CHAPTER 1

Empirical Research in Islamic Banking: Past, Present, and Future

Nafis Alam and Syed Aun R. Rizvi

Abstract Islamic banking is an emerging research theme in banking-related studies that can be further expanded owing to a dearth of extensive studies in this field. A major part of the literature contains a comparative analysis of Islamic banking and its conventional counterparts, based on performance and regulatory theme. The aim of this chapter is to demonstrate the extra-ordinary potential and depth of current and future research theme in Islamic banking domain. The chapter discusses the areas and issues that have been covered intensively in the recent literature, and also helps to identify the areas that have received relatively less attention. Finally, it also points to the newest areas of research that seem promising for future research in Islamic banking theme.

Keyword Islamic banking · Research · Comparative analysis · Regulation · Efficiency

N. Alam (✉)
University of Nottingham Malaysia, Selangor, Malaysia
e-mail: nafis.alam@nottingham.edu.my

S.A.R. Rizvi
Lahore University of Management Sciences, Lahore, Pakistan
e-mail: aun@rizvis.net

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1 Introduction

Islamic banking and finance has emerged as an intriguing field of research in academia over the past decade. Islamic countries primarily straddle the developing and the less developed strata of the global economic society.

With financial assets valuing nearly $1.8 trillion globally Islamic banking and finance has started to gain traction within Muslim and non-Muslim financial markets over the last decade. The ever-increasing intensity of recurring financial crises, evidenced in the recent financial meltdown of 2007–2008, has put much pressure on the conventional financial system and brought it under the microscope yet again. While some have looked at ways and means to fix the instability inherent in the conventional interest-based system, others have searched for alternative financial systems. In this respect, the Islamic financial system seems to offer a promising avenue for future financial resiliency and stability. However, to date, this view has been largely circulated within professional circles and it has only recently become a topic of academic inquiry.

The room for exploration in Islamic banking and finance is huge, owing to a continuing dearth of extensive studies in this field. A major part of the academic literature on the subject contains a comparative analysis of Islamic financial system and its conventional counterparts, divided between banking and capital markets. Some studies also focus on the instruments used in the Islamic and commercial banking, and discuss the regulatory and supervisory challenges related to Islamic banking (e.g., Sundararajan and Errico 2002; Ainley et al. 2007; Jobst 2007; Sole 2007).

In this survey, we focus on the two main aspects of research in Islamic banking and finance: the banking sector and the capital markets. While not claiming to survey all literature on Islamic finance, which is too vast to cover in its entirety, we aim to demonstrate the extraordinary potential, and depth of research available and possible in the field. To do this, we undertake an exploration of the Thomson Reuters ISI Web of Knowledge and other journal search and ranking methodologies, including the SCImago Journal & Country Rank (SJR) measures, to identify the main journals in which significant literature on Islamic banking and finance has been published. In Sect. 3, we point to the newest areas of research that seem promising for future research and conclude our brief review of Islamic financial literature.

Islamic financial institutions operate in approximately 75 countries, mostly in the Middle East and Southeast Asia, with Bahrain and Malaysia as the major hubs. Islamic financial products have mushroomed over the past decades in competition to the conventional financial industry in both Muslim dominated and Muslim minority countries. As it is a niche industry, the Islamic financial industry is becoming a market that could rival the conventional sector in many countries. Dusuki and Abdullah (2007) described the Islamic financial sector as no longer a business entity operated only to fulfill the religious obligations of the Muslim community, but more significantly, it is striving to fulfill the needs and demands of new customers as well (as cited in Wilson 1995).

The growth in Islamic financial services has attracted much attention from across the world, and nearly 25 % of Islamic financial institutions now operate in countries that do not have Muslim majorities, while the conventional banking system has started opening Islamic banking windows across the world, primarily in Europe and North America (Pollard & Samers 2007).

The initial attempts at introducing Islamic finance in the Western world were initiated by the Islamic Finance House established in 1978 in Luxembourg. There is also the Islamic Bank International of Denmark in Copenhagen, and the Islamic Investment Company in Melbourne, Australia. Shanmugam, Perumal and Ridzwa (2004) observed that a tremendous effort has been progressing over the last decade in introducing Islamic financial services in Western countries, especially in the UK, Australia, and the US.

2 Islamic Banking Research: Past and Present Trend

Islamic banking growth has helped develop interest in studying the performance of Islamic banks through comparative analyses in recent times. The findings of most studies provide contradictory results in determining whether Islamic banks are better performers or not. An earlier work by Olson and Zoubi (2008) found Islamic banks to be more profitable, but less efficient as compared to their conventional counterparts over the 5-year period of 2000–2005. Their sample set comprised banks from the Gulf Cooperation Council (GCC), and the main investigation was carried out with financial ratios as the distinguishing factor between conventional and Islamic banks. In a more recent study, Abedifar, Molyneux and Tarazi (2013) found Islamic banks to be more capitalized

and profitable compared to conventional banks on an average while investigating risk and stability features of Islamic banking, using a large sample of 553 banks from 24 countries between 1999 and 2009. An interesting aspect of their finding points toward the smaller Islamic banks, which are more leveraged in predominantly Muslim countries and have lower credit risk than conventional banks.

In related research, Srairi (2010) compared conventional and Islamic banks using a frontier analysis approach for 71 commercial banks in the GCC over the period 1999–2007. He found that, in terms of both cost and profit efficiency levels, the conventional banks are more efficient than Islamic banks. Khediri, Charfeddine and Youssef (2014) reaffirm the results for the GCC using the period of 2003–2010 for investigating the performance of Islamic banks using near discriminant analysis, logistic regression, tree of classification, and neural network. They found that Islamic banks are, on average, more profitable, more liquid, better capitalized, and have lower credit risk than conventional banks, while they are also less involved in off-balance sheet activities and have more operating leverage than their conventional peers.

An aspect of financial literature in the firm-level banking studies falls under the field of cross-country analysis of Islamic banking and financial efficiency. The existing studies in this field can be broadly categorized into two groups: First, studies that group the Islamic banks based on geographical boundaries (e.g., Yudistira 2004; Sufian 2006), and the second classification compares the efficiency of Islamic banks with their conventional counterparts (e.g. Hassan et al. 2009; Ahmad and Abdul-Rahman 2012; Al-Khasawneh et al. 2012; Gishkori and Ullah 2013). While doing a comparative analysis of the efficiency and performance, some authors also extend into the determinants of these efficiency measures. The following discussion highlights some of the main studies from these two groups.

In the first classification, one of the earlier studies by Yudistira (2004) explored the performance of 18 banks from the Middle East, East Asia, and African countries, for a short period of 1997–2000. Using a nonparametric approach of Data Envelopment Analysis (DEA) the study analyzed the technical and scale efficiencies of the Islamic banks. The results argued that the slight inefficiencies experienced by the Islamic banks during the crisis of 1998/1999 can be explained by pure technical inefficiency rather than scale inefficiency. The main contributor to scale efficiency was bank size according to Yudistira (2004). The findings of the study also highlighted that the risk-taking

behavior of the Islamic banks across different regions does not have a significant effect on the overall technical efficiency of these Islamic banks.

While examining the efficiency of Malaysian Islamic banking through the period 2001–2005, Sufian (2006) suggested that the scale inefficiency dominated pure technical inefficiency in the Malaysian Islamic banking industry. In addition, he also found domestic Islamic banks to be marginally more efficient compared to foreign Islamic banks.

Expanding the earlier works, Sufian and Noor delved into a comparative analysis of the efficiency of Islamic banking sectors in the Middle East and Africa (MENA) and Asian countries to investigate the technical, pure technical, and scale efficiency for each bank during the period 2001–2006. Their findings suggest that the MENA Islamic banking industry exhibits higher mean technical efficiency relative to the Asian Islamic banks. The pure technical inefficiency outweighed the scale inefficiency in both MENA and Asian banking sectors, and the banks of MENA countries were found to be global leaders that dominated the efficiency ratings during the period of study.

In a very recent study by Rosman, Abd Wahab and Zainol (2014), the results highlighted the fact that Islamic banks were able to sustain operations through the crisis by studying the case for 79 Islamic banks across the Middle East and East Asia for the global financial crisis period of 2007–2010. However, most of the banks were scale inefficient, while profitability and capitalization were the main determinants of Islamic banking efficiency. This has been further corroborated by Belanes et al. (2015), who studied the three aspects of efficiency, namely overall technical efficiency, pure technical efficiency, and scale efficiency, for the GCC-based Islamic banks and found that most Islamic banks have remained efficient, whereas some of them witnessed a relatively minor decrease in their efficiency level. They argue that Islamic banks have succeeded in mobilizing large amounts of deposits, especially when the impact of the crisis has been devastating to the managers of global finance.

In the second classification of Islamic and conventional banking analysis, Hassan, Mohamad and Bader (2009) investigated the difference in mean cost, revenue, and profit efficiency estimates of Islamic versus conventional banks. Encompassing 11 Islamic countries and 40 banks, for an extended period of 15 years, starting from 1990, their study highlights that there was no significant difference between the overall efficiency of the Islamic banks and the conventional banks.

In contrast to the results of Hassan et al. (2009), Ahmad and Abdul-Rahman (2012) examined the relative efficiency of the Islamic and

conventional banks in Malaysia between 2003 and 2007. Their findings negate the previous findings, and the conventional banks outperformed the Islamic commercial banks in all efficiency measures, indicating that this higher efficiency may be owing to managerial efficiency and technological advancement. Al-Khasawneh, Bassedat, Aktan and Thapa (2012) while examining the same argument in the case of North Africa for almost a similar time frame from 2003 to 2006 indicated that the Islamic banks achieved higher average revenue efficiency scores compared to the conventional banks in the region. However, they also highlighted that the growth of efficiency measure was relatively slower for Islamic banks as compared to their conventional counterparts.

In a study specifically on Pakistan, a Muslim majority country of 180 million, Gishkori and Ullah (2013) argued that the technical inefficiency for the Islamic banks is primarily owing to the scale inefficiency instead of pure technical inefficiency. In a large dataset study, Beck, Demirguc and Merrouche (2013) investigated 510 banks across 22 countries with 88 Islamic banks, during the period 1995–2009. They found that Islamic banks were less efficient, but have higher intermediation ratios, have higher asset quality, and are better capitalized than conventional banks. Their findings also suggest that Islamic banks perform better during crises in terms of capitalization and asset quality and are less likely to disintermediate than conventional banks.

A recent study by Rosman et al. (2014) highlighted the fact that Islamic banks were able to sustain operations through the crisis for a sample set of 79 Islamic banks across the Middle East and East Asia for the global financial crisis period of 2007–2010. However, most of the banks were scale inefficient while profitability and capitalization were the main determinants of Islamic banking efficiency. A comprehensive study by Johnes, Izzeldin and Pappas (2014) of 252 banks (207 conventional and 45 Islamic) across 18 countries found Islamic banks to be on similar grounds with their conventional counterparts in terms of gross efficiency. However, differences exist in the efficiency where Islamic banks are higher while significantly lower on type efficiency. They argue that the low efficiency of Islamic banks could be attributed to lack of product standardization whereas high net efficiency reflects the high managerial capability in Islamic banks.

Some recent studies have diverged from the performance and efficiency issues in Islamic banking, and also studied the competitiveness of Islamic banking industry. Despite the reality that Islamic banks will grow rapidly in today's economy, there are a few systematic and regular analyses on the topic

of the competition in Islamic banking. The majority of the previous studies only focused on the comparison of banking performance, such as the comparison of cost–profit efficiency and financial stability in dual-banking systems, for example, the studies provided by El-Gamal & Inanoglu (2005), Cihak and Hesse (2008), and Alam (2012a). Turk Ariss (2010) found that Islamic banks are relatively less competitive than their conventional counterparts in 13 countries during the period 2000–2006. They argue that it may be because Islamic banks allocate a greater share of their assets to financing activities compared to conventional banks.

Turk Ariss' (2010) findings were contradicted by Weill (2011) who argues that Islamic banks by no means are less competitive. Weill (2011) focused on the analysis of market power in both conventional and Islamic banks by using a cross-country sample of 17 countries from the Middle East and South East Asia to determine whether Islamic banks had higher market power than conventional banks over the period 2000–2007. The result showed that Islamic banks have lower market power than conventional banks resulting from the nature of Islamic banking concept that forbids the banks to charge interest and limit their ability to charge on high prices on their financial products. In fact, in robustness checks with control variables, some of the results suggest a higher competitiveness. His sample set contains 17 countries arranging from 2000 to 2007. Weill (2011) argues that while the competitiveness may be same, market power of Islamic banks may be low that can be attributed to their different norms and their different incentives. One such area would be the impact of the competition on the risk-taking behavior of the Islamic banks.

Sahut, Mili and Krir (2011) conducted a study on the factor of competitiveness of Islamic and conventional banks in the MENA region and the effect of competition on banks' profitability. Their study used PR-H statistic of Panzar and Ross and Lerner index to measure the competition in dual-banking systems and found that conventional banks are less competitive than Islamic banks. Moreover, Islamic banks also tend to have higher market power over the conventional banks.

Although studies conducted by Weill (2011), Sahut et al. (2011), and Turk Ariss (2010) focused on the comparison of market power between Islamic and conventional banks, these studies did not cover any comparative association between competition and risk-taking behavior among Islamic and conventional banks, which is one of the areas to be considered for future investigation.

Another area that demands an extensive investigation is the regulatory framework for the effective operation of Islamic banking system.

Regulations and the supervision of the banking system have been the topic of much recent discussion and attention, mainly because of the global financial crisis of 2007. Regulatory frameworks play an important role in the efficiency, risk-taking behavior, and financial stability of the Islamic banking system.

Alam (2012a) estimated profit and cost-efficiency of 70 Islamic banks and 165 commercial banks and compared them with the risk-taking behavior of these banks. Using data from 2000 to 2010, he established that for conventional banks, there is a positive relation between risk and inefficiency whereas as the opposite holds true for the Islamic banks. Conventional banks with low efficiency were found to have a high risk appetite, whereas inefficient Islamic banks cannot take greater risks because of the controlled costs. Results showed that larger Islamic banks have higher cost and profit efficiency. Alam (2012a), further suggested that for dual-banking systems, regulators should make sure that Islamic banks are highly capitalized in order to remain efficient.

In a related study, Alam (2012b) studied the impact of regulatory and supervisory framework associated with Basel III's pillars with risk taking and efficiency in the dual-banking system. He found that technical efficiency of Islamic banks is improved by stringent regulations and monitoring of banks and greater supervisory power. However, the opposite effect was found among conventional banks. Regarding risk-taking behavior of banks, it was found that conventional banks tend to take greater risks when severe restrictions are placed on their activities, whereas, Islamic bank's risk taking goes down with higher restrictions. In his recent study focusing on regulatory factors and risk taking of Islamic and conventional banks, Alam (2014) established that strict capital requirements results in controlled risk-taking actives by both Islamic and conventional banks. With official supervision as a regulatory tool, the study found that it had a similar effect on the risk-taking behavior of both conventional and Islamic banking system. The author argued that Islamic banks tend to work better with stringent regulatory environment as compared to their conventional counterparts, furthermore, establishing that Islamic banking system is better prepared for implementing Basel III guidelines.

Although there are not many studies on the incentive structure of Islamic banks, recently, Farook, Hassan and Clinch (2014) explored incentive and loan loss provision and their overall results suggest that there is an inverse relationship between profit distribution management and loan loss provisions. The results also suggest that there are differential effects

depending on whether the profit distribution management is for the benefit or the detriment of investment depositors. Their results are derived from 248 Islamic banks and 2258 conventional banks with a minimum of 5 years and a maximum of 10 years of data for each bank for the period 1992–2005. Recently Azmat, Skully and Kym (2015) found that adverse selection and moral hazard alone cannot explain this phenomenon while investigating the dominance of debt natured contracts on the asset side of Islamic banks argue. They augment the model with risk-averse depositors to highlight that asset side Islamic Joint Venture (IJV) could be deterred by Islamic banks' liability side. They conclude that for IJV, venture capital and private equity will prove to be more successful institutions than banking.

In a pioneering work on Islamic banks' capital buffers, Daher, Masih and Ibrahim (2015) investigated the susceptibilities of Islamic banks' capital buffers to unique risks emanating from their operating environments. Employing two-step dynamic Generalized Method of Moments on a dataset comprising 128 conventional and Islamic banks, they argued that privately owned Islamic banks, unlike their state owned counterparts, attempted to safeguard shareholders by independently mitigating the effects of displaced commercial risk through higher capital buffers. In addition, their findings suggested that the relation between equity investment risk and bank capital buffers also seems to vary by region.

In related literature on Islamic banking, Mallin et al. (2014) compared corporate social responsibility (CSR) and financial performance of 90 Islamic banks across 13 countries. Using the CSR disclosure index, their findings suggest that Islamic banks engage across the range of social activities, on both individual and geographical group levels. But they seem to be paying less attention to environmental aspects while exhibiting more commitment to the vision and mission, the board and top management, and the financial product/services dimensions.

Bank stability is another dimension that needs a thorough investigation within the Islamic banking system. Studying Islamic banking from bank stability perspective is important as Islamic banks are becoming systematically significant due to their rapid growth and increase in their share of the global banking system. Additionally, the absence of hedging instruments in Islamic banks can cause greater risk among financial institutions. It has been discussed that the special features of Islamic banking should be recognized and disclosed in the application of efficient banking supervision and to acquire an optimal operation of Islamic banking according to their attributes. Cihak and Hesse (2008) were the first ones to study the

Islamic banking from the viewpoint of banking stability. They compared the stability of Islamic banks with conventional banks, using data from 18 countries for the time period of 1993–2004. The study established that small Islamic banks are more stable when compared to small conventional banks. However, large Islamic banks were found to be unstable when compared with large conventional banks, indicating higher credit risk management problems for large Islamic banks.

Beck et al. (2013) used a larger sample to study the conventional and Islamic bank's model, stability, and efficiency. They conclude that countries, where Islamic banks have a greater market share, also have unstable, yet more cost-efficient, conventional banks. They also established that the resilience of Islamic banks during global financial crisis of 2007 was due to the greater capitalization and liquidity reserves of Islamic banks. Studying the interrelationships amid bank efficiency, competition, and stability, Kristo and Gruda (2010) estimated different variables that influence bank's stability for the time period 2005–2009. Comparing nonperforming loans, net interest margin, *z*-score, and return on equity they concluded that the high level of competition can improve bank's efficiency but deteriorate its stability.

Although a few studies investigate bank's stability and regulations together among conventional banking system, regarding dual-banking system, there is no exhaustive study to investigate the three-way relationship between bank regulations, efficiency, and stability for the Islamic banking system.

3 Islamic Banking Future Research

It can be seen from the above discussion that there is an extensive empirical literature on the efficiency, performance, risk-taking behavior, and regulatory theme under the Islamic banking domain. Evidence suggests that Islamic banks have mixed bag results when compared to their conventional counterparts in the dual-banking system. There is little evidence that Islamic banks perform worse than their conventional counterparts or tend to be riskier or unstable during the economic downturn.

Much work needs to be done in the area of Islamic banking role in the economic and financial development. There is a dearth of literature when it comes to assessing the role of the Shariah Supervisory Board on issues such as earnings management for Islamic banks. Governance issues in the Islamic banks is an area that is yet to be explored given the complex nature of relationships among different stakeholders of Islamic banks. Work still

needs to be done on examining the systematic risks and unique risks for an Islamic bank. More specifically, it will be worth looking at the liquidity and market risk of Islamic banks.

Most of the research carried in the dual-banking system was done when Islamic banks were in their infancy and less affected due to global financial crisis. It would be interesting to see if Islamic banks are ready to face the challenge when their main location undergoes an economic downturn in light of falling oil prices.

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Dr. Nafis Alam is Associate Professor at University of Nottingham Malaysia Campus and also Director of CIBFR.

Dr. Syed Aun R. Rizvi is Assistant Professor at Lahore University of Management Sciences (LUMS) and a Research Fellow of Nottingham University Business School Malaysia Campus.