Comparative Analysis between Islamic Banking and Conventional Banking Firms in terms of Profitability, 2006-2009

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ABSTRACT

This paper work is going to perform comparative analysis of Islamic Banking and Conventional Banking firms. This study will also touch the differences of the Islamic Banks and Conventional Banks in terms of historical origin, mobilizing of financial resources, and ways of generating profit, operating principles, and equity structure. The main focus of this comparative study is to evaluate and measure the difference in financial performance of the two dissimilar banking firms operating in different countries. To evaluate empirically performance of the banks, different financial ratios are going to be employed which are based on CAMEL framework. We plan to measure performance in terms of capital adequacy, asset quality, management, earnings and liquidity. For this purpose, we will refer to the banking literature to find most commonly used ratios. In this work, t-test, f-test, and regression analysis will be used to make hypothesis test and determine the ratio significance. Consequently, results from empirical analysis indicate that there is difference in profitability determinants.

Keywords: Islamic banking; conventional banking;

ÖZ

Bu tez İslami Bankacılık ve Geleneksel Bankacılık sektörleri arasındaki olası performans farklılıklarını ortaya koymak için hazırlanmıştır. Araştırmada, İslami ve Geleneksel Bankacılığın mali kaynakların kullanımı, tarihsel kökenleri, para kazanma yöntemi ve özkaynak yapısının farklılıkları da ele alınmıştır. Yukarıda bahsedilen farklılıklara ilaveten, bu çalışmanın temel amacı, değişik ülkelerde faaliyet gösteren farklı türdeki bankaların olası finansal performans farklılıklarını ortaya koymaktır. Bankaların performansını ampirik olarak değerlendirmek için, farklı finansal oranlar kullanılmıştir. Performans literatürünün öngördüğü, sermaye yeterliği, aktif kalitesi, yönetim, kazanç ve likidite gibi performansı etkileyen, fınansal oranlar kullanılarak performans olçülmüş ve tahmin edilen panel regresyon analizlerinin sonuçlarının değerlendirilmesi F-test ve T-test ile yapılmıştır.

Anahtar Kelimeler: Islami bankacılık; geleneksel bankacılık.

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I owe extremely to my family who allowed me to travel all the way from Kazakhstan to Turkish Republic of Northern Cyprus and supported me all throughout my studies. I would like to dedicate this study to them as an indication of their significance in this study as well as in my life.

To my lovely wife and son

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LIST OF ABBREVIATIONS

CB .....Conventional Bank

CAMEL.....Capital Adequacy, Asset Quality, Management, Earnings and Liquidity

CEO .....Chief Executive Officer

CR ..... Cost to Revenue

DUM .....Dummies Variable of Banks

GGDP..... Gross Domestic Product Growth

GCC .....Gulf Cooperation Countries

IB .....Islamic Banks

LTA ..... Logarithmic of Total Assets

LIQD.....Liquid Assets to Deposits

LD .....Loans to Deposits

NIM ..... Net Interest Margin

NCUA .....National Credit Union Administration

PLLTL.....Provision of Loan Losses to Total Loans

ROA ..... Return on Assets

ROE ..... Return on Equity

Chapter 1

INTRODUCTION

Nowadays the banks play a significant role in our society, and it is not even possible to imagine the life without banks, in other words the banks have become a blood vein of our economy. In order to stimulate the economy of any specific country the government does this via banking system by using "Monetary Tools". Moreover, all of the finance and business transactions that we are being involved in are done through the banks. However, not only advantages have come out from conventional banking system, but disadvantages as well. As we are witnessing, financial and economic crisis has been occurred mostly due to Conventional Banking System recently. The frequency of happening such financial crises has started since existence of Capitalistic system in which the interest rate and speculative transactions are allowed. The Capitalism has been existed since 19^{th} century. The governments and central banks have been striving making economy to work better off after each crisis by applying "Monetary Tools" but their goals didn't reach final stages of its completion. As in the paper work of M. Kabir Hassan, the web page it was mentioned that "The steady expansion of Islamic banks has been the hallmark of the Muslim world financial landscape in the 1980s and 1990s. With a network that spans more than 60 countries and an asset base of more than $166 billion; Islamic banks are now playing an increasingly significant role in their respective economies. In this respect, Islamic banks are rapidly gaining market shares in their domestic economies.

In retrospect, the presence of Islamic banks exemplifies the empirical success and the viability of eliminating fixed interest payments from financial transactions."[1]

Human beings are suffered enough due to financial distress, by becoming homeless because of mortgage loans, millions of people lost everything, and there are even people who end up with suicide. All these are going on around the world and no one questions why these things happened? The answer is shortcomings of conventional banking system, bankers of such system are careless about their depositors and borrowers, they just charge interest on interest, and even if you are default they will charge a fine of interest. However, it is not necessarily mean that all people should come together and get rid of conventional banking system. We will not able to live without any financial intermediations, all transactions that we are being involved in are computerized through the banking system. Banking system facilitates the life of people, and makes economic in term of money and time. People need something that will provide benefits for the borrowers and depositors. The first establishment of conventional bank was with no interest, and then it was added and has become the main source of earnings of banking system. In addition to, many alternatives viewed but only one is reflected as an optimum option in the horizon that may replace Conventional Banking System (CB System) which is Islamic Banking System (IB System). Alongside of Traditional Banks, Islamic Banks have started playing a vital role in contribution to economy of a country since 1970s. The main difference between Conventional Banking and Islamic Banking is that in IB the interest rate is prohibited. Furthermore, the interest rate is the only way of source of funds that traditional banks are receiving, whereas in Islamic Banks "profit/loss

[1] M. Kabir Hassan and Abdel-Hameed M. Bashir, Determinants of Islamic Banking Profitability, *ERF paper, Conference*.

sharing" methodology is being used. The banking principles, rules, regulations and equity structure are different as well. Likewise, recently we have witnessed a global financial crises terribly affected conventional banking firms, but not the Islamic Banks, simply to say that Islamic Banks are not unaffected from global financial crises much as CB, they are being affected little because of financial dealings, and because Islamic Banks are not involving in speculative and interest rate related transactions, they did not suffer from global financial crises. As it is being mentioned in the internet " Riyadh, Asharq Al-Awsat- A number of experts and officials of Islamic banks and financial institutions have confirmed that Islamic banks have not been affected by the global financial crisis, and that any effects would be limited due to the nature of Islamic banking. Experts told Asharq Al-Awsat that Islamic banks are untouched by the current crisis due to the nature of Islamic banking especially that it does not deal in debt trading and distances itself from market speculation that takes place in European and American banks. CEO of the Bahraini-based Albaraka Banking Group Adnan Ahmed Yousif stated that Islamic banks do not rely on bonds or stocks, and are not involved in the buying and selling of debt unlike most conventional European and US banks. He noted that Islamic banking is distinguished by the fact that it is prohibited from buying debts under Islamic Sharia law; therefore, Islamic banks are safe from the effects of the global financial crisis."[2] Furthermore, there is a big dispute prevailing in the world that is being argued what type of banking system should replace the current capitalistic banking system which wore out and no more financial medicine helpful and useful that has been applying after all crises since 19th century, in other words the financial tools or instruments are not working in a useful way anymore that used to stimulate economy of a specific

[2] Mohammed Al-Hamzani, Islamic Banks Unaffected by Global Financial Crisis, http://www.asharq-e.com/news.asp?section=6&id=14245, 30/09/2008.

country. On one hand, there is a big dispute has risen that Islamic Banking System is being an optimum alternative for Conventional Banking System. Therefore, the analytical comparison of the two different banking systems is crucial in terms of financial performance, in other words, the main focus of this comparative study is to evaluate and measure the statistical difference in financial performance of the two different banking firms operating cross countries. To evaluate performance of the banks empirically, different financial ratios are going to be employed. The measurement of performance will be based on CAMEL framework. CAMEL is the rating system that measures the viability of financial organization in terms of Capital Adequacy, Asset Quality, Management Quality, Earnings and Liquidity. The background of CAMEL framework in the internet is "The CAMEL Rating System was adopted by NCUA in October 1987. Its purpose is to provide an accurate and consistent assessment of a credit union's financial condition and operations in the areas of Capital Adequacy, Asset Quality, Management, Earnings, and Asset/Liability Management. It is not intended to be used as a "report card," but as an internal tool to measure risk and allocate resources for supervision purposes"[3].

In this work, two regression analysis will be applied to see the statistical differences of IB and CB in terms of determinants of profitability, simply to say how the explanatory variables affect the profitability indicators or dependent variables in two different banking system. First of all, two regression analyses have been estimated which is based on country cross bank level data: General Model Regression and Pure Model Regression Analysis. Whole Model Regression Analysis besides bank's characteristics does include macroeconomic variable and dummies of banks which is coded for IB as 1 and for CB as 0. Whereas, in Pure Regression

[3] National Credit Union Administration, Camel Rating System, NCUA, March 2003, http://www.ncua.gov/letters/2003/03-CU-04.pdf.

Analysis they are just excluded to see whether this estimation results will be changed or not. As result it can be said that profitability indicators of all banks are positively related to capital adequacy of the banks, except ROE. So the probability of defaults is low because the banks have sufficient amount of capital that keeps out the banks of any difficulties in payments that banks may face. However we found that economic growth does not exert any influence on determinants of profitability because they are statistically insignificant, but only Net Interest Margin is inversely related to GDP growth over period 2006-2009. As a separate comparison of Islamic and Conventional Banks showed differences in profitability measures with relation of, management, asset quality and capital adequacy, but scales of banks do not exert any impact on profitability of banks.

Chapter 2

BACKGROUND REVIEW

2.1 Islamic Banking and Conventional Banking

Both Islamic Banks and Conventional Banks are financial intermediation that helps to transfer the funds from investors, depositors or savers to borrowers or investors. Regular Conventional Banks can not be involved in venture transactions or merchandizing transactions, which is allowed for Islamic Banks. But there are merchant banks who are allowed to do merchandizing. The main difference between Islamic Banks and Conventional Banks are that, interest rate and speculative transactions, investment in alcohol, in tobacco and in pig made products are prohibited in accordance with Islamic Principles. Generally, Conventional Banking Principles are man made, whereas in Islamic Banks principles and rules are based on Shariyah who set up the principles, simply to say transactions of Islamic banks are based on profit and loss sharing. As we are aware of, that interest rate for Conventional Banks is main source of earnings. As a proof, interest is forbidden in not only Islam and in Christianity as well. Likewise, as it is being stated in Quran " O you who have believed, do not consume usury, doubled and multiplied, but fear Allah that you may be successful."[4] And another proof in Quran is "Allah has permitted trade and has forbidden interest"[5]. In the Bible states "Do not charge your

[4] Quran, chapter 3,verse 130
[5] Quran, chapter 2, verse 275

brother interest, whether on money or food or anything else that may earn interest."[6] Unlike Islamic Banks, the Conventional Banks are not allowed to purchase commodities with the aim of reselling them, in other words it is forbidden for them to buy capital assets or fixed assets such as: building, tracks, cars, machineries with the purpose to resell them with mark up unless they do not use for their own. On the article from internet that contains table which briefly describes the differences between Islamic Banks and Conventional Banks which is demonstrated bellow in the [Table 2.1][7]

Table 2.1: Differences between IB and CB

Conventional Banks	Islamic Banks
1. The functions and operating modes of conventional banks are based on fully manmade principles.	1. The functions and operating modes of Islamic banks are based on the principles of Islamic *Shariah.*
2. The investor is assured of a predetermined rate of interest.	2. In contrast, it promotes risk sharing between provider of capital (investor) and the user of funds (entrepreneur).
3. It aims at maximizing profit without any restriction.	3. It also aims at maximizing profit but subject to *Shariah* restrictions.
4. It does not deal with *Zakat.*	4. In the modern Islamic banking system, it has become one of the service-oriented functions of the Islamic banks to be a *Zakat* Collection Centre and they also pay out their *Zakat.*
5. Lending money and getting it back with compounding interest is the fundamental function of the conventional banks.	5. Participation in partnership business is the fundamental function of the Islamic banks. So we have to understand our customer's business very well.
6. It can charge additional money (penalty and compounded interest) in case of defaulters.	6. The Islamic banks have no provision to charge any extra money from the defaulters. Only small amount of compensation and these proceeds is given to charity. Rebates are give for early settlement at the Bank's discretion.
7. In it very often, bank's own interest becomes prominent. It makes no effort to ensure growth with equity.	7. It gives due importance to the public interest. Its ultimate aim is to ensure growth with equity.
8. For interest-based commercial banks, borrowing from the money market is	8. For the Islamic banks, it must be based on a Shariah approved underlying

[6] Bible, Deuteronomy chapter 23, verse 19

[7] Ust Hj Zaharuddin Hj Abd Rahman, Differences between Islamic and Conventional Banks, Senarai Lengkap Artikel, http://zaharuddin.net/index.php?option=com_content&task=view&id=297&Itemid=72, Thursday, 22 February 2007 18:02, 1.

relatively easier.	transaction.
9. Since income from the advances is fixed, it gives little importance to developing expertise in project appraisal and evaluations.	9. Since it shares profit and loss, the Islamic banks pay greater attention to developing project appraisal and evaluations.
10. The conventional banks give greater emphasis on credit-worthiness of the clients.	10. The Islamic banks, on the other hand, give greater emphasis on the viability of the projects.
11. The status of a conventional bank, in relation to its clients, is that of creditor and debtors.	11. The status of Islamic bank in relation to its clients is that of partners, investors and trader, buyer and seller.
12. A conventional bank has to guarantee all its deposits.	12. Islamic bank can only guarantee deposits for deposit account, which is based on the principle of *al-wadiah,*thus the depositors are guaranteed repayment of their funds, however if the account is based on the mudarabah concept, client have to share in a loss position..

Table 2.1 (cont.)

2.2 Origins of the Banks

The establishment of first Conventional Bank was nearly 424 years ago. As it has been stated in the book of Sudin Haron and Wan Nursofiza that "Modern conventional banking system came into existence nearly 420 years ago with establishment if Banco Della Pizza at Rialto in Venice in 1587(Hamoud, 1985). Nevertheless, in England modern CB was regarded as non existent before 1640; the Bank of England was only established in 1694(Sumner, 1971)."[8] However, Islamic Banks officially was established in 1963 which was Mit Ghamr Saving Bank in Egypt and its transactions were based on Shariyah principles and rules. In addition to, though a first Islamic Banking was established in 1963, it does not necessarily mean that previously there were no Islamic finance and banking activities in the Islamic history. In accordance with the book of Sudin Haron and Wan Nursofiza "before or after the arrival of Islam in Mecca, the deposits were made for safe

[8] Sudin Haron and Wan Nursofiza, Islamic Finance and Banking System, McGraw-Hill (Malaysia) Sdn,Bhd, 2009, 44.

keeping. The person entrusted to keep the deposit would pledge to return the amount deposited. However, during the time of Prophet (peace and blessing upon him), one of his Companions, Az Zubair al Awwam would refuse money from depositors if it was in the form of saving. Instead, he proffered it to be in the form of loan or qard."[9]

On other hand, we are all aware of principles of Conventional Banking system, but most of us are not familiar with Islamic banking operational principles that are divided into Equity and Debt Instruments.

2.3 Shariah Compliant Instruments

2.3.1 Equity Structure Instruments

The *Musharaka* refers to partnership. This principle also known as financing participation, partnership is existing unless main criterion which is cash is not there. In other words, this principle similar to Joint Venture in Conventional Banking that means agreement between two parties who are being involved in a specific business activity or specific project with the aim of making profit. Under this principle both parties come with a capital to conduct specific business activity, and where investor or lender also may participate in the management. Allocation of profit or loss is determined in advance and is not necessarily based on the total capital contributed by the partners involved.[10] Musharaka is shown in [Figure 2.1][11]

[9] Sudin Haron and Wan Nursofiza, Islamic Finance and Banking System, McGraw-Hill (Malaysia) Sdn,Bhd, 2009, 48.
[10] Sudin Haron and Wan Nursofiza, Islamic Finance and Banking System, McGraw-Hill (Malaysia) Sdn,Bhd, 2009, 130-131.
[11] Administrator, Musharaka, http://www.fidomes.com/islamic-finance/index.asp?relatif=214&rub=17&id=232, 20/04/2008.

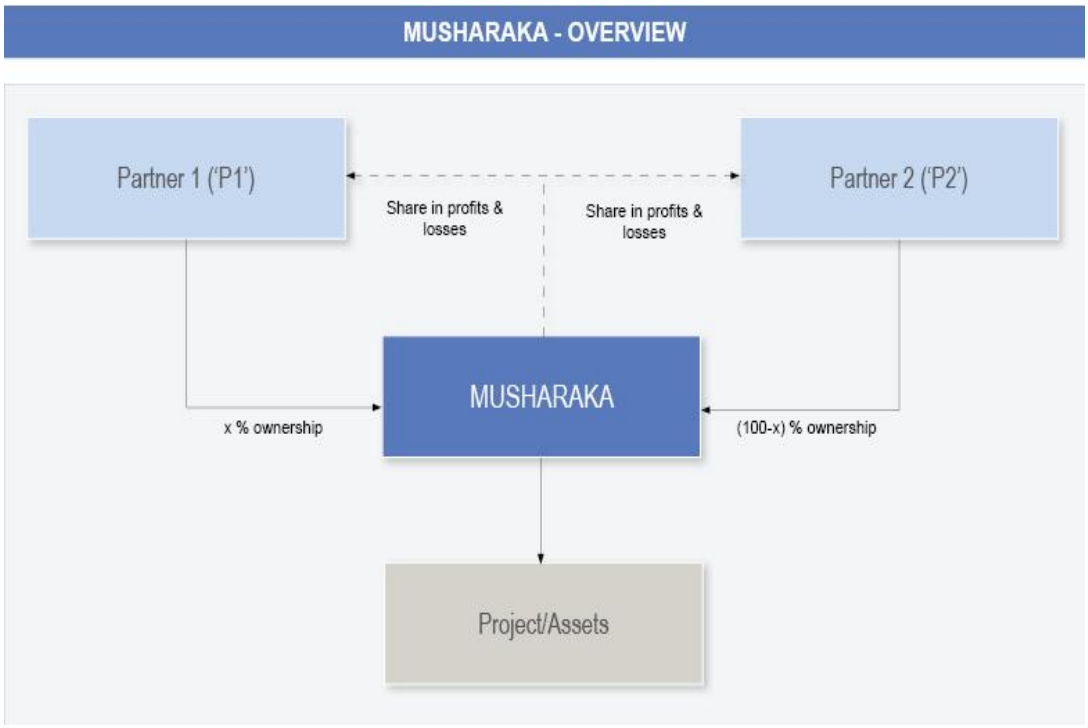


Figure 2.1: Musharaka PLS Partnership

The *Mudaraba* is a terminology which means trust finance, profit sharing among trustees or equity sharing. Basically, under this concept, those parties who are lenders or investors with the capital assign their money to another parties who might be entrepreneur to carry out a venture or specific business activity in accordance with Shariah rules and regulations. The investors or lenders will not be involved in the business activity or project and at the end of stipulated period, the borrower who agreed to take capital and carry out the business or venture will return the principal amount to investor and pre agreed proportion of profit which borrower made during specified time in specific business. Simply to say, the profit ratios are based on the agreement made at the beginning of the contract, and there is no guarantee to the investor that investment would make a profit, so all losses bear the investor. The

borrower or agent manager bears loss only in terms of time and efforts.[12] The Mudaraba is mentioned in [Figure 2.2][13]

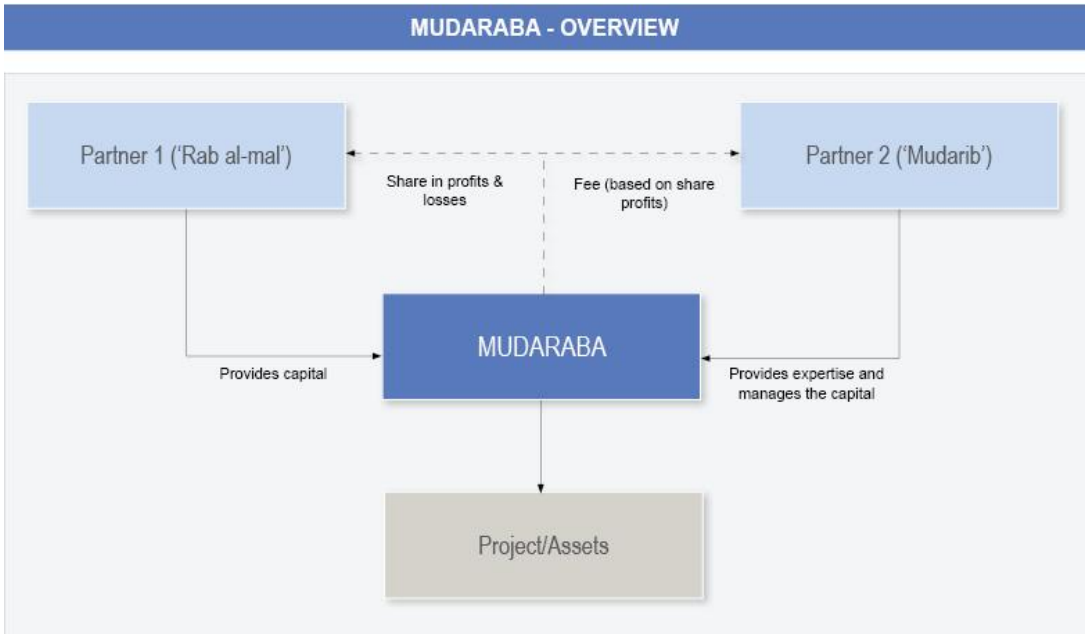


Figure 2.2: Mudaraba

2.3.2 Debt Structure Instruments

The *Murabaha* is cost plus or mark up, basically it refers to purchase of tangible goods from third party at request its customers, and resells the goods to clients at pre agreed price on installments by adding profit margin. On one hand, It is the sales of goods at a price that covers the cost and plus added profit which is based on agreed profit margin. This operational principle resembles to traditional lending activity where the lenders buys the goods in the form of raw materials, machines, or other equipments as required by the borrower, and then lenders resell these goods to the borrowers at higher price agreed upon by both parties. However, this lending activity

[12] Sudin Haron and Wan Nursofiza, Islamic Finance and Banking System, McGraw-Hill (Malaysia) Sdn,Bhd, 2009, 133-134.
[13] Administrator, Mudaraba, http://www.fidomes.com/islamic-finance/index.asp?relatif=214&rub=17&id=232, 20/04/2008.

is not allowed in ordinary Conventional Banking system. Moreover, the mark up should not be so high and buyer or clients always have to be aware about the charged price before he or she get the goods.[14] The Murabaha is demonstrated in the [Figure 2.3]. [15]

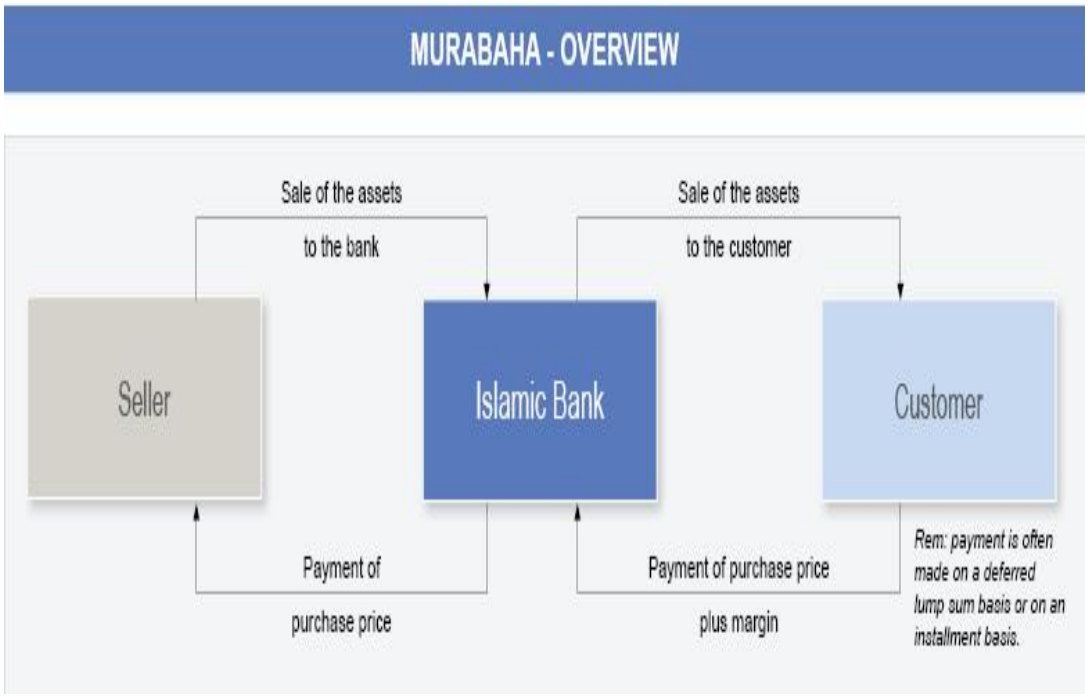


Figure 2.3: Murabaha Cost Plus

The *Ijarah* is a contract that is used to lend or hire or lease ant commodity such as, equipment, machines, building, flats, and even land. As property, is being leased by clients that leasing ending with ownership to the lessee. Likewise, it is similar to transaction of traditional banks that provides equipment, facilities, and premises in the form of leasing that will end up with ownership of that property.[16] The concept Ijarah is practiced by Islamic Banks that acquire an asset on request of customer and

[14] Sudin Haron and Wan Nursofiza, Islamic Finance and Banking System, McGraw-Hill (Malaysia) Sdn,Bhd, 2009, 134-135.
[15] Administrator, Murabaha Cost plus, http://www.fidomes.com/islamic-finance/index.asp?relatif=215&rub=17&id=238, 20/04/2008.
[16] Sudin Haron and Wan Nursofiza, Islamic Finance and Banking System, McGraw-Hill (Malaysia) Sdn,Bhd, 2009, 136.

lease it to him over specific period of time. It enables Islamic Banks enter into profitable venture and avoiding charging interest rate. The concept Ijarah Shariah compliant equivalent conventional operating leasing. In the internet Ijarah shown in [Figure 2.4].[17]

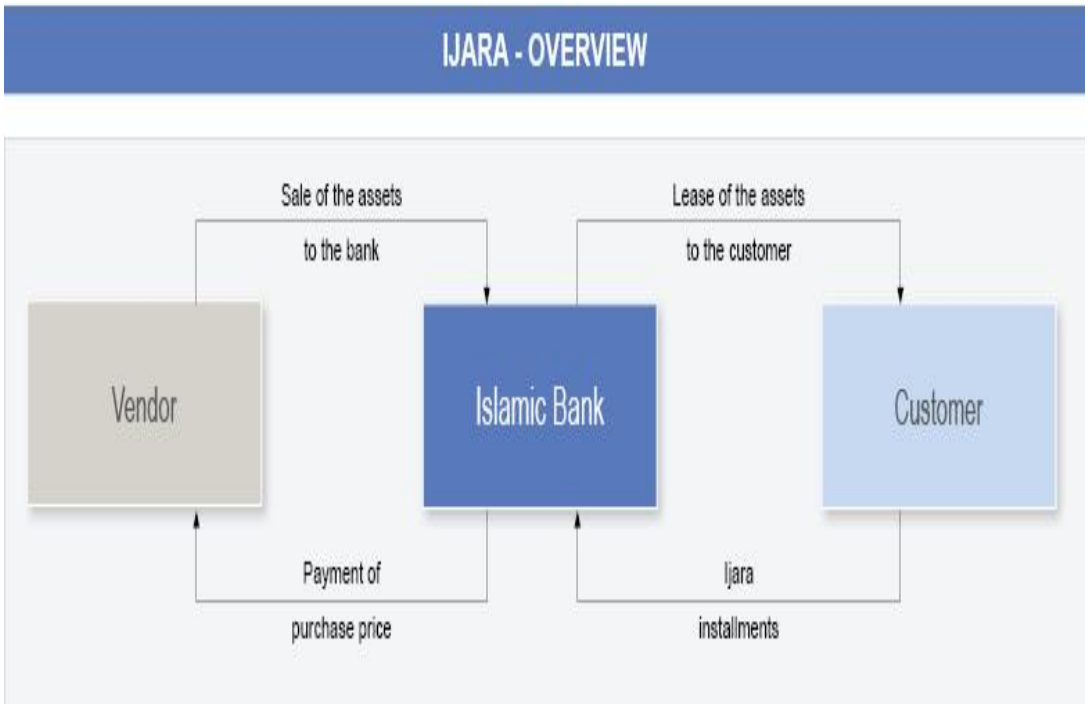


Figure 2.4: Ijara-Leasing

The *Istisna* is a commissioned manufacture contract whereby the buyer request or ask the seller to construct or manufacture a specified item using the sellers' own raw materials at mutual agreed price. It is sale of transaction before it comes into existence. Istisna is Islamic mode of financing by financial institution or banks. They finance construction of buildings, manufacturing ships, engines and machines. This concept is almost similar to *Bai Salam*. The only difference between Bai Salam and Istisna, is that in Bai Salam in the time of agreement before construction or manufacture is conducted, but in Istisna the payment is made later on the delivery of

[17] Administrator, Ijara Cost plus leasing, http://www.fidomes.com/islamic-finance/index.asp?relatif=215&rub=17&id=238, 20/04/2008.

an item. These transactions can be done on installments basis as well.[18] Istisna is demonstrated bellow in the [Figure 2.5].[19]

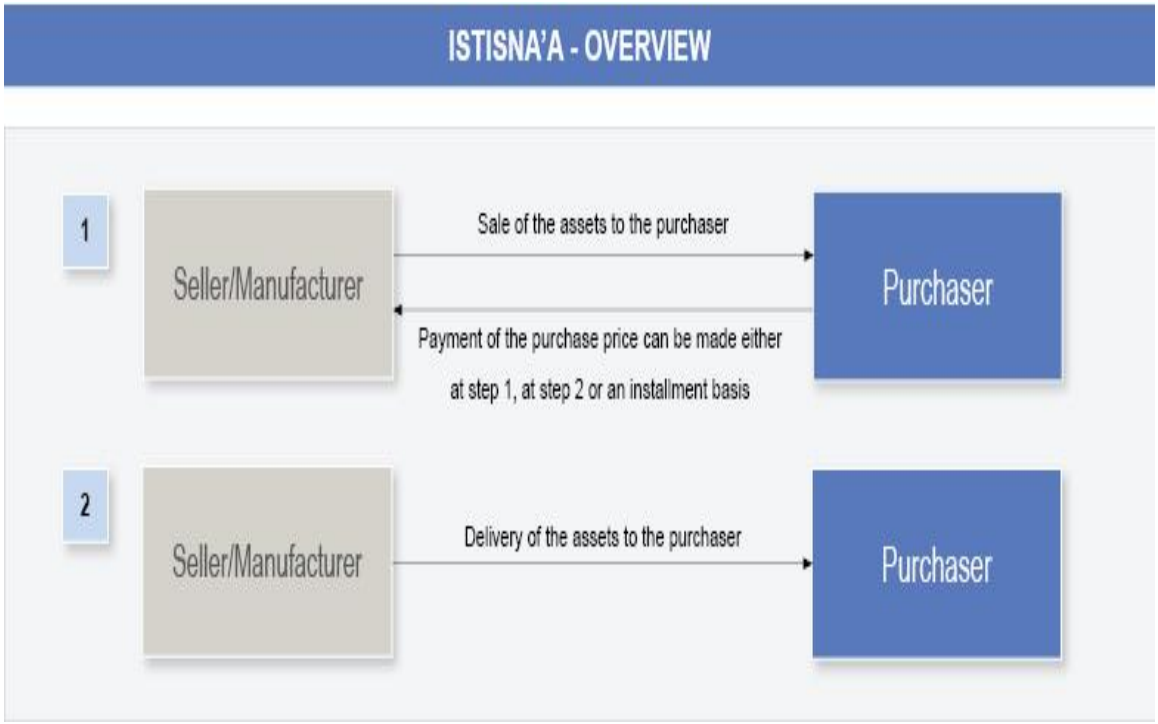


Figure 2.5: Istisna -Commissioned Manufacture

The *Qard Hassan* is interest free loan which is sole type of loan that is acceptable in Islam. It is benevolent loan that obliges a borrower to repay the lender the principal sum borrowed. The borrower however has discretion or option to reward the lender by paying any sum over and above the principle amount borrowed. This type of financing is also used to promote and aid micro enterprises. In practice, it is used for short term bridging financing and social welfare. If the borrower in trouble, or the probability of default high then it is expected from lender to extend the time or

[18] Sudin Haron and Wan Nursofiza, Islamic Finance and Banking System, McGraw-Hill (Malaysia) Sdn,Bhd, 2009, 133.
[19] Administrator, Istisna Commissioned Manufacture, http://www.fidomes.com/islamic-finance/index.asp?relatif=215&rub=17&id=236, 2008.

even to pass on part or total amount of borrowed fund.[20] Qard Al Hassan is displayed in the [Figure 2.6].[21]

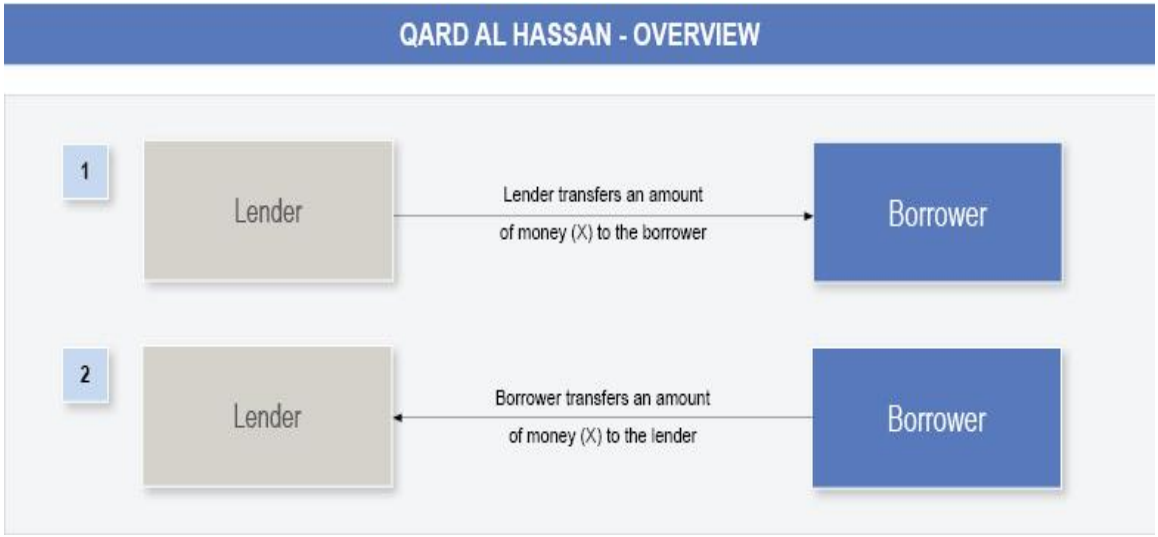


Figure 2.6: Qard Al Hassan – Interest free Loan

The *Wadiah* is a trusteeship refers to an agreement whereby a customer deposits his money or other items with the banks for safekeeping and the bank must seek permission from customer to use that fund at the bank's own risk as long as the funds remain with the bank. The depositors do not earn anything, just safekeeping of money is guaranteed. The customer may withdraw part of his deposit or whole amount at any time he desires to do that and banks guarantees that to honor such request.[22]

The capital structures of both types banks are different. Capital structure is way that organization is financing its assets whether from liabilities or equity or both at the same time. In Islamic Banks, capital structure is based on equity, whereas in

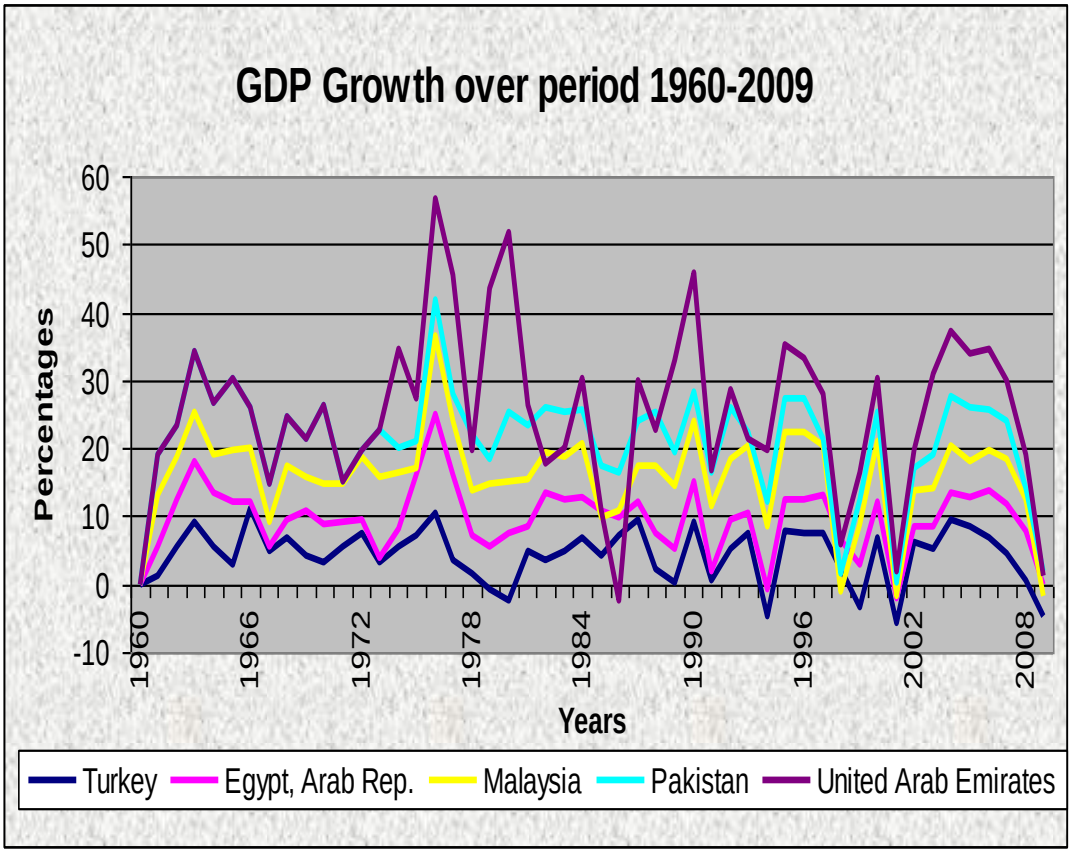
[20] Sudin Haron and Wan Nursofiza, Islamic Finance and Banking System, McGraw-Hill (Malaysia) Sdn,Bhd, 2009, 138.
[21] Administrator, Qard Al Hassan – Interest free Loan, http://www.fidomes.com/islamic-finance/index.asp?relatif=215&rub=17&id=236, 2008.
[22] Sudin Haron and Wan Nursofiza, Islamic Finance and Banking System, McGraw-Hill (Malaysia) Sdn,Bhd, 2009, 140.

Conventional Banks is opposite, mostly debt financing and some equity. For instance, if the Conventional Banks issue the equity to raise the capital by $10 billion and debt by $90 billion that is said to be 10% equity financed and 90% debt financed. Furthermore, the ratio of total debt to equity financing is 90%, in this example the bank is leverage.

To sum up, all of the above mentioned transactions are free interest and non speculative transactions. Furthermore, if default of the borrower is taking place due to serious problems that raised, even though the borrower put maximum efforts to realize his goal to make profit but because of some unexpected outcomes he defaults, for example those unexpected conditions are: war, big recession, military coup, and so on. In this case the borrower is not accountable for the loan, that is to say he is not obliged to repay the loan back.

2.4 Countries overview

Turkey is one of the independent Turkic countries in where most of the population is Muslims, although 99 % of people in Turkey are belonging to the religion of Islam, the country's system based on secularism. The currency is called Turkish Lira. Egypt is one of the Arab independent countries. Majority of population is Muslim. The currency of Egypt is Egyptian Pound. The first Islamic bank was established in Egypt in 1963s. Due to some changes in political climate the first Islamic bank was taken over by a national bank. Pakistan is one of the recognized Islamic countries. The currency is Pakistani Rupee. Malaysia is also one of the Islamic countries and population is big as well. The currency is Malaysian Ringgit. United Arab Emirates is having one of the most developed economies in west part of Asia. The currency is UAE dirham. The economic growth of these countries is demonstrated in the [Graph 2.1].



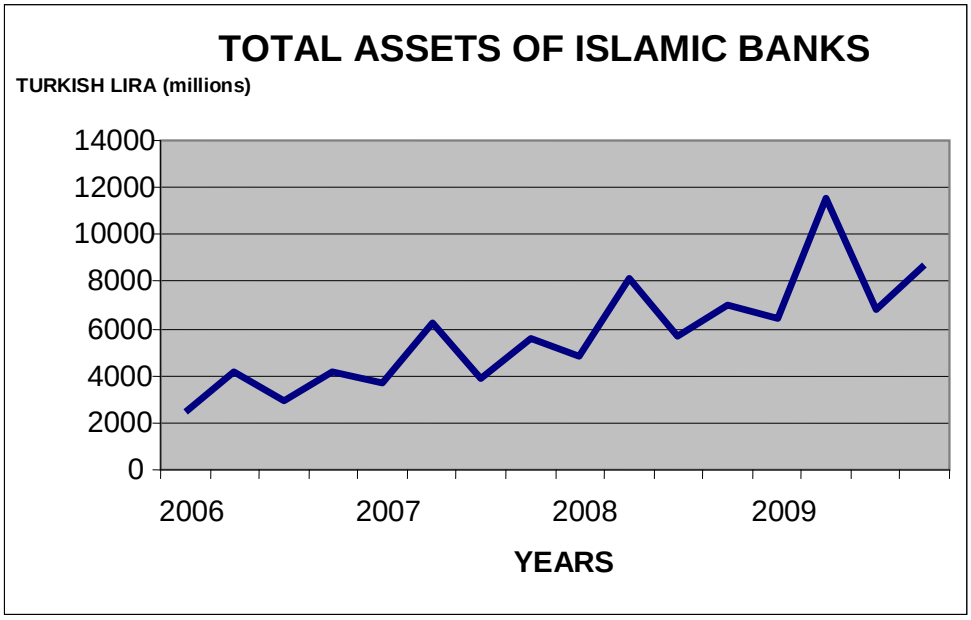
Graph 2.1: GDP growth of mentioned above countries over period 1960-2009, sources: World Bank database.

Turkey

Turkey is one of the well developing countries. According to statistics, the growth of economy of this country is evolving in a stable manner. Moreover, Turkey is one of the leading countries in the world in terms of agriculture, motor vehicles, electronics, construction materials, ships and other transportation machines, home appliances and so on. The state still plays a major role in private sector such as banking, industry, transportation and communication.[23] Furthermore, Islamic banks are evolving with rapid speed growth alongside with traditional banks, as average the total assets of these Islamic banks showed by [Graph 2.2]. This table is consisting of

[23] Aliye Pekin Celik, Turkey: Current and Future Political, Economic, and Security Trends. http://www.cdfai.org/PDF/Turkey%20Current%20and%20Future%20Political%20Economic%20and%20Security%20Trends.pdf

all Islamic banks in Turkey in terms of total assets. And we can see that curve is upward slopping curve as year passes the Islamic banks are getting bigger in terms of scale.

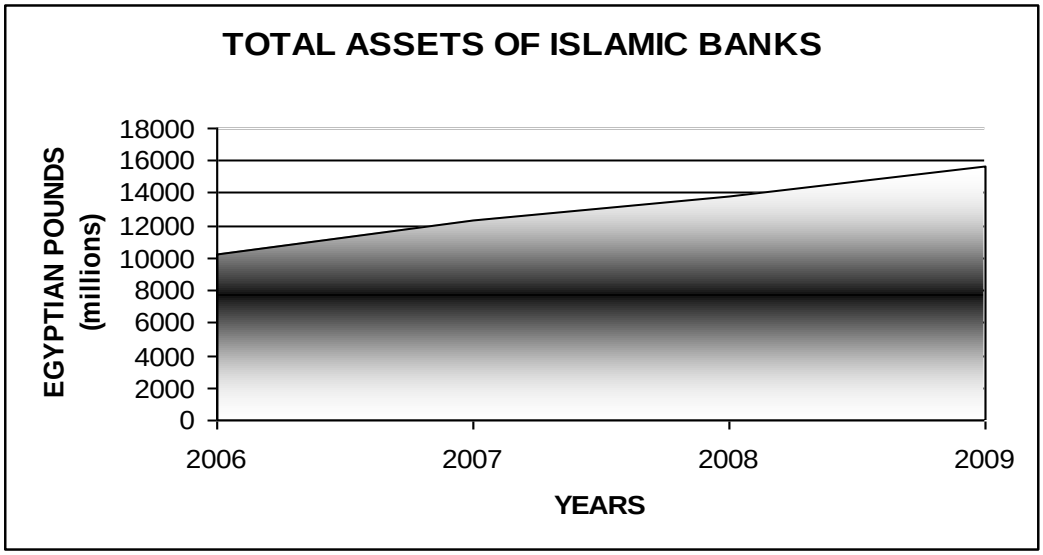


Graph 2.2: Total Assets of all Islamic Banks in Turkey over period 2006-2010, Source: Bankersalmanac and Bankscope databases.

Egypt

Egypt is one of the Arabic countries with growing stable economy. Moreover, the growth of Islamic banking system has started since 1963 among the Conventional banks. Egypt make contribution to its own economy, in order to make better off via being involving in agriculture sector, automobile manufacturing sector, tourism, textile and clothing, electronics, construction fields, communication sector, banking and emerging sector which is ICT information and communication technology sector. Islamic banks are evolving in good profitable manner and increasing by size as years pass. For instance, it can be shown graphically by taking three Islamic

banks, sample of Islamic banks represents whole population.[24] The total assets of Islamic banks increase represented in the [Graph 2.3]:



Graph 2.3: Total Assets of Islamic Banks in Egypt over period 2006-2009, source: Bankersalmanac and Bankscope databases.

We can see that the total assets are increasing year by year for Islamic Banks, in other words the banks are evolving in size as year pass in Egypt.

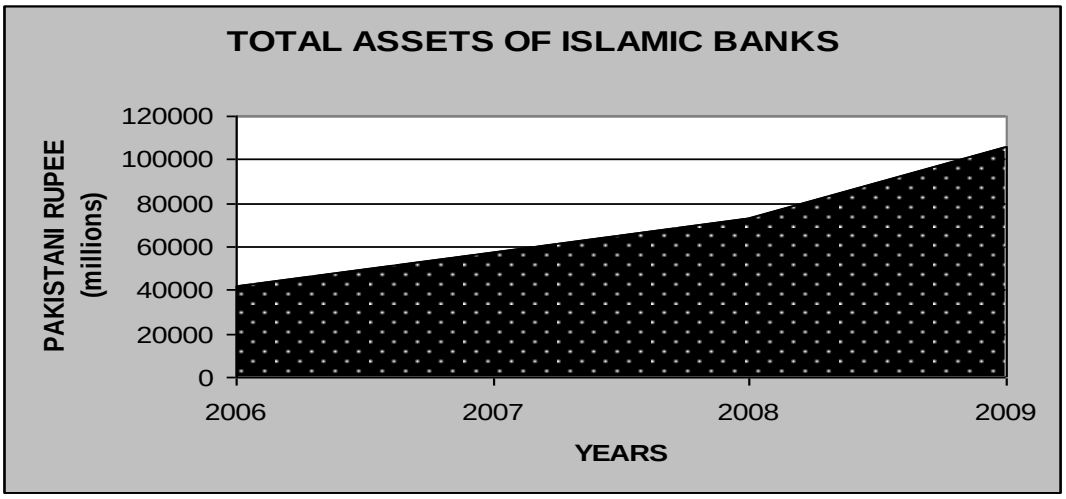
Pakistan

Pakistan is one of the impoverished and less developed countries; it suffered a lot due to political biases and with small amount of foreign investment. The contributions to economy growth are coming from fields of textiles, chemicals, steel, transportation, food processing, paper products, and construction materials. Furthermore, Pakistan is an Islamic Republic. Islamic banks are growing in size as it showed in the bellow graph as an average of total assets of Islamic banks:[25] As You

[24] Sahar Nasr, Access to Finance and Economic Growth in Egypt, the World Bank, http://siteresources.worldbank.org/INTEGYPT/Resources/Access_to_Finance.pdf, 31 March 2011 at 00:50.

[25] Ishrat Hussain, Economy of Pakistan: An Overview, http://ishrathusain.iba.edu.pk/speeches/economicManagementPolicies/Economy_of_Pakistan_Expo_2005.pdf 26 April 2011 at 16:08.

can see Islamic banks are growing in terms of scales as years pass from the [Graph 2.4].



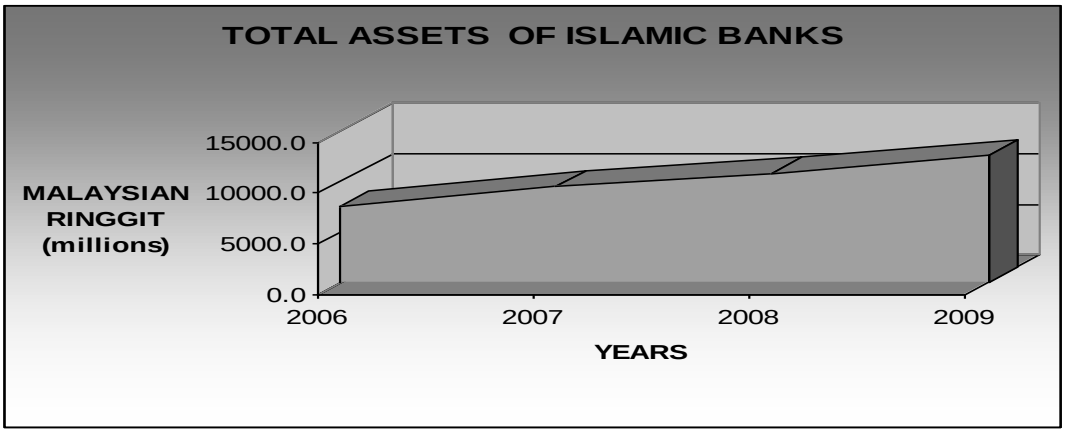
Graph 2.4: Total Assets of Islamic Banks in Pakistan over period 2006-2009, source: Bankersalmanac and Bankscope databases.

Malaysia

Malaysia is one of the well developed countries and it is growing with speedy growth. Malaysian economy faced economic boom around 1960s. That is to say Malaysia has become multi sector economy rather being a producer of raw materials only. The economy is based on agriculture, electronics, tin mining, tourism, petroleum production and so on. In addition to, Malaysia is the country where Islamic banking is evolving with high growth and they are at higher stages than in other countries. As it is stated in one the economic research articles that "Before 1957, Malaysia was a low income agrarian economy, whose mainstays were rubber and tin production and entrepôt trade centered on Penang and Malacca. Business enterprises were small scale, largely localized, and predominantly family- based. Over time, the economy has diversified beyond agriculture and primary commodities, such that manufactured goods now account for a larger share of GDP and total exports. Urbanization has been rapid; in 2005, some 63 percent of Malaysia's

population lived in urban areas, compared with just about a quarter in 1957. Although more urbanized today, historically the *Bumiputera* were rural- based. By contrast, the Chinese have always been predominantly urban."[26]

As economy grows, the sizes of Islamic banks are increase as well and it is demonstrated in the [Graph 2.5].



Graph 2.5: Total Assets of Islamic Banks in Malaysia over period 2006-2009, source: Bankersalmanac and Bankscope databases.

United Arab Emirates

UAE is oil based federation whose economy is rapidly growing and considered to be one of the highly developed countries. Moreover, the main resources of this country are petroleum, petrochemicals, and fishing. Other resources are aluminum, cement, boat building and handicrafts.

[26] Zainal Aznam Yusof and Deepak Bhattasali, Economic Growth and Development in Malaysia: Policy Making and Leadership, Commission on Growth and development, 03-Oct-2008 14:16, 3-4.

Chapter 3

LITERATURE REVIEW

3.1 Islamic Banks

The comparative analysis of Islamic and Conventional Banks in terms of profitability determinants which is based on CAMEL approach is very vital. All banks are playing a significant role in contribution to the growth of the economy. And many studies are done to improve the profitability indicators and bank characteristics. Recent paper works have employed different characteristic, structures, macroeconomic variables of bank level data across countries. Those papers which are outlined in this chapter done by Bashir(2000), Abdus Samad & M. Kabir Hassan(1997), Rima Turk Ariss (2006), Faisal (2004), Hassan and Bashir(2004), Sehrish(2009), Toufiq(2005), Chukwuogor(2002), Anouar Hassoune(2002), M.S. Moin(2007), Devid Tripe(2002), Kosmidou (2004) and Spathis(2002).

Bashir(2000), his research was about "determinants of profitability in Islamic Banks, some evidence the from Middle East". He applied Regression Analysis, in order to see the relationship between bank's characteristics and measure of financial performance in Islamic Banks. He used cross country panel data to conduct the estimation and showed that profitability measures of Islamic Banks react positively in association with increase capital and loan ratios. Financial ratios are employed to measure the performance measures of Islamic Banks. 14 of Islamic banks are taken

across 8 countries. He has taken as dependent variables: Return On Equity, Return On Assets and Profit before Tax over total assets. He come up with results that the larger the total equity to assets and greater loans to assets ratios interacted with GDP growth which increases profit margins. These results are playing a crucial role in explanation of financial performance of Islamic Banks. Secondly Bashir(2000) found that profitability determinants are having positive relationship with OVERHEADS, that is to say the higher the salaries, wages and investment costs that can be explained the banks earn more. Findings and results are consistent with previous studies. Moreover, he regressed the ownership as dummy variable on profitability determinants as well, and come up with that foreign ownership contributed significantly to Islamic Banks, that is to say there is statistically significant positive relationship between foreign ownership and profitability indicators. He used tax factors as well, and results showed that the financial repression by using taxes on Islamic banks' profitability indicators influenced negatively, in other words the tax structure of government has negative connection with financial performance of Islamic Banks. In addition to, Bashir(2000) had found that reserve ratio has been negatively related to performance measure of Islamic Banks. Good economic growth will improve the profitability determinants and loan to assets ratio positively related to profitability determinants.

Bashir and Hassan (2004) have continued to conduct regression analysis of Bashir(2000) study, in order to improve the estimation by adding some dependent and independent variables such as: macroeconomic variables, profitability indicator and financial structure. The added dependent variable as a profitability indicator is Net Non Interest Margin. First of all, they both preceded empirical analysis on relationship of bank characteristics with performance measure of Islamic Banks. As a

result, they found that profitability indicators is positively related to capital ratio and it is consistent with previous study of Bashir(2000) and it has inverse association with loan ratios. The empirical results disclosed that high of capital ratio or equity over assets directs to higher profit margin. Furthermore, they had found that NNIM (net non interest margin) positively related to OVERHEADS, that tells us the more banks are earning the more the salaries and wage will be distributed. The tax structure of government is the same empirically important impact on profitability indicators as in previous study of Bashir(2000). However the reserve requirement ratio does not have a strong impact on financial performance measure of Islamic banks. On one hand, the favorable macroeconomic environment is said to have positive impacts on profit margins, GDP growth increases which lead to an increase in performance measure of Islamic Banks. However, the GDP per capita and Inflation are not statistically significant, in other words they don't have much effect on performance measure of Islamic Banks. Finally, the size of banking system has negative impact on determinants of profitability, except of NNIM.

3.2 Islamic Banks and Conventional Banks

According to study of Faysal(2004) who aimed to identify profitability of determinants of Islamic Banks and Conventional Banks. The profitability indicators ROE, ROA, and NIM of two different types of banks are compared. As independent variable he used: logarithmic of total assets, equity to assets, deposit to assets, total loans to assets and etc. He used cross country bank level data for Gulf Cooperation Council GCC countries to conduct Ordinary Least Square. He found the results which are consistent with Hassan and Bashir(2004) for Islamic Banks, and he also found in his analysis relationships between banks' characteristics and profitability indicators for Conventional Banks. The result of variables showed their reflection

towards profitability indicators differently. The logarithmic total assets TA have negative relationship with performance measure in Conventional Banking System, but positive in Islamic Banking System. The capital ratio or equity ratio has got negative association with performance measure of Conventional Banks and positive connection with Islamic Banks' profitability indicators. He also found that lending improves the profitability of both Islamic and Conventional Banks, in other words total loans are positively related to determinant of profitability of both banks. In addition to, he had found that deposit ratio has inverse relationship with profit margins for Islamic banks which is consistent with previous studies of Bashir(2000) and Hassan, Bashir(2004). However, deposits are positively related with profitability determinants for Conventional Banks. OVERHEADS of both Islamic and Conventional Banks are positively related to determinant of profitability.

Spathis (2002) study, he aimed to investigate the difference between profitability and efficiency of small and large Conventional Banks in Greek. In other words, he just classified the conventional banks into small ones and large ones, based on their scale or total assets. In order to investigate profitability and efficiency of Greek banks, Spathis(2002) has used a multicriteria methodology, that is to say he applied M.H.DIS and UTADIS to identify that affect the ratios of Greek banks. The evidence points out those large banks are more efficient than small ones. In his study, he found that small banks described by high capital yield ROE, high interest yield MARG, high financial leverage TA/TE, and high capital adequacy TE/TA. Large banks are distinguished by asset yield, and low capital and interest rate yield. M.H.DIS and UTADIS support the results of regression analysis.

Anouar Hassoune(2002) studied the volatility of Islamic banks in terms of return on equity ROE and return on assets ROA by comparing with Conventional peers in

GCC countries. He used ROE as efficiency measure and ROA as profitability measure. Moreover, he found that Islamic banks are more profitable than conventional banks with the same structure of balance sheet. And he explained his empirical results in a way that Islamic banks gets benefit from imperfection of market. Furthermore, he found that Islamic banks have weakness in terms of liquidity, concentration risks and operational efficiency.

Abdus Samad & M. Kabir Hassan(1997) assessed the differences of performance measures of Bank Islam Malaysia Berhad BIMB and eight Conventional banks in terms of profitability, liquidity, risk and solvency. They come up with output of empirical results stating that BIMB relatively is more liquid and less risky compared to the group of eight Conventional banks. In addition, Islamic banks showed significant progress on ROA and ROE during 1984-1997. However Samad & M. Kabir Hassan(1997) found that comparison of BIMB with group of 8 banks showed that difference in performance measures are statistically insignificant. They also found that the risk in BIMB increased and it is statistically significant.

Rima Turk Ariss (2006) analyzed competitive condition prevailing in Islamic and Conventional global banking markets by looking into difference of profitability measure between Islamic banks and Conventional banks. The findings suggest that Islamic banks are allocating a large amount of their assets to finance activities such as, Musharaka, Mudaraba, Ijara and etc. in comparison with Conventional peers and Islamic banks are better capitalized. In other words, Islamic banks are greatly exposed to credit risks. Generally, he examined the difference of Islamic and conventional banking markets and they come up with that Islamic global banking market show evidence of being more concentrated and less competitive banking segment in contrast to Conventional ones.

M.S. Moin(2007) measured the performance of first Islamic bank in Pakistan with comparison of 5 conventional banks. The performance measure of this study was in the field of profitability, liquidity, risk and efficiency by using financial ratios. He found that conventional banks are more profitable and significantly different from first Islamic bank in terms of ROE. His findings showed that Islamic banks are getting closer with conventional ones in terms of profitability. He found also positive relationship of net profits with profitability indicator, ROE. However, he did not find any difference between Islamic bank and conventional banks in term of liquidity, loan to deposit ratio. Conventional banks are more risky and less solvent than Islamic bank due to high profitability.

Kosmidou (2004) evaluated performance and efficiency of commercial and cooperative bank in Greece and Europe for the period 2003-2004. He has taken 16 cooperative banks and 14 commercial banks. And banks are divided into two group large banks and small ones in terms of total asset. Evaluation based on CAMEL framework by employing financial accounting ratios such as equity to assets, EBT/TA, EBT/ TE, Loans to assets, and etc. He used multi criteria method to evaluate performances of commercial and cooperative banks. In comparison to cooperative banks, commercial banks are likely to increase their accounts, more competitive, and increasing market share in general.

Devid Tripe(2002) studied the relationship between capital level and return on equity of banks in New Zeeland and Australia for the period 1996-2002. He took 9 Australian banks and 6 New Zeeland banks. GDP and interest rate was considered in empirical analysis as well. He categorized Australian banks into large and small banks, but New Zeeland banks were estimated separately. Ganger causality test used to see whether there is relationship between the capital ratio and return on equity. As

a result he found moderate positive relationship between capital level and ROE in both countries. There is economic environmental positive effect on profitability, and in New Zeeland interest rate has same effect on profitability, but it is unclear whether it has causative relationship with profitability.

Chukwuogor(2002) examines comparative performance US commercial banks for the period 1997-2002. He classified the commercial banks into small, medium and large sizes by assets. To measure profit efficiency he used return on assets, interest income, non interest income and loan loss reserves. The number of observations is 2579 in 1997, 2651 in 1998, 2655 in 1999, 2693 in 2000, 2724 in 2001 and 2728 in 2002. He applied empirical analysis to measure performance efficiency among the banks. He found that small banks were more profit efficient than large ones and less than medium banks. He also found that since 1999 profit efficiency declined more in small banks than in medium and large banks. Medium size banks have achieved high profit efficiency during this period. He found that for the period 1997-2002 all the 3 banks are same in term of ROA, with respect to net interest margin small banks are greater than large and bigger than medium sizes banks for period 1997-1999, and for the period 2000-2002 it is less than medium size banks. in contrast to non interest income, small banks are the lowest, where large banks are the highest. Small banks have lowest loan reserve provision that talks about good management in small banks, but large banks has the highest loan loss during the period.

Chapter 4

DATA AND METHODOLOGY

4.1 Data

The panel data has been used to conduct the empirical analysis on determinants of profitability of Islamic and Traditional Banks that comes from financial statements, in other words financial ratios and macroeconomic variable are employed to perform comparative analysis. The cross-country bank-level data has been gathered from Bankscope, Bankersalmanac and World Bank databases for the selected countries over period of 2006-2009. The number of countries and banks both Islamic and Conventional are 5 and 36 respectively. Number of observation is 141. The size of both Islamic and Traditional banks is approximately same, and number of Islamic Banks are 18. Countries and banks are illustrated bellow in the [Table 4.1].

Table 4.1: Bankscope and Bancersalmanac sources.

Period 2006-2009

Countries	**ISLAMIC BANKS**	**CONVENTIONAL B ANKS**
Turkey	Albarak Turkish Participlation Bank	Eurobank Tekfen AS
	Bank Asya	HSBC Bank AS
	Kuwait Turkish Participlation Bank	Turkiye İhracat Kredi Bankası
	Turkish Finance Participiation Bank	ŞekerBank
Egypt	Albaraka Bank Egypt SAE	Bank Audi SAE
	Ahli United Bank SAE	Blom Bank Egypt SAE
	Faisal Islamic Bank of Egypt SAE	Bank of Alexandria
Pakistan	Bank Al Habib Ltd.	NIB Bank Ltd.
	Bankislami Pakistan Ltd.	Mybank Ltd.
	Dawood Islamic Bank Ltd.	Samba Bank Ltd.
	Mezzean Bank Ltd.	Soneri Bank Ltd.
Malaysia	Affin ıslamic Bank Berhad	Royal Bank of Scotland Berhad
	Bank Islam Malaysıa Berhad	Bank Pembangunan Malaysıa Berhad
	RHB Islamic Bank Berhad	Deutche Bank Berhad
	Bank Muamalat Malaysia Berhad	CIMB Investment Bank Berhad
UAE	Abu Dhabi Islamic Başnk	Commercial Bank of Dubai PSC
	Dubai Islamic Bank	MashreqBank PSC
	Emirates Islamic Bank	Union National Bank

4.2 Methodology

Panel root test have been employed to the variables, in order to test the data whether data is stationary or not. According to methodologies developed by Levin, Lin and Chu (LLC) the data reject the null hypothesis, that is to say the unit root does not exist in our whole model or the data is stationary. Furthermore, the presence of multicollinearity in our regression model is tested. According to correlation between independent variables are very low in both regression model, Whole and Pure Models Regression, and R square are very low which proves the absence of multicollinearity, correlation table is represented in chapter 5.

Accounting ratios are classified as dependent and explanatory variables. Dependent variables are Return On Equity, Return On Asset; Net Interest Margin expressed as percentages. Explanatory or independent variables are Total Equity over Total Assets, Liquid Assets over Deposits, Provision Loan Losses to Total Loans, Cost to Revenue, Loans over Deposits, Gross Domestic Product growth as % percentages, and logarithmic of Total Assets . These variables are used correspondingly with selected five countries which are Turkey, Malaysia, Pakistan, United Arab Emirates and Egypt. Moreover, while measuring, evaluating and comparing the financial performances of Islamic and Conventional Banks, all important financial and operational factors will be taken into account by using CAMEL approach in this comparative study. CAMEL is rating system which measure financial performance of financial institutions and banks that gives information about financial validity.

In this comparative study ordinary regression equation is employed to measure and evaluate the difference in financial performance of the Islamic and Conventional Banks, and next step is taken to compare those results between two different types of

banks. We conduct regression analysis by using Eviews software program to estimate our equation. In accordance with Hausman test which is done in panel data regression analysis as well, the "Cross Section Random Effects" model has been used because our sample data does not represent whole population. Additionally, and due to small number of groups which is 36 and time is only 4 years we have used cross section random effects model. Furthermore, three dependent variables used in this linear least squares: ROE, ROA and NIM. Other variables are considered as independent ones and demonstrated bellow in the models:

$$ROE = \alpha_1 + \beta_1(CR) + \beta_2(TETA) + \beta_3(PLLTL) + \beta_4(LD) + \beta_5(LTA) + \beta_6(LIQD) + \beta_7(GGDP) + \varepsilon$$

$$ROA = \alpha_2 + \beta_1(CR) + \beta_2(TETA) + \beta_3(PLLTL) + \beta_4(LD) + \beta_5(LTA) + \beta_6(LIQD) + \beta_7(GGDP) + \varepsilon$$

$$NIM = \alpha_3 + \beta_1(CR) + \beta_2(TETA) + \beta_3(PLLTL) + \beta_4(LD) + \beta_5(LTA) + \beta_6(LIQD) + \beta_7(GGDP) + \varepsilon$$

Where:

ROA_{bt} represents the Return on Assets,

ROE_{bt} represents the Return on Equity,

NIM_{bt} represents the Net Interest Margin,

CR_{bt} represents the Cost to Revenue,

α_1 , α_2 , α_3 represents alpha (constant) for each model respectively,

β represents the coefficients of the regression equation,

CR represents the Cost to Revenue,

TETA represents Total Equity to Total Asset,

PLLTL represents Provision of Loan Losses over Total Loans,

LD represents Loans to Deposits,

LTA represent the logarithmic of Total Assets,

LIQD represents Liquid Assets to Deposits,

GGDP represents Gross Domestic Product Growth,

E represents error term.

All dependent and explanatory variables from above mentioned model, in other words all financial ratios are defined bellow. Moreover, independent variables are classified according CAMEL framework.

4.2.1 Dependent Variables

ROE

Return on Equity is profitability determinant that is net income over to total equity. ROE is ratio that is a sign of profitability generated from the amount capital that shareholders invested. Furthermore, ROE is the returned income as percentages out of shareholder's equity. This ratio tells us that how efficiently company is able to generate profit from the money that had been invested by shareholders.

ROA

Return on Assets is profitability indicator which is net income to total assets. ROA assesses efficiency management in terms of assets as percentages. In other words, it measures the ability in terms of efficiency of the banks to generate profit by using its assets, simply to say, how efficiently assets are making earnings.

NIM

Net interest margin is as well profitability measure difference between interest income earned by lending or any other investment and interest expenses that have been paid to its lenders and this all relative to total assets for Conventional Banks. This ratio points out to the company whether it made or not wise decision in terms of loan investment. For Islamic Banks Net Interest Margin (NIM) is net non interest margin which is used in this paper as a profit generated from benevolent loans or free interest loans, such as Musharaka, Mudaraba, Murabaha, Ijara and so on. For simplicity and consistency, in the databases of financial profile of all banks such as Bankscope and Bankersalmanac where NIM is categorized as profit earned from free

interest rate transactions in order to make the data of Islamic Banks to be consistent with Conventional Banks' data. In addition to, NIM for Islamic banks makes up lion's share of total operating income and capture of bank's ability to reduce the risk of insolvency.[27]

4.2.2 Independent Variables

Capital Adequacy

Capital adequacy measures the financial strength and viability of the banks in terms of capital over assets like investment and loans. Total equity over total assets TETA represent explanatory variable that measure proportion of total assets which is being financed by shareholders. It is the ability to withstand to any unexpected loses and bankruptcy.

Asset Quality

Assets are related to left hand side of balance sheet of banks that consists mostly from loans. The quality of loans or asset of any banks is very significant for investors or depositors because the loans are mostly main source of generating profit for banks. Furthermore, it measures the creditworthiness of the banks. In this paper provision of loan loses over total loans is used PLLTL.

Management Quality

Management quality measures how efficiently and productively the bank manages to get more deposits from trustworthy and financially strong depositors and reduce of the defaults of borrowers by giving the loans to creditworthy customers. Total loans over total deposits LD that indicates the percentage of bank's loans funded through deposits.

Earnings Quality

[27] M. Kabir Hassan, Ph.D. Professor of Finance Department of Economics and Finance University of New Orleans, Determinants of Islamic Banking Profitability, Yusuf A. Nzibo http://www.nzibo.com/, 11.

Cost to Revenue ratio CR is cost in relation to operating revenue. It is a division of operating costs such as salaries, wages, and property, fixed and administrative expenses over operating revenue. Moreover it measures the efficiency of the bank, the lower the ratio, the more profit will be generated by bank.

Liquidity Quality

Liquid assets over total deposits LIQD. Liquidity is very crucial for all banks, because liquidity problem may lead to insolvency that is to say if banks are facing any liquidity problem then the bank may end up with bankruptcy. Liquidity is ability of easily convert assets into cash, in other words is if the bank has enough capacity in term of cash to meet its short term obligations.

Other

LTA logarithmic of total assets. Total assets are absolute number in the balance sheet which consists of short term funding and long-term funding, and that why logarithmic of total assets is taken to conduct the regression analysis. The scales of banks are playing a significant role in contribution to economy of specific country. Asset is anything tangible or intangible which can be owned can produce value. GGDP is Gross Domestic Product growth is an economic growth. GDP growth or Economic growth is very important because the financial performance of banks totally is being affected by economy of specific country. Dummies of banks are coded as 1 and 0, Islamic Banks and Conventional Banks respectively. We used dummies of banks because we would like to learn whether there is difference in performance measures between Islamic banks and Conventional banks.

Chapter 5

EMPIRICAL ANALYSIS AND RESULTS

5.1 Correlation Analysis

The Correlation analysis points out the relationship of variables among them selves. The correlation is demonstrated in [Table 5.1]. The variables are classified into three groups: All banks, Conventional banks and Islamic Banks. Correlation Analysis is applied to predict how independent variables that are based on CAMEL approach will be correlated with profitability indicators or dependent variables. Another purpose of correlation is to test for multicollinearity problem, in other words whether independent variables are highly correlated with each other or not.

Let us see first part or group. The efficiency of the all banks are inversely correlated to ROE and ROA, except NIM. However the positive correlation between CR and NIM is very low. In other words, the earnings quality of the banks reacts negatively to any change of profitability determinants. The scale of banks is negatively correlated with profitability determinants of banks and it is consistent with Faysal (2005). Furthermore, the asset quality is inversely related to ROE, ROA and NIM, but coefficient correlation of ROE is low. The Economic growth is positively related to profitability measures and it is consistent with findings of Bashir(2000) and Hassan,Bashir(2004). However, NIM is the opposite. The capital adequacy is positively associated with ROA and NIM, except the ROE. Previous findings of Faysal(2005) which is different. Liquidity indicator has inverse correlation with profitability indicators and which is inconsistent with previous findings.

Table 5.1: Correlations of Variables

ALL BANKS (CB & IB)											
	ROE	**ROA**	**NIM**	**CR**	**TETA**	**PLLTL**	**LD**	**LTA**	**LIQD**	**GGDP**	**DUM**
ROE	1.00										
ROA	-0.11	1.00									
NIM	0.11	0.12	1.00								
CR	-0.25	-0.46	0.10	1.00							
TETA	-0.18	0.10	0.23	0.12	1.00						
PLLTL	-0.03	-0.42	-0.16	0.32	0.09	1.00					
LD	0.00	0.02	0.14	-0.02	0.06	-0.13	1.00				
LTA	-0.01	-0.18	-0.04	0.23	-0.16	-0.04	0.15	1.00			
LIQD	-0.05	-0.16	-0.18	0.13	-0.07	0.20	-0.11	-0.26	1.00		
GGDP	0.07	0.00	-0.30	-0.10	-0.11	0.11	-0.08	0.01	0.16	1.00	
DUM	0.13	-0.07	0.41	-0.03	-0.13	-0.21	0.02	-0.02	-0.15	-0.01	1
CONVENTIONAL BANKS											
	ROE	**ROA**	**NIM**	**CR**	**TETA**	**PLLTL**	**LD**	**LTA**	**LIQD**	**GGDP**	
ROE	1.00										
ROA	0.81	1.00									
NIM	-0.10	0.09	1.00								
CR	-0.49	-0.55	0.12	1.00							
TETA	-0.23	0.18	0.67	0.13	1.00						
PLLTL	-0.56	-0.53	-0.02	0.41	0.27	1.00					
LD	-0.02	-0.04	0.03	-0.03	0.10	-0.10	1.00				
LTA	-0.18	-0.27	0.00	0.31	-0.12	-0.02	0.24	1.00			
LIQD	-0.02	-0.19	-0.15	0.16	-0.09	0.28	-0.06	-0.28	1.00		
GGDP	0.11	0.04	-0.28	-0.15	-0.23	0.13	-0.05	0.05	0.17	1.00	
ISLAMIC BANKS											
	ROE	**ROA**	**NIM**	**CR**	**TETA**	**PLLTL**	**LD**	**LTA**	**LIQD**	**GGDP**	
ROE	1										
ROA	-0.58	1.00									
NIM	0.10	0.31	1.00								
CR	-0.32	-0.17	0.14	1.00							
TETA	-0.18	-0.04	0.00	0.12	1.00						
PLLTL	0.16	-0.28	-0.17	0.11	-0.18	1.00					
LD	0.01	0.40	0.56	0.06	-0.02	-0.29	1.00				
LTA	0.04	-0.03	-0.07	0.10	-0.20	-0.09	-0.07	1.00			
LIQD	-0.05	-0.11	-0.12	0.04	-0.10	-0.03	-0.38	-0.27	1.00		
GGDP	0.08	-0.07	-0.38	-0.04	0.00	0.09	-0.22	-0.04	0.16	1.00	

On other hand, we have run correlation analysis separately for each type of bank namely Islamic and Conventional ones. The efficiency of both types of banks is cost

to revenue correlated to profitability indicators, but NIM. Capital adequacy ratio of Islamic and Conventional Banks are only negatively associated with ROE, however towards other both determinants of profitability for only CB, TETA is positively related. Faysal (2005) found same output of his correlation analysis. In both banks the liquidity is inversely correlated to profitability measures. The asset quality ratio is negatively correlated with ROE in CB, but in IB it is positively associated with ROE. And it is the same with the size of banks, that is to say the scale of banks are positively related to ROE for IB, but opposite for CB. And it is consistent with previous findings. The profitability measures of Islamic banks are positively correlated to loan to deposit ratio LD that is loans which are being funded through deposits, whereas in Conventional Banks are inversely related.

5.2 Regression Analysis

In this chapter we will talk about the output of regression analysis which is applied on financial ratios of both Islamic and Conventional banks, in order to explain how any changes in independent or explanatory variables may affect the determinants of profitability or the dependent variables of these banks which are Return On Equity, Return On Asset and Net Interest Margin/Net Income Margin. We have estimated six regression analyses which are categorized into two main models: General and Pure Regression Models. Moreover, General Model consists of 3 regression analyses, in other words firstly all banks have been taken into consideration namely Islamic Banks and Conventional Banks to regress dependent variables or profitability determinants. Then, regression analysis is applied on both Conventional and Islamic Banks separately and the results are compared. Moreover, in General Model CAMEL ratios, profitability ratios are employed and macroeconomic variable, dummies of banks are added as well. However, in Pure

Model Regression Analysis dummies of banks and macroeconomic variable are excluded.

5.2.1 General Model Regression Analysis of All Banks

Firstly, according to classification all banks show the effect of bank characteristics, macroeconomic variable and dummies of banks on financial performance of all banks over period 2006-2009. General Model of Regression Analysis is shown bellow in [Table 5.2]. There are three dependent variables in our model ROE, ROA, and NIM. In the first regression estimation model, ROE and ROA have statistically significant negative relationship with cost to revenue ratio, as efficiency of banks increases the ROE and ROA increases, except NIM. On other hand, NIM is having positive statistically significant relationship with cost revenue ratio, as the cost increases the NIM is increases as well. This depicts meaningless information, it is not possible as cost increases the profitability indicator increase as well, and this is because of limitation on availability of data, simply to say we could not get more data which is needed. The ROE has statistically insignificant negative association with total equity to total assets TETA for all banks. Faysal (2004) has come up with same results where he estimated all banks of gulf countries. However, return on assets and net interest margin are statistically insignificant and positively related with TETA. On one hand, the ROA is inversely related with provision of loan losses PLLTL and statistically significant. Provision of loan losses are debts which are written off and subtracted from revenue before net income is derived, simply to say as PLLTL ratio increases it means the written off loans goes up and that lost amount will be excluded from net income in the statement of profit and loss account, that's why net income to total assets ratio goes down. The bigger the PLLTL in the banks the more problems bank will have. NIM and ROE are not statistically

significant so they are not affected. Furthermore, ROE and ROA have no relation with loan to deposit ratio for 2006-2009 period, this may be due to limitation on data. But NIM has got positive relationship and statistically significant. It gives a picture of more loans are given to borrowers, the more interest income will be earned and that's why net interest margin is raising as LD ratio increases for the period 2006-2009 of all banks. It seems that successful decisions made on investment such us simple loans, mortgage loans and etc. but as LD ratio increases the risk of potential defaults on short payments increase as well. On other hand, all determinants of profitability of all banks are not affected by the size LTA logarithmic total assets due to statistical insignificance over period 2006-2009. Likewise, Liquid assets to deposits ratio exerts no effect on the profitability determinants ROE, ROA and NIM for conventional banks at all for the period 2006-2009 because they are statistically insignificant. GDP growth does not have any influence on determinants of profitability. This is due to limitation on data. However, NIM has negative effect with GGDP and statistically significant. It depicts that during the period 2006-2007 there was recession due to credit crunch which affected inversely the profitability indicator of banks. NIM is interest earned from loans such as, mortgage, commercial loans, personal loans and etc. and we are aware of securitization process in which most of all banks over the world had been involved and at the end they faced with defaults of customers. The Dummy of banks that coded Islamic bank as 1 and Conventional Banks as 0. According to results there is positive relation with NIM and statistically significant. In other words, the coefficient is more than 1 that states there is difference in profitability between Islamic Banks and Conventional Banks in terms of NIM. NIM is referred for Islamic Banks as net income margin such as, fees from foreign exchanges, from profit loss and share PLS from financing activities,

service charges and etc. almost whole the profits of Islamic banks are coming from NIM. The whole models of ROE, ROA and NIM are reliable and valid due to F-test probability value which is statistically significant. R's squared are all very low less than 25%, that depicts the variation in profitability can be explained by variation in financial ratios by less than 25%.

5.2.2 General Model Regression Analysis of Islamic and Conventional Banks

As we go through the results of regression analysis of Islamic Banks and Conventional Banks separately by comparing the relationship between profitability determinants and explanatory variables. The profitability determinants of both Islamic and Traditional Banks are having positive connection with efficiency of banks. The profitability indicators are negatively related cost to revenue ratio and statistically significant. As cost increases the profitability determinants falls. Equity relative to assets of Conventional Banks is positively related to ROA and NIM which are statistically significant. As proportion of equity relative to assets TETA increases, the net profit of Conventional Banks relative to total asset ROA and NIM will increase as well. Well capitalized banks are less exposed to insolvency risk or bankruptcy because as they increase the capital relative to total assets ratio, it means that they secure their selves from potential defaults on loans because they are less leveraged so they are not pursuing high risks with high returns. The banks wish to increase capital, simply to say they want to finance their asset through equity rather than debts. So generally the return should be low as Conventional banks are not involved in high risk. But in our case profitability indicators net income/ total assets and net interest income/ total assets increase as capital goes up this due to reduction in assets as well. However, Islamic banks' profitability determinants ROE, NIM are in inverse association with TETA and statistically insignificant. Capital adequacy

ratio of IB plays a weak role in explaining the variation in profitability indicators, in other words well or less capitalized Islamic banks should not necessarily mean that it leads to higher or lower profit margin because the profitability indicators of Islamic banks are statistically insignificant in relation to capital adequacy ratio. Our results are consistent with previous study of Faysal(2005), but different from Bashir(2000), it is different because we used different sample data for different period of time. In addition to, PLLTL Provision of loan losses over loans is statistically significant and negatively related to ROE, ROA and NIM for Conventional Banks. Unlike Conventional Banking, in Islamic Banks only the ROE has positive relationship with PLLTL and statistically significant. It is quite normal for CB to have inverse relation between profitability measure and PLLTL over period of 2006-2009 because as provision of loan losses increase, there will be more debts that are written off loan portfolio. For IB to have positive association between profitability measure ROE and PLLTL can be explained that PLL is increasing faster than TL which cause to increase PLLTL ratio so as IB increase provision of loan losses that will reduce earnings before taxes EBT, taxes will be paid less so as effect there will be more of net income NI, as NI goes up relative to total equity the ROE will increase. Furthermore, in Islamic Banks the profitability determinants ROA and NIM are in positive connection with loans to deposits and statistically significant, but it is opposite in conventional Banks, that is to say CB's profitability indicators are not statistically significant. It shows that profitability margin increases as loan to deposit ratio increases that proves that Islamic Banks are less liquid than CB, in other words if LD ratio increases the banks are becoming less liquid because they give out more loans than they gather the deposits. The Conventional Banks' profitability determinant ROE positively related with LIQD. As an example in Turkey almost all

of the conventional banks' profits coming from short term government securities. Economic Growth and Size of the both Islamic and Conventional banks do not affect profitability measures because the relationship between GGDP, LTA and ROE, ROA, NIM are statistically insignificant. This may be because of restriction on data for banks. The validity of whole models itself is reliable in Conventional Banks according to F-probability values they are less then significance values. On other hand, the validity of models in Islamic Banks is reliable, except the ROA model whose F probability value is more than all significance levels, that is to say the ROA model is not best fitted due to statistical insignificance. Generally, In Islamic banks R squares are less than in Conventional Banks, that is to say the changes in profitability indicators can be explained by R square which is expressed as percentage. The whole model of ROA in Islamic banks is checked for validity and it is unreliable because F probability value is less than significance level. Moreover, almost all of the variables predicted correlation with each other which are found in Correlation analysis.

5.2.3 Pure Model Regression Analysis

Now let us to compare this pure model in table 5.2 with the table 5.1.the one that contains macroeconomic variable and dummy, whereas in pure model they are excluded, in order to see whether this exclusion will have more effect on determinants of profitability by explanatory variables. According to table 5.1 and table 5.2 taking into consideration first part labeled as all banks in both tables, that is to say both Islamic Banks and Conventional Banks, we can see that there is no much difference in terms of significance and coefficients as well, in other words the exclusion of macro variable and dummy doesn't change influence of explanatory variables on dependent variables or determinants of profitability much. Only the relationships between TETA ratio and PLLTL ratio with profitability determinants

ROE and NIM correspondingly have become significant. Let us now compare Islamic and Conventional Banks with Islamic and Conventional Banks that doesn't have macroeconomic independent variable GDP growth. According to tables, no differences are arising whether macroeconomic variable is included or not, the effect of independent variables on profitability indicators remains the same, in other words there were not many changes in variables, like provision of loan losses to loans has become significant in Islamic Banks in relation to Islamic banks. Pure Model of Regression Analysis is represented bellow in the [Table 5.3].

Table 5.2 Regression Analysis on General Model which is applied on all banks and separately on Conventional and Islamic Banks (2006-2009), bold numbers represent probability values

	All Banks			**Conventional Banks**			**Islamic Banks**		
	ROE	**ROA**	**NIM**	**ROE**	**ROA**	**NIM**	**ROE**	**ROA**	**NIM**
Constant coefficients	0.242	0.056	0.026	0.175	0.069	0.000	0.170	0.002	0.013
P-values	**0.560**	**0.022**	**0.168**	**0.347**	**0.073**	**0.994**	**0.843**	**0.937**	**0.649**
CR coefficients	-0.297	-0.014	0.009	-0.064	-0.018	0.004	-1.027	-0.007	0.008
P-values	**0.011**	**0.011**	**0.035**	**0.048**	**0.010**	**0.459**	**0.000**	**0.319**	**0.216**
TETA coefficients	-0.465	0.022	0.021	0.104	0.098	0.111	-0.650	0.005	-0.009
P-values	**0.147**	**0.203**	**0.128**	**0.514**	**0.004**	**0.000**	**0.237**	**0.760**	**0.610**
PLLTL coefficients	0.401	-0.104	-0.026	-0.796	-0.174	-0.056	1.690	-0.038	0.027
P-values	**0.416**	**0.000**	**0.138**	**0.000**	**0.000**	**0.020**	**0.065**	**0.152**	**0.159**
LD coefficients	0.026	0.002	0.006	0.008	-0.002	-0.002	0.412	0.023	0.036
P-values	**0.732**	**0.694**	**0.081**	**0.763**	**0.713**	**0.395**	**0.205**	**0.018**	**0.000**
LTA coefficients	0.004	-0.003	-0.001	-0.005	-0.005	0.001	0.029	0.000	0.000
P-values	**0.914**	**0.223**	**0.693**	**0.809**	**0.231**	**0.474**	**0.690**	**0.938**	**0.919**
LIQD coefficients	-0.058	-0.008	0.001	0.106	-0.006	0.001	-0.170	0.003	0.006
P-values	**0.744**	**0.365**	**0.834**	**0.047**	**0.601**	**0.890**	**0.690**	**0.809**	**0.555**
GGDP coefficients	0.547	0.039	-0.087	0.320	0.111	-0.039	2.159	0.015	-0.050
P-values	**0.606**	**0.386**	**0.013**	**0.315**	**0.123**	**0.467**	**0.180**	**0.747**	**0.147**
DUM coefficients	0.107	-0.007	0.017						
P-values	**0.217**	**0.182**	**0.000**						
R-Squared	0.095	0.239	0.219	0.338	0.451	0.474	0.211	0.135	0.389
R-Squared (adjasted)	0.040	0.193	0.171	0.264	0.389	0.416	0.122	0.038	0.319
F-Test	1.738	5.179	4.593	4.591	7.379	8.125	2.372	1.386	5.541
P-values	**0.095**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.032**	**0.227**	**0.000**

Table 5.3 Regression Analysis on Pure Model applied on all banks and separately on Conventional and Islamic ones (2006-2009), bold numbers represent probability values.

	All Banks			**Conventional Banks**			**Islamic Banks**		
	ROE	**ROA**	**NIM**	**ROE**	**ROA**	**NIM**	**ROE**	**ROA**	**NIM**
Constant coefficients	0.40	0.05	0.02	0.20	0.08	0.00	0.71	0.00	-0.01
P-values	**0.34**	**0.02**	**0.37**	**0.30**	**0.06**	**0.99**	**0.45**	**0.87**	**0.69**
CR coefficients	-0.29	-0.01	0.01	-0.07	-0.02	0.00	-1.16	-0.01	0.01
P-values	**0.01**	**0.00**	**0.01**	**0.02**	**0.00**	**0.33**	**0.00**	**0.25**	**0.31**
TETA coefficients	-0.54	0.02	0.01	0.08	0.09	0.11	-0.93	0.00	-0.01
P-values	**0.10**	**0.17**	**0.62**	**0.63**	**0.01**	**0.00**	**0.13**	**0.87**	**0.55**
PLLTL coefficients	0.31	-0.10	-0.03	-0.78	-0.17	-0.06	1.61	-0.04	0.03
P-values	**0.52**	**0.00**	**0.10**	**0.00**	**0.00**	**0.01**	**0.09**	**0.15**	**0.10**
LD coefficients	0.03	0.00	0.01	0.01	0.00	0.00	0.40	0.02	0.03
P-values	**0.71**	**0.74**	**0.08**	**0.74**	**0.78**	**0.41**	**0.24**	**0.01**	**0.00**
LTA coefficients	0.00	0.00	0.00	-0.01	0.00	0.00	-0.01	0.00	0.00
P-values	**0.97**	**0.23**	**0.87**	**0.79**	**0.24**	**0.53**	**0.95**	**0.89**	**0.28**
LIQD coefficients	-0.08	-0.01	0.00	0.12	0.00	0.00	-0.21	0.00	0.00
P-values	**0.66**	**0.52**	**0.99**	**0.03**	**0.78**	**0.98**	**0.64**	**0.82**	**0.82**
R-Squared	0.08	0.23	0.11	0.33	0.42	0.47	0.22	0.15	0.41
R-Squared (adjasted)	0.04	0.19	0.07	0.26	0.37	0.42	0.14	0.07	0.35
F-Test	1.98	6.57	2.63	5.17	7.71	9.47	2.95	1.86	7.07
P-values	**0.07**	**0.00**	**0.02**	**0.00**	**0.00**	**0.00**	**0.01**	**0.10**	**0.00**

Chapter 6

CONCLUSION

Alongside with traditional banks, Islamic banks have started involving with their principles and rules that exclude interest rate and speculative transactions. And the purpose of this study is not to say that Islamic banks are better off than traditional banks from our empirical results of regression analysis. There are the differences in financial performances between Conventional Banks and Islamic banks which are found in overall picture of all banks in terms of NIM by using DUM. Then we estimated Islamic banks and Conventional Banks separately to touch those differences in detail. Firstly all banks are examined to find differences and similarities in terms of profitability and then both Islamic and Conventional Banks are evaluated separately. The second estimation is applied that does not include economic growth and dummies.

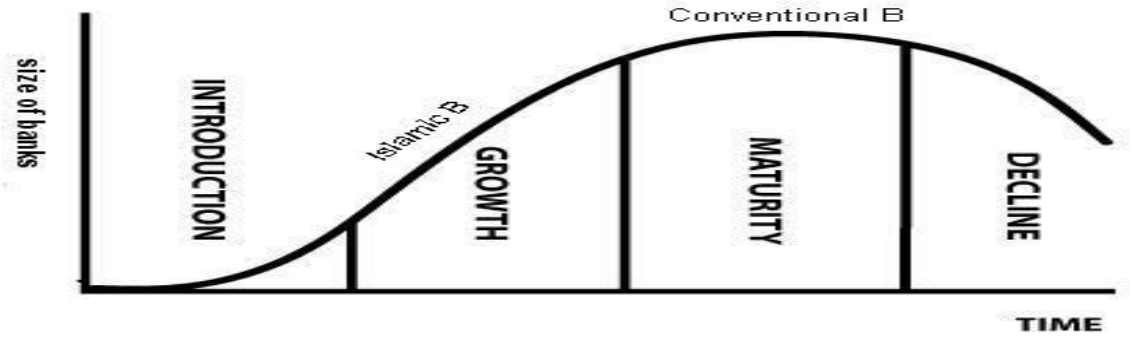
For instance, as it is shown in our empirical results as the cost increases the profitability decreases for all banks, in other words the efficiency is positively related with profitability indicators, except NIM which is positively related to cost to revenue and they are all statistically significant. This relationship is unexplainable and this may be because of limitation on data. GGDP is inversely related with profitability indicator NIM and statistically significant for the period 2006-2009, that is to say during this period there was recession which affected financial organizations' profitability negatively. Finally, the difference found between Islamic Banks and Conventional banks

in terms of profitability determinant NIM, in other words DUM variable is positively related and statistically significant with NIM. NIM is main source of income for Islamic banks.

First of all, let us consider the capital adequacy, TETA has inverse relationship with profitability indicators for Islamic banks and statistically insignificant, unlike Conventional banks. The profitability measure ROA and NIM are positively related to TETA and statistically significant, in other words the capitalized Conventional banks are less risk insolvent and they receive less profit. The difference found between Islamic banks and conventional ones in terms of profitability determinant ROE which is positively related to provision of loan losses to total loans PLLTL and statistically significant for IB, unlike CB. Generally as PLLTL increases the more problem the bank may face, but in the case of Islamic banks it is positively related because the increase in PLL will lower earnings before tax EBT so they paid less tax that increase net income relative to total equity. Loans to Deposit ratio increases that cause to increase profitability indicators ROA and NIM for IB. As they give more loans and they receive more profit share and at the same time they become more risky because the loans are increase relative to deposits so they may face liquidity problem. Unlike IB, Conventional banks are getting more profit from liquid assets, in other words as an example of Turkey the banks are being involved in short term government securities. ROE is positively related to LIQD and statistically significant.

In Pure Regression Analysis Model that excludes macroeconomic variables showed that dependent variable or all profitability determinants are affected by all independent variables in same way, almost there is no difference between first and second models.

To sum up, CB is different than IB in terms of capital adequacy, asset quality, earnings quality, liquidity quality and management quality. The Islamic banks are less liquid than CB because they are dealing mostly with long term investment. We hear many times that Islamic banks are not affected from recent financial crises because they are not involving in speculative and prohibited transactions. Beside this reasons, there is one more reason why Islamic banks are not affected much from recession and this is because of the stage of IB in life cycle of banks is at "growth" stage that tells they have just started operating around the globe and did not have much time to get capital and offer different complicated banking financial services as Conventional Banks have been doing so far. And this is one of the reasons why Islamic Banks are considered as banks which are less exposed to insolvency risk, simply to say they are not affected from recent crises because Islamic banks were not in that stage to be affected by crises. And it is demonstrated in [Graph 6.1].



Graph 6.1: The Life Cycle of Islamic and Conventional Banks, constructed by author.

I believe that if IB will continue providing Islamic financial services by adapting to Conventional banking system and then they will end up with more similarities rather

than differences in profitability measures. Because the economic system is based on conventional banking system so IB and CB are applying same policy, though they offer services under different rules and principles. So Islamic Banks need to create their own standardized rules in the field of accounting, monetary tools and etc., and they should establish Islamic economic system under which they will operate wholly as an Islamic Bank. There should be one body governor who will monitor and control all of the Islamic banks around the world and obligate them to follow the standards set up by central Islamic bank.

In further research, by increasing number of banks, macroeconomic variables and countries we will have more accurate evaluation the profitability measure of two different types of Banks. In this research accessibility of data was limited and that's why there might be unreasonable relationship between variables. For example, Cost to Revenue is positively related and statistically significant with Net Interest Margin. We need full access to databases such as Bankscope and Bankersalmanaca so that we will be able to do comprehensive empirical evaluation of profitability determinants.

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