work have a low case of bankability, indicated by among others lower percentage of population with bank accounts. The lower access to financial services may suggest a lower awareness among the population, or a lack of adequate financial infrastructure and financial services penetration in the country.

The good news is that microfinance sector is growing steadily in these and many other countries. Microfinance institutions or microfinance programmes in these markets have proven that microfinance is an effective tool to alleviate hard-core poverty, provide income security in insecure environment, and most importantly provide the poor with some dignity and hope. The high growth potentials are also accompanied by a relatively high economic growth and gross domestic savings ratio in few of these countries, such as Indonesia and Bangladesh. These relatively healthy economies may be able to elevate the capability of IMFIs through government support and active involvement of private sectors in terms of funding or enabling infrastructure.

Finally, apart from working in a challenging macroeconomic environment, Islamic microfinance sector is structurally unique. IMFIs in the same country may adopt different approach to lending or financing (i.e. group-based model, individual financing model), use different legal contracts or product schemes (*qard hasan*, *murabahah*), as well as rely on a range of funding models (from individual, seasonal fund raising to regular corporate or institutional contribution). Although this diversity is not a handicap, managing such complexity is an extraordinary challenge for most IMFIs, and most importantly for regulators.

7.4.2 Coping with regulatory and business environment challenges

Regulatory and business environment is an extraordinary challenge for microfinance institutions. Increasing pressure from regulators, investors and donors have required IMFIs to make further adjustment in their design and delivery of microfinance programmes. Most countries have in recent years adopted a more stringent regulatory regime to microfinance, after allowing the sector to self regulate for almost two decades. This stand may have been caused by some failures and crises in microfinance sector, most notably the Andhra Pradesh crisis in 2010. As a result, most countries now demand a better risk mitigation or portfolio management by IMFIs, as well as an improved way to analyse and select their clients.

In the *Global Microscope on the Microfinance Business Environment* series of report from 2009 to 2015, Muslim majority countries are performing quite poorly, with the exception of Pakistan that rank consistently high among the 55 countries covered by the Report. The lower rank means that the country is having a less favourable business environment for all MFIs (conventional or Islamic) constituted by a) lack of well defined regulatory framework, b) absence of supporting institutional framework, and c) instability. Table 17 summarises the ranks of select Muslim countries for the overall category of microfinance regulatory and business environment.

Table 18 Microfinance business environment

Country rank/ overall category	2009	2010	2011	2012	2013	2014	2015
Bangladesh	27	33	43	41	41	29	40
Bosnia Herzegovina	26	32	27	23	29	23	20
Egypt	n/a	n/a	42	50	49	53	51
Indonesia	36	41	33	24	28	11	11
Morocco	44	45	37	38	35	17	14
Nigeria	33	28	25	29	24	20	28
Pakistan	11	5	3	3	3	7	5
Tajikistan	30	25	31	34	36	38	44
Turkey	44	48	49	51	50	28	23
Yemen	29	27	44	45	44	54	n/a

Source: The Economist Intelligence Unit (EIU)

The indicators suggest that, for instance, better regulatory framework is positively associated with larger loan sizes, greater gender diversity of the borrowers and lower shares of portfolio risk. Meanwhile, strong performance in the institutional framework suggests that the MFIs tend to reach larger number of borrowers (high outreach and penetration). Apart from socio-economic factors such as business potential, the regulatory environment is increasingly becoming an important consideration for a business decision-making.

Pakistan is more advanced among other countries with respect to regulatory readiness. The State Bank of Pakistan (SBP) has issued guidelines for Islamic microfinance in 2007. The guidelines stipulate four types of institutional arrangements for offering Islamic microfinance; they are (i) Islamic microfinance bank, (ii) Islamic bank, (iii) conventional bank, and (iv) conventional microfinance bank. The central bank also issued guidelines for shariah compliance, and it has stated its intention to adopt the Accounting and Auditing Organization for Islamic Financial Institutions (AAOIFI) standards in this instance (Karim et al., 2008). This high regulatory standards aspired by the SBP will require MFIs in Pakistan to operate within strict operational guidelines.

As many cases have signified, regardless of the ranking and current regulatory environment of a country, MFIs will become necessarily more regulated going forward. With more MFIs entering the markets each year, many lawmakers are considering to regulate MFIs more strictly. The case of Pakistan above, and many other countries, is evident of such a move from an unregulated sector that provides small loans to the poor to a more regulated full-scale microfinance industry.

7.4.3 Proving impact claims: is poverty affected by Islamic microfinance?

The role of microfinance in poverty alleviation is well documented in literature, particularly in a context of rural development, region or country case studies, financial inclusion, and improvement in the income of poor household. For instance, a study by Imai et al. (2012), which examines the effect of microfinance outreach on poverty in 61 countries, find that microfinance outreach has indeed a significant negative relationship with poverty. This result entails that an increase in microfinance outreach will reduce poverty, which is consistent with many other researches and case studies.

Similarly, the contribution of Islamic microfinance sector in reducing incidence of poverty is an important prospect to ponder. According to Consultative Group to Assist the Poor (CGAP), there are more than 600 million of Muslims who live with less than $1.5 a day, of whom nearly half would not accept financing support or loan from interest based institutions (El-Zoghbi and Tarazi, 2013).

Although some researches assign the task of poverty alleviation to the more developed Islamic banking, the different needs of micro-entrepreneurs and the poor make it harder for Islamic banks to serve this segment. The creation of specialised IMFIs is seen as a necessity, and there are evidences that linked these MFIs with poverty alleviation. At the current stage where IMFIs constitute only a fraction of the microfinance sector, attribution to poverty reduction is still questionable. However, the IMFIs have the potential to contribute to poverty alleviation in many Muslim countries, as the scale of the industry increases over time.

At country level the role of Islamic microfinance is gradually gaining momentum, especially in countries where microfinance sector is near maturity such as Bangladesh or Indonesia. IMFIs are seen to improve lives and income level of the poor, and at the same time contribute positively to employment creation in the country. However, there are still some deficiencies that need to be addressed by IMFIs, especially in terms of outreach, customer education and product delivery innovation.

The islamicity of IMFIs and their borrowers, or the strong adherence of the poor to their religion is certainly not a hindrance for them to engage with financial institutions. In fact, according to Noland (2005) religion and in particular Islam ‘does not appear to be a drag on (economic) growth’, which at the same time disputes other studies on the subject matter. The role of IMFIs in reaching out the poorest segment and hence contributing to poverty alleviation efforts is also shared with MFIs that are based on other beliefs, such as Christianity (Mersland et al., 2013).

However, a more robust assessment on the impact of Islamic microfinance to poverty is not currently available, hence urgently required. At the same time, Islamic microfinance sector should be expanded further in countries where Muslim are majority, in order to create any meaningful impact on poverty. As IMFIs constitute less than five percent of the microfinance sector, any attribution to poverty reduction is limited. Yet, it is indisputable that IMFIs have the potential to contribute to poverty alleviation in many Muslim countries, as the scale of Islamic finance sector would expectedly increase over time.

7.4.4 Analysis of performance and organizational efficiency

The main pillars of performance measurement of the majority of MFIs are financial ratios, following the so-called banking logic that has dominated microfinance field in the past decade. Among the ratios measured by most of the MFIs are those related to cost efficiency in managing the MFIs, particularly related to staffing, loan disbursement, and costs related to recovering the loans that are overdue.

Efficiency of MFIs, Islamic or otherwise, does not depend on the country where they operate, but more significantly on other factors such as the type of institution Gutiérrez-Nieto et al. (2007). According to Gutiérrez-Nieto et al., type of institution is relevant and important for MFIs, and they find that NGO is more efficient than other types of MFIs. Portfolio quality is also an important aspect to measure performance and efficiency of IMFIs. For instance, in a study involving 350 MFIs from 70 countries, D'Espallier et al. (2011) suggest that lower portfolio at risk and lower write-off rates are associated with higher proportions of women borrowers. Hence, the result confirms existing strategy of many MFIs to work exclusively or largely with women borrowers and target two objectives at once, performance and affirmation.

In the case of Islamic microfinance, there are very few empirical studies that are available related to the performance and efficiency of global Islamic microfinance institutions. The few studies that are published in reputable journals highlighted some cases of lack of efficiency and slightly poor performance of IMFIs. For instance Widiarto and Emrouznejad (2015), find that IMFIs have similar performance with conventional MFIs in some regions but in other regions the conventional MFIs "surpassed Islamic/window MFIs in financial and social efficiency under output-orientated strategy in global, EAP and SA meta-frontiers, in pure overall efficiency in MENA meta-frontiers, and in financial efficiency under input-orientated in SA meta-frontier".

It should be noted that although *financial* performance and efficiency of IMFIs may be discouraging, the social performance i.e. poverty alleviation mission of IMFIs is quite reassuring as suggested by among others Adnan and Ajija (2015) and Ahmed (2002). However, the ideal situation of any IMFIs should be attaining superior financial performance and at the same time achieving high impact in poverty alleviation objectives, hence double bottom line. This ideal goal would only be achieved if Islamic microfinance sector confronts the issues of inefficiency and inferior financial performance, which are attributed to relatively high operational cost and unsustainable funding sources of IMFIs. This issue is directly relevant with the current study, and will extend the analysis of the empirical chapters. This task is, of course, will be part of future undertakings.

Appendices

Appendix 1 Dependent Variables

Dependent variables	Definitions
Return on Assets (%)	(Net Operating Income, less Taxes)/ Assets, average
Operational Self-Sufficiency (%)	Financial Revenue/(Financial Expense + Impairment Loss + Operating Expense)
Cost per Borrower	Operating Expense/ Number of Active Borrowers, average
Portfolio at Risk > 30 days Ratio (%)	Portfolio at Risk > 30 days/ Gross Loan Portfolio Portfolio at Risk > [XX] days The value of all loans outstanding that have one or more instalments of principal past due more than [XX] days. This includes the entire unpaid principal balance, including both the past due and future instalments, but not accrued interest. It also includes loans that have been restructured or rescheduled.
Portfolio at Risk > 90 days Ratio (%)	Portfolio at Risk > 90 days/ Gross Loan Portfolio
Write Off Ratio (%)	Write Offs / Gross Loan Portfolio, average Write Offs Total amount of loans written off during the period. A write-off is an accounting procedure that removes the outstanding balance of the loan from the Loan Portfolio and from the Impairment Loss Allowance when these loans are recognized as uncollectable.
Number of Active Borrowers	The number of individuals or entities who currently have an outstanding loan balance with the MFI or are primarily responsible for repaying any portion of the Gross Loan Portfolio. Individuals who have multiple loans with an MFI should be counted as a single borrower.
Average Loan Balance per Borrower/ GNI per Capita (%)	Average Loan Balance per Borrower/ GNI per capita GNI per capita, Atlas method (current US$) GNI per capita is the gross national income, converted to U.S. dollars using the World Bank Atlas method, divided by the midyear population. GNI is the sum of value added by all resident producers plus any product taxes (less subsidies) not included in the valuation of output plus net receipts of primary income (compensation of employees and property income) from abroad.
Percentage of Women Borrowers (%)	Number of Active Borrowers who are women / Number of Active Borrowers

Source: MIX Market Database, http://mixmarket.org/about/faqs/glossary (accessed: 25 April 2015).

Appendix 2 Independent variables

Independent variables	Definitions
Yield on Gross Portfolio (nominal) (%)	Interest and Fees on Loan Portfolio/ Loan Portfolio, gross, average
Yield on Gross Portfolio (real) (%)	(Yield on Gross Portfolio (nominal) - Inflation Rate)/ (1 + Inflation Rate)
Gross Loan Portfolio	All outstanding principals due for all outstanding client loans. This includes current, delinquent, and renegotiated loans, but not loans that have been written off. It does not include interest receivable
Average Loan Balance per Borrower	Loan Portfolio, Gross / Number of Active Borrowers
Operating Expense / Loan Portfolio (%)	Operating Expense / Gross Loan Portfolio, average
Cost per Borrower	Operating Expense/ Number of Active Borrowers , average
Loan Loss Rate	(Write-offs - Value of Loans Recovered)/ Gross Loan Portfolio, average
Deposits	Total deposits, including both voluntary and compulsory deposits. See also Data note for historical differences in treatment of deposits.

Source: MIX Market Database, http://mixmarket.org/about/faqs/glossary (accessed: 25 April 2015).

Appendix 3 MFIs across countries

Country	MFI Type		
	Conventional	IMFI	Total
Afghanistan	105	21	126
Albania	74	-	74
Armenia	131	-	131
Azerbaijan	250	-	250
Bangladesh	494	18	512
Belarus	4	-	4
Bhutan	5	-	5
Bosnia and Herzegovina	189	-	189
Bulgaria	188	-	188
Cambodia	204	-	204
China (PRC)	279	-	279
Croatia	16	-	16
East Timor	24	-	24
Egypt	136	-	136
Fiji	5	-	5
Georgia	135	-	135
Hungary	4	-	4
India	1,120	-	1,120
Indonesia	314	27	341
Iraq	35	25	60
Jordan	71	17	88
Kazakhstan	231	-	231
Kosovo	102	3	105
Kyrgyzstan	230	10	240
Laos	63	-	63
Lebanon	30	16	46
Macedonia	46	-	46
Malaysia	0	5	5
Moldova	39	-	39
Mongolia	79	-	79
Montenegro	25	-	25
Morocco	120	-	120
Myanmar	3	-	3
Nepal	317	-	317
Pakistan	238	31	269
Palestine	30	53	83
Papua New Guinea	21	-	21
Philippines	720	-	720
Poland	25	-	25
Romania	72	-	72
Russia	478	-	478
Samoa	14	-	14
Serbia	53	-	53
Slovakia	3	-	3

Solomon Islands	1	-	1
Sri Lanka	170	-	170
Sudan	0	12	12
Syria	17	5	22
Tajikistan	271	-	271
Thailand	14	-	14
Tonga	5	-	5
Tunisia	15	-	15
Turkey	16	-	16
Ukraine	29	-	29
Uzbekistan	142	-	142
Vanuatu	2	-	2
Vietnam	219	-	219
Yemen	30	23	53
Total	**7653**	**266**	**7,919**

Appendix 4 MFIs across countries in regions

Region and Country
East Asia and the Pacific
Cambodia
China, People's Republic of
East Timor
Fiji
Indonesia
Laos
Malaysia
Myanmar (Burma)
Papua New Guinea
Philippines
Samoa
Thailand
Tonga
Vanuatu
Vietnam
Eastern Europe and Central Asia
Albania
Armenia
Azerbaijan
Belarus
Bosnia and Herzegovina
Bulgaria
Croatia
Georgia
Hungary
Kazakhstan
Kosovo
Kyrgyzstan
Macedonia
Moldova
Mongolia
Montenegro
Poland
Romania
Russia
Serbia
Slovakia
Tajikistan
Turkey
Ukraine
Uzbekistan

Middle East and North Africa
Egypt
Iraq
Jordan
Lebanon
Morocco
Palestine
Sudan
Syria
Tunisia
Yemen
South Asia
Afghanistan
Bangladesh
Bhutan
India
Nepal
Pakistan
Sri Lanka

Appendix 5 MFIs in sample countries where there are Islamic Microfinance

No.	Country	Conventional	Islamic	Total (Obs.)
1	Afghanistan	105	21	126
2	Bangladesh	494	18	512
3	Indonesia	314	27	341
4	Iraq	35	25	60
5	Jordan	71	17	88
6	Kosovo	102	3	105
7	Kyrgyzstan	230	10	240
8	Lebanon	30	16	46
9	Malaysia	0	5	5
10	Pakistan	238	31	269
11	Palestine/West Bank	30	53	83
12	Sudan	0	12	12
13	Syria	17	5	22
14	Yemen	30	23	53
	Total Observations	**1,696**	**266**	**1,847**

Appendix 6 List of IMFIs

No	IMFI Name	Region	Country
1	Amanah Ikhtiar Malaysia	East Asia and the Pacific	Malaysia
2	BMT Kayu Manis	East Asia and the Pacific	Indonesia
3	BMT Pelita Insani	East Asia and the Pacific	Indonesia
4	BMT Pringsewu	East Asia and the Pacific	Indonesia
5	BMT Sanama	East Asia and the Pacific	Indonesia
6	MBK Ventura	East Asia and the Pacific	Indonesia
7	Kompanion	Eastern Europe and Central Asia	Kyrgyzstan
8	START	Eastern Europe and Central Asia	Kosovo
9	Abyan	Middle East and North Africa	Yemen
10	ACAD	Middle East and North Africa	Palestine/West Bank
11	Al Amal Bank	Middle East and North Africa	Yemen
12	Al Aman	Middle East and North Africa	Iraq
13	Al Majmoua	Middle East and North Africa	Lebanon
14	Al Takadum	Middle East and North Africa	Iraq
15	Al Thiqa	Middle East and North Africa	Iraq
16	ASALA	Middle East and North Africa	Palestine/West Bank
17	Azal	Middle East and North Africa	Yemen
18	CHF Iraq	Middle East and North Africa	Iraq
19	DEF	Middle East and North Africa	Jordan
20	Family Bank	Middle East and North Africa	Sudan
21	FATEN	Middle East and North Africa	Palestine/West Bank
22	FINCA - Jordan	Middle East and North Africa	Jordan
23	Islamic Relief Palestine	Middle East and North Africa	Palestine/West Bank
24	Jabal Al Hoss	Middle East and North Africa	Syria
25	PARC	Middle East and North Africa	Palestine/West Bank
26	PASED	Middle East and North Africa	Sudan
27	Reef	Middle East and North Africa	Palestine/West Bank
28	Tadhamon	Middle East and North Africa	Yemen
29	Akhuwat	South Asia	Pakistan
30	Asasah	South Asia	Pakistan
31	Bank of Khyber	South Asia	Pakistan
32	CWCD	South Asia	Pakistan
33	Farz Foundation	South Asia	Pakistan
34	FINCA - Afghanistan	South Asia	Afghanistan
35	IIFC Group	South Asia	Afghanistan
36	Muslim Aid	South Asia	Bangladesh
37	Mutahid	South Asia	Afghanistan
38	TMSS	South Asia	Bangladesh

Glossary

Assets Total of all net asset accounts

Average Loan Balance per Borrower

Loan Portfolio, Gross / Number of Active Borrowers

Average Loan Balance per Borrower/ GNI per Capita (%)

Average Loan Balance per Borrower/ GNI per capita

Borrowers per Loan Officer

Number of Active Borrowers / Number of Loan Officers

Capital / Asset Ratio

Total Equity/ Total Assets

Cooperative/Credit Union

A non-profit, member-based financial intermediary. It may offer a range of financial services, including lending and deposit taking, for the benefit of its members. While not regulated by a state banking supervisory agency, it may come under the supervision of regional or national cooperative council.

Cost per Borrower

Operating Expense/ Number of Active Borrowers, average

Cost per Loan

Operating Expense/ Number of Outstanding Loans, average

Debt / Equity Ratio

Liabilities/ Equity

Deposit Accounts per Staff Member

Number of Deposit Accounts/ Personnel

Deposits

Total deposits, including both voluntary and compulsory deposits. See also Data note for historical differences in treatment of deposits.

Equity

Total of all equity accounts, less any distributions.

Financial Expense

All interest, fees and commissions incurred on all liabilities, including deposit accounts of clients held by the MFI, borrowings, subordinated debt, and other liabilities.

Financial Expense / Assets (%)

Financial Expense/ Assets, average

Financial Revenue

All interest, fees and commissions incurred on the loan portfolio and other financial assets. This amount also includes other revenues related to financial service provision.

Financial Revenue Ratio (%)

Financial Revenue/ Assets, average

Fund Assets (US$)

Total Assets held by a Fund.

GNI per capita, Atlas method (current US$)

GNI per capita (formerly GNP per capita) is the gross national income, converted to U.S. dollars using the World Bank Atlas method, divided by the midyear population.

Impairment Loss

The non-cash expense calculated as a percentage of the value of the loan portfolio that is at risk of default. This value is used to create or increase the impairment loss allowance on the balance sheet.

Loan Loss Rate

(Write-offs - Value of Loans Recovered)/ Loan Portfolio, gross, average

Loan Portfolio, gross

All outstanding principals due for all outstanding client loans. This includes current, delinquent, and renegotiated loans, but not loans that have been written off. It does not include interest receivable. See also Data note for historical differences in treatment of the Loan Portfolio.

Loans per Loan Officer

Number of Loans Outstanding/ Number of Loan Officers

Loans per Staff Member

Number of Loans Outstanding/ Personnel

Net Operating Income

Financial Revenue - (Financial Expense + Impairment Loss + Operating Expense).

NGO

An organization registered as a non profit for tax purposes or some other legal charter. Its financial services are usually more restricted, usually not including deposit taking. These institutions are typically not regulated by a banking supervisory agency.

Non-Bank Financial Institution

An institution that provides similar services to those of a Bank, but is licensed under a separate category. The separate license may be due to lower capital requirements, to limitations on financial service offerings, or to supervision under a different state agency. In some countries this corresponds to a special category created for microfinance institutions.

Number of Active Borrowers

The number of individuals or entities who currently have an outstanding loan balance with the MFI or are primarily responsible for repaying any portion of the Gross Loan Portfolio. Individuals who have multiple loans with an MFI should be counted as a single borrower.

Number of Active Clients

Number of individuals who are active borrowers and/or savers with the MFI. A person with more than just one such account (i.e. with a loan and a savings account) is counted as a single client in this measure.

Number of Deposit Accounts

Number of any type of deposit account held by the MFI, whether voluntary or compulsory. See also Data note for historical differences in treatment of the Deposit Accounts.

Number of Depositors

Number of clients with any type of deposit account, whether voluntary or compulsory. See also Data note for historical differences in treatment of Depositors.

Number of Loan Officers

The number of employees whose main activity is to manage a portfolio of the Gross Loan Portfolio. A loan officer is a staff member of record who is directly responsible for arranging and monitoring client loans.

Number of Loans Outstanding

Number of loan accounts associated for any outstanding loan balance with the MFI and any portion of the Loan Portfolio. See also Data note for historical differences in treatment of the Borrowers.

Offices

The number of staffed points of service and administrative sites used to deliver or support the delivery of financial services to microfinance clients.

Operating Expense

Expenses related to operations, including all personnel expense, depreciation and amortization, and administrative expense.

Operating Expense / Assets (%)

Operating Expense/ Assets, average

Operating Expense / Loan Portfolio (%)

Operating Expense / Loan Portfolio, gross, average

Operating Expenses / Period Average Fund Assets

Fund Operating Expenses / Fund Assets, average

Operational Self-Sufficiency (%)

Financial Revenue / (Financial Expense + Impairment Loss + Operating Expense)

Percent of Women Borrowers (%)

Number of Active Borrowers who are women / Number of Active Borrowers

Personnel

Total number of staff members.

Personnel Allocation Ratio

Loan Officers / Personnel

Personnel Expense

All personnel expenses related to operations.

Personnel Expense / Assets (%)

Personnel Expense / Assets, average

Personnel Expense / Loan Portfolio (%)

Personnel Expense / Loan Portfolio, gross, average

Portfolio at Risk > [XX] days

The value of all loans outstanding that have one or more installments of principal past due more than [XX] days. This includes the entire unpaid principal balance, including both the past due and future installments, but not accrued interest. It also includes loans that have been restructured or rescheduled.

Portfolio at Risk > 30 days Ratio (%)

Portfolio at Risk > 30 days/ Loan Portfolio, gross

Portfolio at Risk > 90 days Ratio (%)

Portfolio at Risk > 90 days/ Loan Portfolio, gross

Portfolio to Assets

Loan Portfolio, gross/ Assets

Profit Margin

Net Operating Income/ Financial Revenue

Provision for Loan Impairment / Assets

Impairment Loss/ Assets, average

Return on Assets (%)

(Net Operating Income, less Taxes)/ Assets, average

Return on Equity (%)

(Net Operating Income, less Taxes)/ Equity, average

Risk Coverage (%)

Impairment Loss Allowance/ PAR > 30 Days

Rural Bank

Banking institution that targets clients who live and work in non-urban areas and who are generally involved in agricultural-related activities.

Total Expense / Assets (%)

(Financial Expense + Impairment Loss + Operating Expense) / Assets, average.

Write Off Ratio (%)

Write Offs / Loan Portfolio, gross, average

Write Offs

Total amount of loans written off during the period. A write-off is an accounting procedure that removes the outstanding balance of the loan from the Loan Portfolio and from the Impairment Loss Allowance when these loans are recognized as uncollectable.

Yield on Gross Portfolio (nominal) (%)

Interest and Fees on Loan Portfolio/ Loan Portfolio, gross, average

Yield on Gross Portfolio (real) (%)

(Yield on Gross Portfolio (nominal) - Inflation Rate)/ (1 + Inflation Rate)

Source: http://www.mixmarket.org/fr/about/faqs/glossary

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