Comparison of Profitability Indicators of Commercial Banks: The Case of Malaysia and Pakistan

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ABSTRACT

The main driver of an economy as a whole is a banking system; the government intervenes into the economy by using banking sector, so profitability determinants of the banking system need to be evaluated. The aim of this study is to compare empirically and measure financial performance of commercial banks in Malaysia and Pakistan for the period of 2006-2011. In this paper macroeconomic variables will be used as well as financial ratios which are based on the CAMEL approach. Tufan (2008) and Hamrat (2008) found that foreign banks outperform domestic ones. To evaluate empirically most commonly used ratios will be employed in this study. Two profitability determinants are used as dependent variables. Furthermore data is checked for robustness of the model and OLS methodology is applied by adopting Eviews program. For this purpose, many banking literatures were studied to form an appropriate model.

Keywords: Commercial Banks, Malaysia, Pakistan, CAMEL Approach

ÖZ

Ekonominin ana sürücüsü bütünüyle banka sistemidir, devlet ekonomiye banka sektörünü kullanarak müdahale eder, bu yüzden banka sisteminin karlılık belirleyicileri değerlendirilmelidir. Bu çalışmanın amacı Malezya ve Pakistan'da 2006 – 2011 yılları arasındaki finansal performansları deneysel olarak karşılaştırmak ve ölçmektir. Bu çalışmada makroekonomik çeşitlilik ve ayrıca finansal ölçülerin bağlı olduğu CAMEL yaklaşımı kullanılacaktır. Tufan (2008) ve Hamrat (2008) yabancı bankaların yerli bankalardan daha iyi performans gösterdiğini bulmuştur. Bu çalışmada deneysel olarak değerlendirebilmek için genel olarak kullanılan ölçütler istihdam edilecektir. Ayrıca veri modelinin sağlamlığı kontrol edilecek ve OLS yöntemi Eviews program kullanılarak uygulanacaktır. Bu amaçla uygun bir model oluşturmak için bankacılık literatürü araştırılacaktır.

Anahtar Kelimeler: Ticari Bankalar, Malezya, Pakistan, CAMEL Yaklaşım

To My Family

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I owe quite a lot to my family who allowed me to travel all the way from Iraq to 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.

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LIST OF ABREVIATIONS

ASQL.....Asset Quality

CPTLAD.....Capital Adequacy

DUM.....Dummy Variable

ERNQL.....Earnings Quality

LIQUID.....Liquid Assets over Total Loans

MNGQL.....Management Quality

ROA.....Return on Assets

ROE.....Return on Equity

Chapter 1

INTRODUCTION

1.1 Background

The banking system has been playing a significant role in our society since it was established. The banking system refers to the system which helps borrowers to find the lenders, simply to say, the people who really need money will be able to meet the people who will provide financing. Wherever you go, whatever you do, you will definitely need a bank for any type of transactions, being as a student or a worker, we need the banking system. It is not even possible to imagine the life without banking system, because it makes easier, safer and faster our life. The banking system is crucial element that contributes a lot into economy domestically as well as internationally. In other words, the global economy cannot function without banking system. The condition of the economy is closely related to the banking system, if the banking system performs well it will affect the growth of the economy positively. The process of production, distribution, exchange and consumption has become easier due to the banking system globally. Nowadays, the modernized banks play an important role in utilizing the resources of the economy of a specific country. As it has been mentioned in one of the popular articles by Kathryn (2009) "A bank as a matter of fact is just like a heart in the economic structure and the Capital provided by it is like blood in it. As long as blood is in circulation the organs will remain sound and healthy. If the blood is not supplied to any organ then that part would become useless, so if the finance is not provided to Agricultural sector or industrial sector, it will be destroyed. Loan facility provided by banks works as an incentive to

the producer to increase the production. Many difficulties in the international payments have been overcome and volume of transactions has been increased. Cheques, drafts bills of exchange and letters of credit are very important instruments of the banks. The banks collect these instruments drawn on banks in other cities or countries and proceeds according to the accounts of the customer's concerns."[1] On the other hand, if something happens to banking system, the whole economy may collapse due to the mistakes of banks, this what we witnessed recently - Global Financial Crisis. There was a credit crunch of banks, which means there was not a sufficient amount of money in the market which caused liquidity problems in the banking system that pushed the economy into recession. When economy is in recession, unemployment increases, GDP growth goes down, demands for goods and services shorten, and interest rates increase and economy of specific country is in a big trouble. As interest rate increase, the cost of borrowing will increase, so the people will stop buying goods and services, the companies will reduce production, which may lead to large layoffs of workers. It was illustrated below in the graph 1.1, where recession and inflation of 2009 are shown. As we can see from the graph, that there is a sharp decline in the Economic Growth in 2009.

[1] Kathryn (2009),What is the Importance of Banks, http://www.blurtit.com/q197532.html, 17th March 2013.

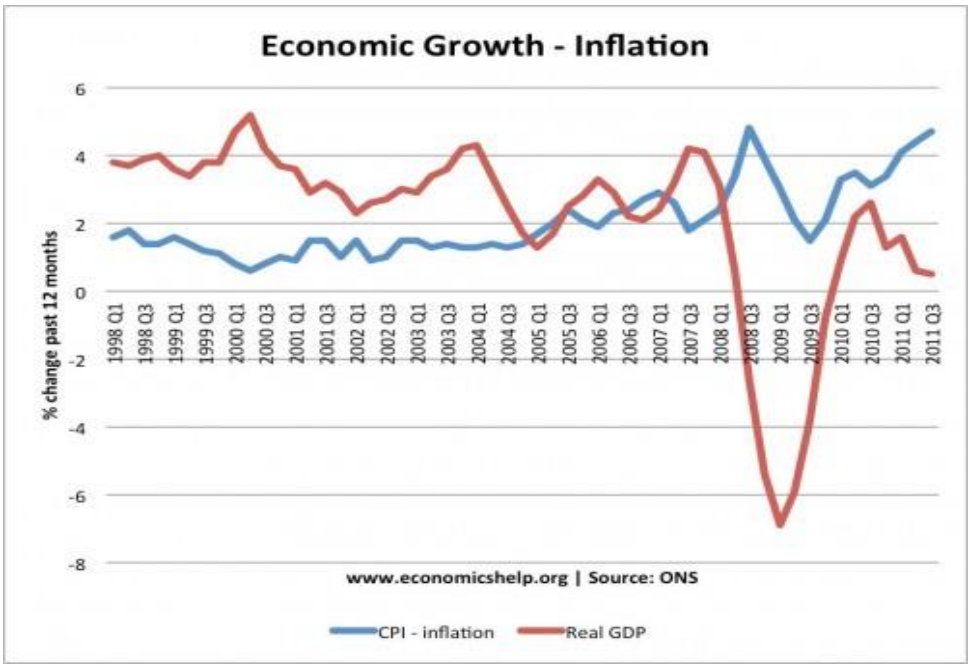

Figure 1.1: Economic Growth and Inflation over the period of 1998-2011

Source: ONS, http://www.economicshelp.org.[2]

There are many studies have taken place towards the banking structure in the economy. Furthermore, there are many different types of banks in the world, main classification of banks are Islamic Banks and Conventional Banks. In every country of the world the banking sector is quickly growing sector. As it has been mentioned in one of the articles of Kosmidou et al (2002), the banking sector in the UK has been substantially grown in recent years. This statistic comes from the expansion of total assets of banks in the UK. They did a good research, where they investigated how the macroeconomic variables and banks' characteristics affect the profitability determinants of commercial banks in the UK over the period of 1995-2002. In addition, there is another outstanding article of Short (1979), he observed

[2] Tejvan Petinger(2011), Macroeconomical factors around the Globe, Sunday 10th of March 2013, http://www.economicshelp.org.

commercial banks' data in Canada, Western Europe and Japan to find out the relationship between profitability indicators of commercial banks and bank concentration. For this study he used 60 commercial banks to see the association between concentration and profitability determinants of those banks for the period of 1970-1979. The explanatory variables he used were unique for banks and as well as for each country, he quantified the explanatory variables or concentration and named it "H", and some variables were government ownership. As results suggested for the relationship between government ownership and profitability indicators varied from country to country, but on overall basis they have inverse association with profitability determinants of commercial banks. Furthermore, he found higher concentration will result in greater profit of commercial banks of those observed countries.

1.2 Aim of the Study

In this research paper, two countries' commercial banks will be taken, Malaysia and Pakistan. As we know, that the from country to country the banking system varies. So the aim of this study is that to take eight banks from Malaysia and eight banks from Pakistan, in order to compare them in terms of financial performance empirically. I believe that there is difference in profitability determinants of two different countries. Simple regression analysis will be used by employing Eviews program. Likewise, different financial ratios will be applied in accordance with the CAMEL approach, and they are grouped as independent variables and as well as dependent variables. The dependent variables are profitability indicators. Additionally, some macroeconomic and dummy variables will be used. A dummy variable is used to find out the differences between two different Countries' banks in terms of profitability indicators or financial performance.

The CAMEL approach is the system which examines the creditworthiness of banks, and tries to identify potential risks that may lead to banking failures, simply to say gives the idea of how much the banks are reliable in terms of ability to meet short and long term obligations. CAMEL is composed of Capital Adequacy, Asset Quality, Asset Management, Earnings Ability and Liquidity Risk. There have been many studies on adoption of CAMEL methodology. A. Kumar et al. (2012), they analyzed 12 public and private sectors of banks over the period of 2000-2011 by adopting CAMEL approach in the case of India. They found that private banks are more creditworthy than public banks.

1.3 Scope of the Study

The analysis of financial performance differences of commercial banks in two different countries Malaysia and Pakistan is done for the period of 2006-2011. By doing this empirical investigation some important questions are needed to be answered, such as whether there is a statistical difference in profitability determinants of commercial banks between Malaysia and Pakistan? Which variables are more important that affect profitability indicators of commercial banks in both countries? And is the estimated model is reliable or not? Getting an appropriate and validated answer with explanation is very significant not only for Pakistan and Malaysia, but for the rest of the world as well.

1.4 Structure of the Thesis

In this study, the research is divided into six chapters. The first one starts with the Introduction. Chapter 2 is about Background Review of the banking system in Malaysia and Pakistan. Chapter 3 covers Literature Review. Chapter 4 refers to Data and Methodologies. Chapter 5 will give information about empirical studies of the

banking sectors in Malaysia and Pakistan. Finally, the study ends with Conclusion in Chapter 6.

Chapter 2

BACKGROUND REVIEW

2.1 Review of Conventional Banking System Globally

The Banking system is the most important system in economy of a specific country. Banks play significant role in the economy, they act as intermediary between borrowers and lenders, and they act as lenders as well as borrowers. As it was mentioned in the article by Allen, Chui, and Maddaloni (2004) which is demonstrated below in figure 2.1. It can be seen that there are people who have excess money and there are people who need the money, so banks or other financial institutions help to meet the lenders with the borrowers.

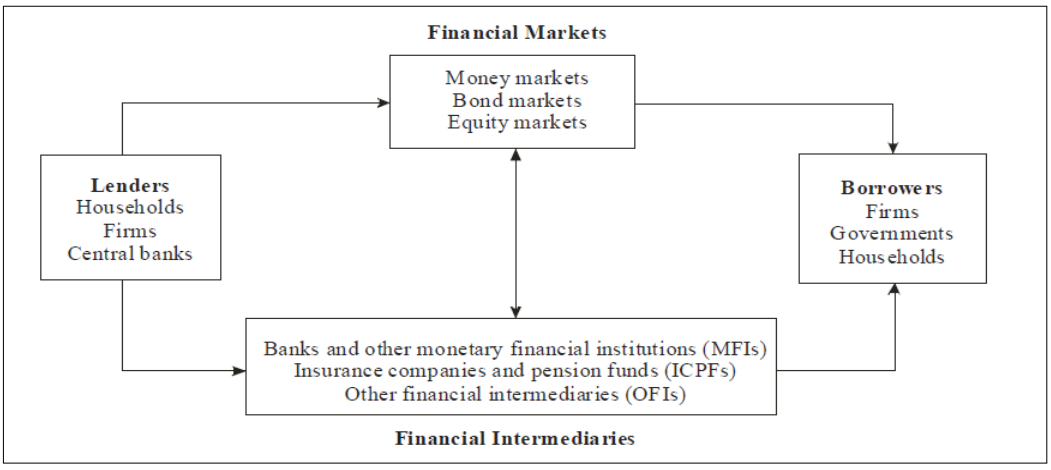

Figure 2.1: General Model of Financial Market

Source: Allen, Chui, and Maddaloni (2004) p.491[3]

[3] Allen, F., M. Chui and A. Maddaloni, (2004). "Financial Systems in Europe, the USA, and Asia," Oxford Review of Economic Policy 20, 490-508.

The functions of banks are different across the world. There are many different kinds of banks: Commercial Banks, Investment Banks, Industrial Banks, Islamic Banks, Retail Banks, Central Banks, Exchange Banks, Co-operative Banks and so on. Central Banks are the type of banks that exist in every country of the world. The main function of these banks is to control and give financial aid to other banks. Simply to say, the central banks are the mothers of other types of banks. Likewise, Central Banks are non-profit financial institution. It is not involved in public transactions. Commercial Banks are established to meet the public demands. In other words, they are involved in providing short term credits to businesses, accept deposits and give loans to customers, simply to say they are acting as financial intermediary between depositors and borrowers. They buy foreign exchange as well as gold and silver from their customers. Saving Banks are small prototype of commercial banks; they deal with small enterprises such as, small farmers, salaried employees and so on. The customers of saving banks are poor and middle class of people. Industrial Banks are involved in long term period transactions. They finance the industries and need a large amount of capital. On the other hand, they make an investment in financial assets such as buying shares, bonds and debentures of companies which helps industrial banks to fix their capital. The important functions of these types of banks are: accepting long run deposits, long term industrial credits and offering consultancy in terms of sale and purchase of shares and debentures of the companies.

2.2 The Review of Banking System in Malaysia

The banking system in Malaysia is very interesting which is composed of two different systems which are Islamic and Conventional banking systems. Islamic and Conventional banking systems operate in parallel in Malaysia. In every country there

is central bank which is responsible for financial economic stability of the country. Likewise, Bank Negara Malaysia is the central bank in Malaysia that is the head of the financial system of economy. Right after the financial crisis in Asia, the central bank of Malaysia has come up with new policy and strategies which is called master plan. The concentration of that plan was on the Islamic Banking sector. The main principle of central bank in Malaysia is to promote financial stability. There are many different financial institutions which are shown in table 2.1:

Table 2.1: List of Licensed Financial Institutions in Malaysia.[4]

Financial Institutions	Domestic Fin. Institution	Foreign Fin. Institution	Total
Commercial Banks	8	19	27
Islamic Banks	10	6	16
International Islamic Banks	0	5	5
Investment Banks	15	0	15
Insurers	19	17	36
Takaful Operators(Islamic Insurers)	9	3	12
International Takaful Operators	0	1	1
Reinsurers	3	4	7
Retakaful Operators(Islamic Reinsurers)	1	3	4
Development Financial Institutions	6	0	6
Total number of Financial Institutions			129

The banking system is the main source of financing in Malaysia which is composed of commercial banks, investment banks, Islamic banks, foreign banks and other financial institutions. In accordance with information provided in 2013 by Bank Negara Malaysia, there have been in total 129 financial institutions including both domestic and foreign banks. There are 27 of commercial banks which are composed

[4] Bank Negara Malaysia, Fincial Sector in Malaysia, Saturday 28th of March, http://www.bnm.gov.my/index.php?ch=fs_mfs&pg=fs_mfs_list&lang=en.

of 19 of foreign commercial banks and 8 are domestic ones. Moreover, there are 21 Islamic banks in total including foreign and domestic owned banks. Furthermore, there are 15 investment banks as well, and they are all domestic ones. Malaysia is one of the Muslim countries with steady economic growth in the world. In 1970 the Malaysian economy has expanded enormously. The economic growth has increased as Malaysia shifted into multi sector economy. The economy of Malaysia is considered to be newly industrialized economy. According to statistics, since 2007, Malaysia has been regarded as 3rd largest economy in the South East Asia and 29th biggest economy in the world. As it was stated in one of the articles outstanding of Elizabeth (2004), Malaysia is a Newly Industrialized County (NIC). Its current GDP per capita is $14,400 (2007est.). Malaysia is the 29th largest economy in the world by purchasing power parity with gross domestic product for 2007 was estimated to be $357.9 billion. Its GDP growth rate is 5% to 7% since 2007. Malaysia was one of the South East Asian countries that experienced rapid economic growth in the early 90's and dubbed as one of the Asian Tiger Economy. Though, this did not last long. Malaysia was hit in the Asian Financial Crisis in 1997, but quickly recovered by about 2001. Malaysia was among the first to recover from the crisis, mostly by refusing aid from the World Bank. Malaysia had never attained its previous average GDP growth of 9% since.[5] The data on GDP growth downloaded from the World Bank database and plotted a graph of it which is demonstrated below in graph 2.1:

[5] Elizabeth (2004), What is the Economy of Malaysia Like? , Sunday 25th March, http://wiki.answers.com/Q/What_is_the_economy_of_Malaysia_like.

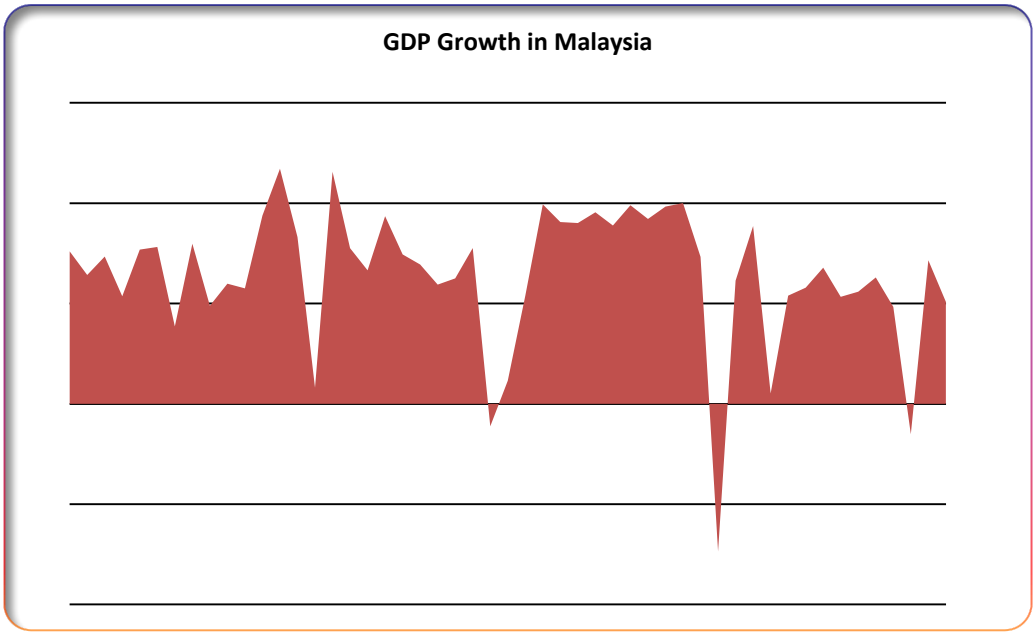

Figure 2.2: GDP Growth in Malaysia for the period of 1961-2011[6]

As we can see from the above graph there was a boom in economic growth of Malaysia in 1970s and then it sharply declined in 1975. Afterwards, and there is a sudden increase in GDP Growth. Sudden changes in economic growth are due to political reasons, in 1975 the government of Malaysia changed exchange regime totally. Between 2007 and 2009 there is a sharp decline in GDP growth, the reason for this reduction was financial crisis in 2008, which was originated from real estates-subprime mortgages.

2.3 Review of Banking System in Pakistan

Pakistan is the second largest Muslim country in the world. For many decades political disputes have existed in Pakistan which led to slow growth and instability in the country. In contrast to other capitalistic countries, the main sector that contributes into the growth of the economy in Pakistan is agriculture sector, 40% of employment is from agriculture sector. In one of the articles about Pakistan, there was stated that

[6] http://data.worldbank.org/indicator.

"Agriculture is the mainstay of Pakistan's economy, employing more than 40% of the population. Cotton, wheat, rice, sugarcane, fruits, vegetables, and tobacco are the chief crops, and cattle, sheep, and poultry are raised. There is also a fishing industry. Most of Pakistan's agricultural output comes from the Indus basin. The country is now self-sufficient in food, as vast irrigation schemes have extended farming into arid areas, and fertilizers and new varieties of crops have increased yields."[7]

Pakistan's economy is still considered as an agrarian economy as it still contributes in GDP growth, even though there is a decline in contribution in GDP from agriculture sector. However, the financial sector is quickly growing and making a large contribution in GDP as well as agriculture sector. Furthermore, the banking system plays a significant role in the growth of the economy. In addition to, after the independence in Pakistan, many of the banks were nationalized. As it was stated in the economic review of Pakistan by OSEC Business Network Switzerland (2011), the Banking sector of Pakistan is playing a pivotal role in the growth of country's economy. In accordance with the State Bank of Pakistan Act, the banking system of Pakistan is a two-tier system including the State Bank of Pakistan (SBP), commercial banks, specialized banks, Development Finance Institutions (DFIs), Microfinance banks and Islamic banks. As of June 2010, the banking sector comprised of 36 commercial banks (including 25 local private banks, 4 public sector commercial banks and 7 foreign banks) and 4 specialized banks with a total number of 9,087 branches throughout the country. Among the banks, there are 6 fully fledged Islamic

[7] Infoplease, Friday 29th of April, http://www.infoplease.com.

banks as at the end of June 2010.[8] In table 2.2 different types of financial institution are shown.

Table 2.2: List of Licensed Financial Institutions in Pakistan[9]

Financial Institutions	Total
Public Sector Banks	5
Islamic Banks	5
Private Banks	17
Foreign Banks	7
Development Financial Institutions	8
Specialized Banks	4
Micro Finance Banks / Institutions	9
Total	55

After getting independence State Bank of Pakistan was established, it played a significant role in contributing into GDP growth of Pakistan. This can be demonstrated by the graph of selected banking sector indicators which are: investment, loans and deposits.

[8] The banking sector of Pakistan, 29th of March, www.osec.ch.

[9] Pakistan and Gulf Economist, Member's Of Pakistan Bank Association, 29th of March, http://www.pakistaneconomist.com/database2/pakbanks.asp.

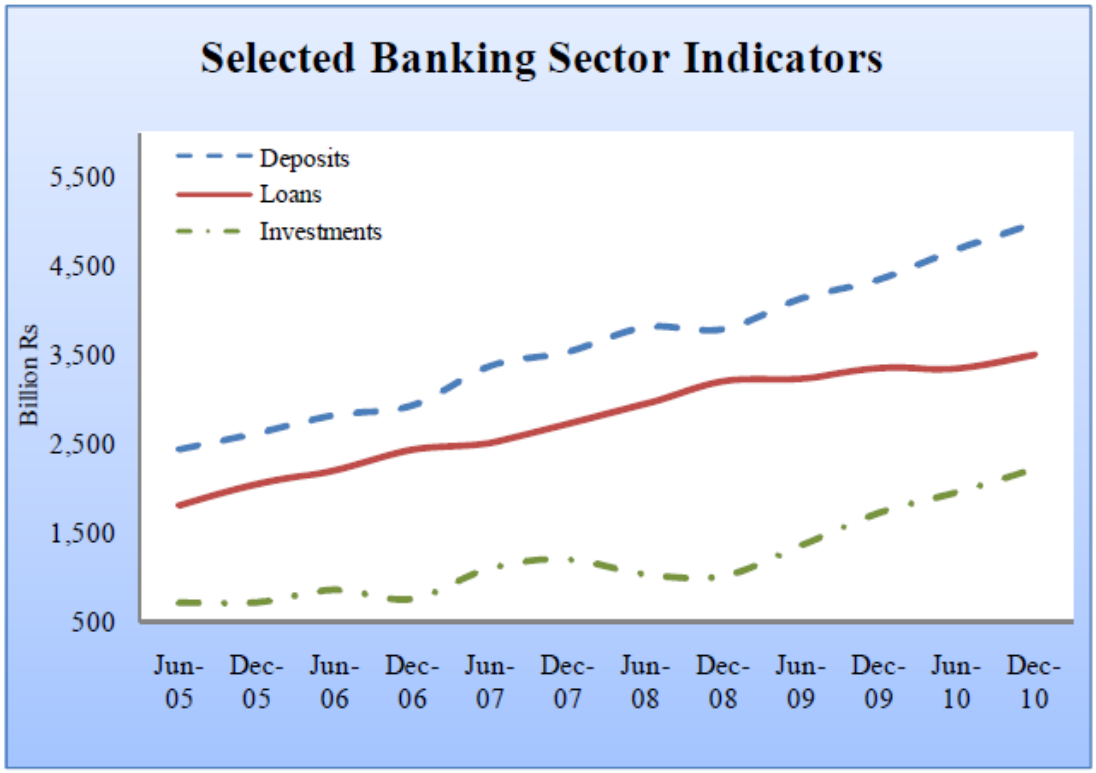

Figure 2.3: Review of Selected Banking Sector Indicators in Pakistan[10]

As we can see from the above graph 2.2 that the banking sector in Pakistan is expanding by more deposits than loans and investments for the period of 2005-2010. The banks are attracting many depositors, and it seems that they didn't have any liquidity problem during this period. The result is due to the supervision of banks by the central bank of Pakistan is under strict control.

The economy of Pakistan was growing with contribution agriculture sector and also within the banking sector. The economy of Pakistan is semi-industrialized that mostly covers textile, agriculture, food processing and etc. The economic growth of Pakistan can be shown in the below graph 2.3.

[10] SBP, Statistics Data Warehouse Department(2010), Sunday March 10, 2013 www.sbp.org.pk.

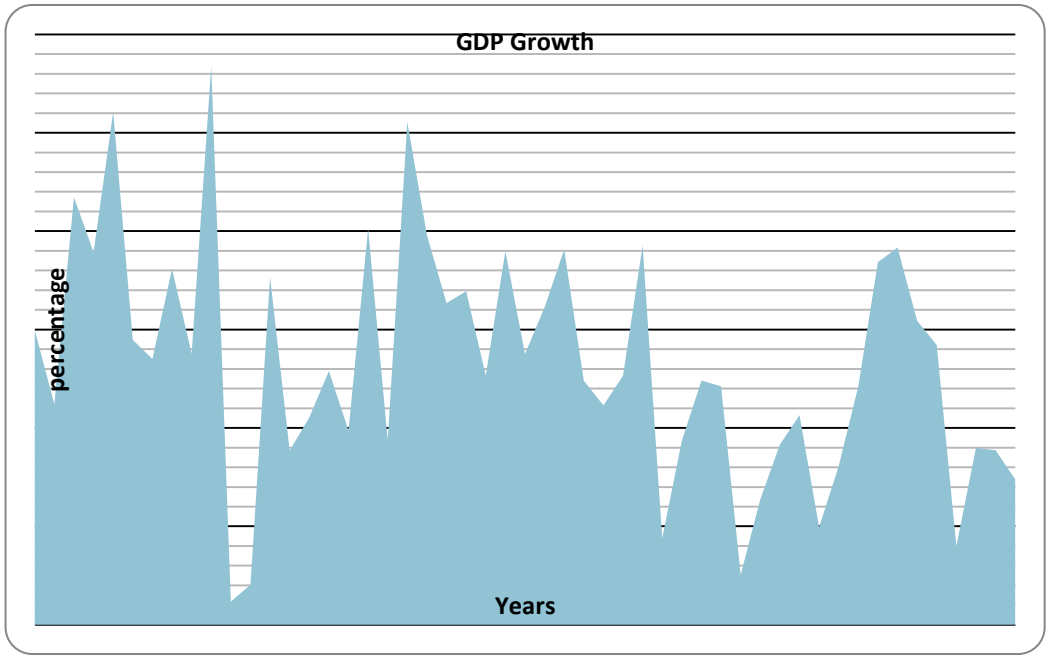

Figure 2.4: GDP Growth in Pakistan for the period of 1961-2011

As the graph suggests that since 1947 up to 1970s the GDP Growth reached its peak, then it has fallen sharply, and the interesting thing is that same trend was observed in the case of Malaysia. So the main reason why there was a sharp decline in GDP growth in both countries in the 1970s is the due to the stock market crash.

Chapter 3

LITERATURE REVIEW

There are many contemporary studies done on banking profitability determinants. In accordance with Berger and Deyoung (2006), the expansion of a banking system in the United States has been on permanent route in recent years within a country and as well as internationally. Between the years 1985-1998 the distance between largest banks and affiliate banks in the US has gone up by 50%. They come up with that the banking industry experiences diseconomies to geographic expansion in the form of agency problems. They found the way to reduce agency cost through improving information processing and telecommunication technologies. Furthermore, generally it is believed that highly capitalized financial institutions are less exposed to financial distress, in one of the outstanding studies of Bourke (1989), he has chosen twelve countries to measure banks' performance and he found statistically validated positive relationship between profitability and capital adequacy. It shows that as a capital ratio increases, this will lead to higher profitability of banks. On the one hand, as empirically proved that profitability has a positive association with capital adequacy, and this is consistent with studies of Berger (1995) and Anghazo (1997), where they found well capitalized banks are more profitable rather than low capitalized ones in the US.

However, the limited numbers of studies have been done on commercial banking's profitability in Malaysia and Pakistan. In one of the studies of Katib (2004), he studied 20 commercial banks in Malaysia for the period of 1989-1996. He used

robust estimation methodology. In his study, he employed some controlled variables as well as financial ratios to measure risk factors and cheap accession to banks in Malaysia. As the results show that efficiency is not the main factor that affects the profitability determinants and market shares. However, bank concentration affects positively profitability indicator and it is statistically significant.

In recent popular articles of Sufian F. (2011), they have done panel data regression analysis in the case of Malaysia. The banks' results suggest that more productive commercial banks are having more income generated from a non interest way of financing and concentrating on expense preferences. The research findings also tell that technological findings are leading to an increase in profitability of commercial banks in Malaysia. Two different methods are employed in this study: DEA and MPI. The main aim was to investigate empirically banking sector's efficiency in Malaysia by using panel data regression analysis.

Asma' R. et al (2011) studied Islamic banks' profitability determinants in Malaysia for the period of 2007-2009. They employed General Least Square methodology with panel data, and they have considered some bank specifications: liquidity, adequacy ratio, management of expenses, size of banks and credit risk. The results have suggested that only bank's size has a positive association with profitability determinants of Islamic financial institutions in Malaysia. It is concluded that only bank's scale may put confidence in the eyes of customers.

Ansari and Rehman (2011) conducted a research on Islamic banking and Conventional banking systems to see which of the sector is performing better. They compared two different banking systems in Pakistan. They have come up with that

Islamic banks are performing better than Conventional banks in Pakistan, as deposits and expenses were inflated, in a result they led to the boom profitability in Islamic banks.

Siti Rohaya R. et al (2012) has done a comparative study between Conventional and Islamic banks in Malaysia in terms of financial stability. They used Z-score and NPL as a proxy for the financial stability. They have taken 17 Islamic banks and 21 commercial banks in Malaysia. They found that Islamic banks are more stable than commercial banks in terms of financial stability. By Z score they measure prediction of bankruptcy or financial distress.

Saba Sehrish et al (2012) applied six financial ratios by employing panel data regression analysis for the comparative study on Islamic banking and Traditional Banking systems in terms of profitability determinants in Pakistan for the period of 2007-2011. They found that Islamic banks are less risky and less efficient in management of expenses. No differences were found in both Islamic and Conventional Banking sectors. As an overall Islamic banking sector's financial performance found to be satisfactory.

Faisal Khan et al (2011) used 16 commercial banks in Pakistan for the period of 2000-2010. The aim of their study was to find main profitability determinants of banks by using bank specific variables. They did OLS by using random and fixed effects on their data. They grouped the banks into two large and smalls. They found that loans are positively related to profitability indicators. In the case of small banks the variables of expansion loans are not statistically significant so they do not exert an effect on profitability indicators of Pakistan's banks.

Moreover, the analysis of the banking industry in European Countries has shown a positive association between profitability determinants and capital ratio, in accordance with the article of Molyneux and Thornton (1992). They used eighteen countries for the period 1986-1989 to find out the relationship between profitability indicators and other independent variables, and especially concentration was on capital adequacy. They found that the positive relationship between capital and profit of banks is not limited to the US only, and they have proven empirically positive relationship for European countries as well, however this is only applied for state-owned banks.

Demirguc-Kunt and Huizinga (1999) have done a wide-ranging research on the banking industry, where they have taken 80 countries over the world and they categorized them into developed and developing countries for the period 1988-1995. They also found that foreign banks are more profitable than domestic ones in developing countries and it is statistically significant. However, they found in developed countries, the domestic banks are more profitable than foreign ones. Furthermore, their general results tell that there is the positive relationship between profitability determinants and capital adequacy ratio.

One of the important determinants in income statement of banks can be considered a non-interest income/assets ratio. Gischer and Juttner (2001), found that fee income generating financial institutions influences inversely related with bank's profitability. The explanation for such relationship is provided by the fact that they are subject to the intense competition on an international basis, in contrast to conventional interest bearing income. The fee incomes are categorized into: trade in currencies, derivatives such as options, futures, credit card provisions and etc.

As we know that deposits and loans are traditional way of transactions in the banking system, it is important to measure the impact of these two variables on profitability determinants of banks. Conventionally it is accepted that loans exert a positive effect on profitability indicators of banks. However, the findings of Abreu and Mendes (2000) are not consistent with this, because they found that the higher loan ratio is positively correlated with profitability determinants of banks, same results are found by Abreu and Mendes (2000), simply to say they found a positive association with profits of the banking sector. They have taken European commercial banks for the period of 1980-1998.

Moin (2007) used first Islamic bank in Pakistan to compare with five of conventional banks. He uses commonly accepted financial ratios in the literature of banking sector such as: profitability, liquidity, risk and efficiency. One of the profitability ratio, ROE was used to find out differences in terms of profitability determinants between Islamic Bank and Conventional Banks, it is proven to be statistically different and conventional banks perform better that Islamic bank. His finding states that year by year Islamic banks are getting closer with conventional banks in terms of financial performance. In his study positive relationship is found between return on equity and net income. Unfortunately, he could not find differences between Islamic bank and Conventional Banks in terms of liquidity. Generally, the more risk exposure lead to the higher profitability, and in his study it was consistent with this statement, where Islamic bank is less risky and more solvent than Conventional Banks, this is due to the fact of high profitability.

Devid Tripe (2002) empirically investigated the correlation between capital and ROE of banks in New Zeeland and Australia for the period 1996-2002. He used nine

Australian banks and six banks of New Zeeland. Macroeconomic independent variables were used in regression analysis such as GDP and interest rate. He did the empirical investigation for these two countries separately; he grouped the bank into small and large ones. Test of Ganger causality was employed to find out the connection between the capital adequacy ratio and ROE. The result of the study shows that there is a moderate positive relationship between capital level and ROE. There is positive impact on profitability indicators and in New Zeeland case causative association with profitability is not clear but the interest rate in New Zeeland has the same outcome on profitability.

Kosmidou (2004) measured empirically financial performance and efficiency of conventional commercial and cooperative banks of Greece and Europe for the period of 2003-2004. In his research sixteen cooperative banks and fourteen conventional commercial banks were chosen. In his empirical investigation, he grouped banks into large and small banks in terms of size. Empirical research is done in accordance with the CAMEL approach by using financial ratios as explanatory variables such as total equity to total assets, earning before tax over the size of the banks, earning before tax over total equity, total loans to total assets. Multi criteria methodology is employed to estimate financial performances of conventional commercial and cooperative banking systems. In contrast to cooperative banks, commercial banks are likely to increase their accounts, and market share in common will be going up.

Hussein (2003), tried to empirically measure the cost efficiency of Islamic banks in Sudan. He used a sample of seventeen banks for the period of 1990 and 2000. The results suggest that foreign banks are cost efficient in contrast to state owned banks in Sudan, simply to say state owned banks are cost inefficient. He grouped the banks

as well into large and small ones, and he found that small banks are relatively more efficient than large banks in Sudan. Furthermore, the banks with a high proportion of musharakkah and muddarabah finance relative to size are more efficient than those with low musharakkah and muddarabah finance relative to size.

Bashir (1999) and Bashir (2001) in his outstanding studies empirically measured Islamic bank's profitability determinants by employing regression analysis. He used bank level data for Middle East, the results show that main source of profit are overhead, customer short term funding, and fee income assets. He stated that since deposits in Islamic banking system is treated as shares, so reserves held by Islamic banks exert negative influence on profitability determinants, for example it may reduce the quantity of funds which are available for investment. And he concluded that Islamic banks are efficient as their counterparts.

In one of the early studies of Perry (1992), where he found that the impacts of inflation on profitability determinants of bank depend on whether the inflation is forecasted or not forecasted. In the case of forecasted inflation, the profitability rates are to increase faster than cost rates which afterwards cause positive influence on bank's financial performance. However, on the other case, when inflation is not forecasted, banks are very slow to adjust their rate of interest, as cost rises faster than income and therefore inverse impacts on profitability indicators of banks.

Miller and Noulas (1997) used a ratio of loan loss provisions to total loans (LLP/TL) as an independent variable in the regression analysis and applied as a proxy for a credit risk. This ratio is put in to regression model with negative sign. The results showed that the bigger the exposure of high risk loans of banks, the higher would be

the summation of unpaid loans which would lead to lower profitability. They also say that the reduction in loan loss provisions is in many cases is the first sign of increase in profitability.

Masood, Akhtan & Chaudhary (2009), in their study they used co-integration and casual approach to see the relationship between ROE and ROA in Saudi Arabia's banks. The results show the strong association between variables in the long run. They also found unidirectional causality from ROE to ROA and this can be explained in a way that sustainable development strategies with high level of return on equity will lead to fast development of banks in Saudi Arabia.

One of the important determinants in the income statement in banks can be considered a non-interest income ratio. Gischer and Juttner (2001) find that a fee income, generated by financial institutions, influences inversely bank's profitability. The explanation for such relation is provided by the fact that they are subject to the intense competition on an international basis, in contrast to conventional interest bearing income. The fee incomes are categorized into: trade in currencies, derivatives such as options, futures, credit card provisions and etc.

In one of the early studies of Bhatt & Ghosh (1992), it has been found that some endogenous and exogenous factors affect profitability determinants of commercial banks. Endogenous factors are standing for manipulation of expenditure, expanding the banking system, slow recovery of loans and productivity. The exogenous factors composed of direct investment, like Statutory Liquidity Ratio, Cash Reserve Ratio and directed credit process, priority of lending in different sectors for population. They were trying to research on the regulation and restriction of regime in the

operation of the banking system by touching investment, credit allocation, branch expansion, interest rate determination.

Burke (1989) conducted a similar study to Short (1979), he also compared concentration of banks to profitability determinants, and added some other variables. He studied approximately ninety commercial banks in Australia, Europe, and North America for the period of 1972-1981. The data are divided into two factors: internal and external. Internal factors refer to employee expenses, liquidity, capital adequacy and loans to deposits. Whereas, external factors are standing for government ownership, regulation of banks, concentration, interest rate, market power, expansion of markets, economies of scale and etc. The results have shown that raise in government ownership which will end up reduction of profitability, simply to say there is a statistical inverse relationship between profitability determinants and government ownership which is consistent with the findings of Short (1979). He also found the positive association between money supply, interest rate, and concentration with profitability indicators of commercial banks. He finds that the size of banks and capital adequacy has a positive relationship with the profitability of banks. Furthermore, well capitalized banks are more efficient than less capitalized ones.

More recently, Goddard, Molyneux and Wilson (2004) empirically investigated 6 European countries: Denmark, France, Germany, Italy, Spain, and the UK. The research covered 665 banks for the period of 1992-1998. They used cross sectional panel data models. Some financial variables are used by employing regression analysis: return on equity, logarithm of total assets, off balance sheet dividends, and capital to asset. They have come up with positive relationships between profitability determinants of banks and size of banks. However, they found a negative or inverse

association between off balance sheet dividends and profitability indicators of banks, and only in the case of the UK it was positive association. Furthermore, they found the positive relationship between capital to assets and profitability of banks. And they could not provide any evidence for the relationship between ownership and profitability.

Ben Naceur (2003) tried to determine the profitability of 10 Tunisian banks by using profitability indicators such as: ROE and NIM for the period of 1980-2000. He also categorized data into two groups: internal and external ones. Internal variables were liquidity, capital adequacy, loans, total assets or size, overhead expenditures. Whereas, external ones: GDP growth, inflation rate and financial structure. In accordance with the results, his findings suggest that the size of banks is negatively related to net interest margin, so the bigger the banks the lower is net interest margin. And also he found the positive relationship of overhead expenses and capital adequacy with NIM. Macroeconomic factors such as GDP growth and inflation rate do not exert any influence on profitability determinants of Tunisian banks. So, regarding the financial structure for Tunisian banks, it is negatively related to concentration, but share market development has the positive connection with profitability.

In one of the highly outstanding articles of Demirguc-Kunt and Huizinga (1999), a wide-ranging research has been done on the banking industry, where they have taken 80 countries over the world and they categorized them into developed and developing countries for the period 1988-1995. And they found that foreign banks are more profitable than domestic ones in developing countries and it is statistically significant. However, they found the opposite in developed countries, simply to say,

they found domestic banks are more profitable than foreign ones. Furthermore, their general results tell that there is positive relationship between profitability determinants and capital adequacy ratio.

Not only conventional banks are being researched, but Islamic banks as well. Bashir and Hasan (2004), in their studies determinants of Islamic banking profitability, employed 21 countries for the period of 1994-2001. According to their research that they made, Islamic banks tend to be more efficient than Conventional Banks in terms of capitalization. They also categorized their data into External and Internal variables. They used these variables to come up with profitability determinants and as well as financial structure, macroeconomic measure, and country variables. They used net non-interest margin as a profitability indicator, earning before tax over total assets, return on assets and return on equity. Forty three banks were used in this study. The results are consistent with findings of Bashir (2000), where positive relationship found between capital adequacy and profitability determinants, and negative association between loans and profitability indicators. They come up with that smaller banks are more profitable than bigger by finding a negative relationship between total assets and profitability of banks. There is no effect of inflation on Islamic banks. There is the positive connection found between profitability indicators of Islamic banks and an overhead expense, in other words as the banks increase the expenses the profitability will go up as well.

Spathis, Kosmidou and Doumpos (2002) used the following profitability indicators: ROE, ROA and NIM. They have taken 23 banks, and seven of them are large and sixteen of them are small for the period of 1990-1999 by employing panel data. By separation of banks into small and large once made this study unique for that period before the estimation of profitability. Multicriteria Decision used based on UTADIS,

in order to identify the financial performance of Greek commercial banks. In addition, they employed some financial ratios as well to determine the performance. According to results, large banks have more access to resources and more ROA than small banks. And small banks performed better than large banks in terms of ROE and NIM, as well as financial leverage.

Chapter 4

DATA AND METHODOLOGY

4.1 Data

The panel data has been conducted to analyze the comparison of commercial banks in Pakistan and Malaysia in terms of profitability determinants. The data was derived from financial statements of each commercial bank from their own websites, in total 16 commercial banks were taken (8 of Malaysian commercial banks and 8 of Pakistani commercial banks) for the period of 2006-2011 that were prepared on a yearly basis. All extracted data were put into Microsoft Excel to make it easier to transfer into Eviews software to run regression analysis and correlation analysis. The names of banks are given in the table 4.1.

Table 4.1: Selected Banks in Malaysia and Pakistan

	Selected Commercial Banks in Malaysia
№	Names of Banks
1	Affin Bank Berhad
2	Royal Bank of Scotland Berhad
3	Bank Malaysia Berhad
4	Bank Pembangunan Malaysia Berhad
5	RHB Bank Berhad
6	Deutche Bank Berhad
7	Bank Muamalat Malaysia Berhad
8	CIMB Investment Bank Berhad
	Selected Commercial Banks in Pakistan
№	Names of Banks
1	Bank AL Habib Ltd.
2	NIB Bank Ltd.
3	BankIslami Pakistan Ltd.
4	Mybank Ltd.
5	Dawood Bank Ltd.
6	Samba Bank Ltd.
7	Meezan Bank Ltd.
8	Soneri Bank Ltd

4.2 Variables

The ordinary model brought into play by Hassan at al. (2004) and Spathis (2002) has been employed to examine the profitability indicators of IB and CB. However, in this work, we employ two response variables, as a proxy for financial performance, i.e., return on equity (ROE) and return on assets (ROA). Each dependent variable is separately specified as follows:

$$ROE=\alpha 1+\beta 1(TE/TA)+\beta 3(PLL/TL)+\beta 4(INT/D)+\beta 5(C/R)+\beta 6(LIQ/D\ )+\varepsilon$$

$$ROA=\ \alpha 1+\beta 1(TE/TA)+\beta 3(PLL/TL)+\beta 4(INT/D)+\beta 5(C/R)+\beta 6(LIQ/D\ )+\varepsilon$$

where, TE/TA represents Total Equity to Total Asset, PLLTL represents Provision of Loan Losses over Total Loans; INT/D represents Interest Expenses to Deposits, C/R represents the Cost to Revenue, LIQD represents Liquid Assets to Deposits and E represents error term.

4.2.1 Dependent Variables

Regression analysis is applied in this thesis to investigate empirically the financial performance of all banks in accordance with CAMEL system. The most common ratios are used in literature reviews are ROA and ROE as dependent variables which are proxies for profitability determinants.

Return on Assets (ROA)

ROA is one of the profitability ratios, the net profit to total assets, showing the efficiency of using assets to earn a profit. Moreover, there are many definitions of return on assets, for example, according to one of the outstanding articles of Naceur (2003) ROA is showing the percentage of profit earned from using the assets of specific companies.

Return on Equity (ROE)

Return on equity is another profitability determinant that refers proportion of net income to total equity. It shows how efficiently the company uses its own capital to generate profit, in other words it underlines the management of stockholder's equity. According to Gul et al. (2011), the return on equity shows the percentage of profit earned by using the equity.

4.2.2 Independent Variables

Capital Adequacy

Capital Adequacy measures whether the company has adequate capital or not towards potential risks. The ratio of capital adequacy used in this research is total equity to total assets. The higher the ratio, thus the more stable and efficient banks are.

Asset Quality

Asset items belong to balance sheet, and it is shown on the left side of the balance sheet. The composition of assets is cash, account receivables, loans and etc. The quality of assets in financial institutions is very important for potential depositors, investors and other financial organizations. The asset quality shows creditworthiness of financial organization, whether the banks are able to generate enough cash to pay their debts. Provision of loan loses dived by total loans, PLL/TL. Likewise, the lower the ratio, the higher the quality of assets is.

Management Quality

Management quality is interest expenses over total deposits. Furthermore, management quality measures how the banks are efficient in terms of interest

expenses to deposits, thus the lower the ratio, hence the more efficiently the banks are dealing with their deposits. When ratio goes lower, the banks incur less expense and make profit.

Earnings Quality

Cost to revenue ratio measures the productivity and earnings efficiency of banks. Furthermore, it shows the efficiency of operations of banks, how much should be spent to earn one dollar, the lower the expenses incurred to earn a dollar, the better the bank is.

Liquidity

Liquidity is the convertibility of assets into cash within a year. If the liquidity of banks is low, the probability of having liquidity problems is low and less likelihood it will lead into bankruptcy. In order to be highly liquid, the banks should keep more cash in hand, but keeping more cash lowers the profitability of banks, this ideology is consistent with the empirical findings of Molyneux and Thorton (1992). In this research, a liquid asset over total deposits ratio is the proxy for liquidity indicator.

Dummy

In order to learn the statistical differences between commercial banks of Malaysia and Pakistan we used dummy, simply to say, we coded as 1 and 0, Malaysian and Pakistani commercial banks respectively.

4.3 Methodology

Unit root test has been checked in data, whether the data is stationary or not. The panel root test is employed in accordance with developed methodologies of Levin Lin and Chu, and Pesaran and Shin. The robustness of model has been examined, in

other words, the presence of multicollinearity, heteroscedasticity and autocorrelation are being tested. Robustness tests are provided in chapter 5. Furthermore, the research is divided into two main parts: General Model and Specific Model. In addition to, the General Model regression analysis is done on all banks with dummy variable, whereas the Specific Model empirical analysis is done separately on Malaysian commercial banks and Pakistani commercial banks but without dummy variable.

Equation form for regression analysis of General Model:

$$ROE=\alpha 1+\beta 1(CPTLAD)+\beta 3(ASQL)+\beta 4(MNGQL)+\beta 5(ERNQL)+\beta 6(LIQUID)+\beta 7(DUM)+\varepsilon$$

$$ROA=\alpha 1+\beta 1(CPTLAD)+\beta 3(ASQL)+\beta 4(MNGQL)+\beta 5(ERNQL)+\beta 6(LIQUID)+\beta 7(DUM)+\varepsilon$$

And equation for regression analysis of Specific Model:

$$ROE=\alpha 1+\beta 1(CPTLAD)+\beta 3(ASQL)+\beta 4(MNGQL)+\beta 5(ERNQL)+\beta 6(LIQUID)+\varepsilon$$

$$ROA=\alpha 1+\beta 1(CPTLAD)+\beta 3(ASQL)+\beta 4(MNGQL)+\beta 5(ERNQL)+\beta 6(LIQUID)+\varepsilon$$

Where,

CPTLAD is capital adequacy model, total equity over total assets

ASQL is asset quality, provision of loan losses to total loans

MNGQL is management quality, interest expenses over total deposits

ERNQL is earnings quality, cost to revenue

LIQUID is liquidity, liquid assets to total deposits

$\alpha 1$ is intercept

β is the slope

DUM is dummy variable, ε is error term.

Chapter 5

EMPIRICAL ANALYSIS AND RESULTS

First of all, the existence of unit root test in variables was checked. In accordance with developed methodologies by Levin and Chu (1993), and Im Pesaran Shin (2003), the variables were found to be stationary which rejects Null Hypothesis because probability values are less than significant levels, so panel unit root does not exist in these models. Robustness of the model was checked for autocorrelation, multicollinearity and it has been adjusted for heteroscedasticity by employing "Cross Section Random Effects" and correlation analysis. For details about stationarity, you can refer to [table 5.1], [table 5.2] and [table 5.3] in the appendix.

5.1 Correlation Analysis

Correlation is the association level between two variables, how they affect each other, if one variable increase what will happen to the other one. Moreover, correlation can be positive and negative. Correlation analysis gives prediction how independent variables will influence the profitability determinants or dependent variables. The correlation analysis is done in accordance with the CAMEL approach. Furthermore, it helps us to determine whether there is a multicollinearity problem or not. In our research we have done three different types of correlation analysis which are: all banks, Malaysian banks and Pakistani banks.

As we did correlation analysis for all banks in [table 5.1], we can see that generally association between the variables are very low, less than 50%. For instance, a negative relationship is expected between capital adequacy ratio and profitability indicators ROA and ROE, the degree of negative relationships are 11% and 18% respectively. Asset quality, Management quality, and Earnings quality have negative associations with ROA, 61%, 40% and 58% consequently. However, the only Liquidity indicator has the positive connection with ROA, and negative association with ROE. Management quality and Earnings quality have got the negative association with ROE, 19% and 15% respectively. As we can see, the relationships between independent variables are very low that proves the absence of multicollinaerity problem.

The [table 5.5] shows correlation analysis for Malaysian banks. Capital adequacy ratio, Liquidity and Management Quality have inverse association with profitability indicators, 29%, 21% and 3% respectively, but they have positive associations with ROE.

On the other hand, correlation analysis was conducted for Pakistani banks as well, this can be seen from [table 5.6] in the appendix. The anticipated relationship of all CAMEL variables with both profitability determinants is negative. The perfect correlation between asset quality and ROA and ROE is expected.

5.2 Regression Analysis of All Banks

In this research, regression analysis is conducted and it is divided into two estimation model, General and Specific estimation models. The main purpose of regression analysis is to see how changes independent variables exert influence on profitability

determinants. General model is applied for Malaysian and Pakistani commercial banks together. ROE and ROA are used as proxies for profitability indicators. Furthermore, explanatory variables are based on the CAMEL approach.

5.2.1 General Model Estimation

Firstly, in these regression analysis profitability ratios, CAMEL ratios and dummy variable are used. According to empirical results from [table 5.7] in the appendix, assuming there is no change in any of the independent variables, the ROA will increase by 2.42 units and it is statistically significant and elastic at level of significance of 5%. Furthermore, there is the positive effect on ROA from the capital adequacy ratio and it is statistically validated at significance level of 1%. That is to say, as the bank will keep more own capital, this will increase the banks' profitability. However, there is the negative influence on ROA by ASQL which is provision of loan losses over total loans, this can be explained that the lower the ratio the more profitable the banks are, simply to say, the lower the defaults of borrowers, the more banks are going to earn, and this ratio is statistically validated. MNGQL does not affect the ROA because it is not significant. In addition to, the earnings quality, ERNQL, exerts negative effect on ROA and it is statistically significant, it is the cost to revenue. The main reason behind this, as the banks increase the cost incurred, the profitability of banks will go down. If the cost of banks will increase by 1 unit, the ROA will go down by 0.022 units. The liquidity is not affecting the profitability at all because of insignificancy. The dummy variable DUM is not significant as well which means that there is no statistical difference in the profitability determinant, ROA, of commercial banks in Malaysia and Pakistan. A 41.25% of variation in ROA can be explained by variations in CAMEL ratios. The

whole model is statistically validated at significance level of 1%, because the F-probability value is less than an alpha.

On the other hand, the profitability determinant ROE estimation model is found to be not validated statistically, none of the CAMEL ratio is significant, because probability values are more than all significance levels. Even the R squared is very low 6.92%.

5.2.2 Specific Model Estimation

In this section regression analysis is subdivided into Malaysian commercial banks and Pakistani commercial banks. Furthermore, the dummy variable is excluded from this model. All explanatory variables are based on the CAMEL approach.

5.2.2.1 Regression Analysis of Pakistani Banks

According to empirical results in the case of Pakistani commercial banks from [table 5.9], assuming there is no change in any of the independent variables, the ROA will increase by 2.78 units and it is statistically significant and elastic at the level of significance of 5%. Furthermore, there is no effect on ROA from the capital adequacy ratio and it is statistically not validated, and it is consistent with the research of Faysal (2005). The effect of ASQL on ROA is negative, and it is statistically significant. It means, if the provision of loan losses over total loans ratio increases by 1 unit, the profitability indicator, ROA, will be reduced by 0.14 units. In other words, the profitability of banks grows when the default on loans by customers is low. However, the association of MNQL with ROA is statistically insignificant, showing no effect of management quality on profitability. But, the negative relationship of earnings quality on profitability, ERNQL on ROA, is obtained, and it is statistically significant. This result is expected, as the higher cost banks incur, the

lower the profit of banks. The ROA will decrease by 0.0297 units, if the cost of banks increases by 1 unit. In addition, the profitability is not affected by the liquidity at all, because of the insignificance of t ratio. Moreover, the whole estimation model is statistically significant due to lower F-probability which is less than all significance levels, and based on R-squared, a 76 % change in ROA can be interpreted by changes in the independent variables.

Furthermore, according to [table 5.10], suppose there is zero change in any of explanatory variables, the ROE will go up by 23.04 units, and it is elastic. The result is statistically significant at 1% significance level. In addition, there is a negative influence on ROE by the capital adequacy ratio, total equity to total assets, and it is statistically proven. This finding contradicts the result of Bashir and Hasan (2001). The more capital the banks keep, the less they are involved in financial transactions that lead to lower profitability. The influence of ASQL on ROE is negative and statistically validated as well, as it has been the same for ROA. Thus, the profitability indicator will be reduced by 0.78 units, if the provision of loan losses over total loans ratio increases by 1 unit. Insignificancy for the relationship of management quality, interest expenses over total deposits ratio, and the profitability indicator, ROE, has been obtained. The earnings quality has shown a negative association with the profitability indicator of retained on earnings, and it is statistically validated. The ROE will decrease by 0.186 units, only when the cost of banks will increase by 1 unit. The liquidity is positively affecting profitability, ROE, at 10% significance level. Likewise with ROA, F-probability is less than significant levels which confirms the model is statistically significant and based on R-squared, a 67.93 % variation in the profitability indicator, ROE, is explained by variations in the independent variables.

5.2.2.2 Regression Analysis of Malaysian Banks

In accordance with the empirical results found in the case of Malaysia in [table 5.11], keeping other changes in independent variables constant, there is -2.30 (negative) unit change in the ROA, but it is not statistically significant. Furthermore, the ROA is positively affected by the capital adequacy ratio and it is statistically validated. Our findings are consistent with the empirical results of one of the outstanding articles of Bashir (2000). It means that, there is the positive relationship between the capital and the profitability, as there is 0.23 units increase in ROA, if there is 1 unit increase in the capital adequacy. But, the negative coefficient is obtained from the association of ASQL on ROA, which is statistically significant at the 1 % level. If the provision of loan losses over total loans ratio will increase by 1unit, the profitability indicator ROA will be reduced by 0.278 units. The banks will have higher profits, keeping fixed other factors, only when defaults on loans are minimized. MNGQL does affect the ROA inversely and it is significant. However, if to take a look to the earnings quality, it has a positive influence on profitability, and the result is statistically significant. As the result shows, if there is 1 unit increase in the cost to revenue ratio, there will be 0.059 units increase in the profit. The explanation of the result may indicate that the more cost induces more revenue, thus generating more profit, as the speed of revenue is more than costs' speed. The effect of liquidity on ROA is positive, but statistically insignificant. In regard to the whole model, it is statistically significant at 1% level. The R-squared shows that 33 % changes in ROA can be interpreted by changes in the independent variables.

According to empirical results found in the case of Malaysia in [table 5.12], based on the intercept which has coefficient of about 57.1, the ROE has positive change, if to have no other changes in the independent variables, however t-ratio is statistically

insignificant. The result shows the existence of the negative association of ROE with the capital adequacy ratio. The profitability increases as long as less capital is kept, because more of them are involved in the financial transactions. For example, 1 unit decrease in CPTLAD; the ROE will increase by 4.68 units.

However, there is a strange case with positive influence of ASQL on ROE, it may indicate that the lower the defaults of borrowers, the less banks are going to earn because they are reducing the provision loan losses through reducing the quantity of loans lent, and this result is statistically validated. If the ratio increases by 1 unit, then there is increase by 10.27 units for the profitability indicator, ROE. The effects of MNGQL and ERNQL on ROE are statistically insignificant. However, the statistical significance result of liquidity's negative effect on ROE is obtained. The main reason behind is that the profitability goes down, when banks decide to keep more cash against potential liquidity problems and they are not involving much in financial transactions. The probability of F-statistic is 0.57%, which proves that the whole estimation model is statistically significant at 1% significance level. And, a 34.78 % change in ROE can be interpreted by changes in the independent variables.

In accordance with the results, unlike Pakistan, in commercial banks of Malaysia ASQL ratio affects positively ROE and LIQUID ratio exerts inverse influence on ROE. In the case of Pakistan the lower the ratio of provision of loan losses over total loans the more profitable banks are. For example, as provision loan losses reduced in proportion to total loans, this will lead to a huge profit. However, in Malaysia is vice versa. I think the explanation for this is that Malaysian banks increase the total loans faster that they reduce the provision of loan losses, so the ratio is being reduced which leads to a reduction of profitability determinants of Malaysian banks. In

contrast to Malaysia, the association between liquidity ratio and ROE of commercial banks of Pakistan is positive. In other words, the more banks are liquid the more profits will be generated by attracting more customers. However in the case of Malaysia, the inverse relationship between profitability determinant and LIQUID ratio is due to keeping the cash in hand to be more liquid rather than investing in new profitable projects.

Chapter 6

CONCLUSION AND SUGGESTIONS

The banking system contributes enormously into economy domestically as well as internationally. The economy's system is closely connected to the banking system. In other words, one of the factors behind the growth of the economy is a well-functioning banking system. So we have investigated empirically the financial performance of commercial banks in Malaysia and Pakistan. We tried to find answers to questions: whether there is a statistical difference in profitability determinants of commercial banks between Malaysia and Pakistan? Which variables are more important that affect profitability indicators of commercial banks in both countries? And is the estimated model is reliable or not?

We have done research on both countries to see how commercial banks work generally in the market. Furthermore, CPTLAD affects positively ROA. However, there is the negative influence on ROA by ASQL which is provision of loan losses over total loans and this ratio is statistically validated. MNGQL does not affect the ROA because it is not significant. In addition to, earnings quality ERNQL exerts negative effect on ROA and it is statistically significant. The liquidity is not affecting the profitability at all, because the coefficient is statistically insignificant. The dummy variable DUM is not significant as well which means that there is no statistical difference in profitability determinant ROA of commercial banks in Malaysia and Pakistan.

On the other hand we have carried analysis separately for Malaysia and Pakistan. In contrast to commercial banks of Pakistan, there is no effect on ROA from capital adequacy ratio and it is statistically not validated in Malaysia. However, in both Malaysia and Pakistan there is the negative influence on ROA by ASQL which is provision of loan losses over total loans. MNGQL does not affect the ROA because the t-ratio is not significant in Malaysia, whereas in Pakistan the t-ratio is significant and there is negative relationship between MNGQL and ROA. In addition to, earnings quality ERNQL exerts positive effect on ROA and it is statistically significant in the case of Malaysia but it is vice versa in Pakistan commercial banks. In both countries the liquidity is not affecting ROA, because of insignificancy of the t- ratio. Moreover, the whole estimation model is statistically significant due to a low F-probability value which is less than all significance levels. In both countries CPTLAD affects inversely ROE and their t-ratios are statistically significant. The asset quality ratio has the negative effect on ROE in Pakistan but positive effect on ROE in Malaysia. LIQUID has negative influence on ROE in Malaysia and positive affect in Pakistan.

To sum up, there is no statistical difference in profitability determinants of Malaysia and Pakistan, the principles and the way of getting profit is same but they operate under different countries' law. The main purpose was to identify which variable affects more profitability indicators of commercial banks in Malaysia and Pakistan, so they will concentrate more on those variables to earn profit. For example, in the case of Malaysia and Pakistan, the commercial banks should not increase and hold more capital because this may lead to a reduction in profits, and it will not be efficient to keep the capital and not investing in profitable projects. In Malaysia, the banks are in the trade-off between being a liquid and profitable, so if they choose to

go ahead with a strategy to keep more cash against the potential risk of liquidity problems, this will reduce the profitability of banks. In Pakistan, being liquid will increase the profit because they will attract more potential investors and customers. So for both countries one of the main drivers of profitability indicators is liquidity ratio and asset quality ratio.

In further work, we will increase our number of variables such as size of banks, macroeconomic variable, and we will increase number of years. Unfortunately, we had found an unreasonable relationship between variables is due to the limitation in data of selected banks in Malaysia and Pakistan. Therefore, to get more accurate empirical results we need to have more access to financial data, like to be subscribed to the world data providers: Banks Scope database and Bankers Almanac.

REFERENCES

Allen, F., M. Chui and A. Maddaloni, (2004). "Financial Systems in Europe, the USA, and Asia," Oxford Review of Economic Policy 20, 490-508.

Ansari, S., and Rehman, A. (2011). Financial Performance of Islamic and Conventional Banks in Pakistan: A Comparative Study. *International Conference on Islamic Economics and Finance.*

Asma' Rashidah Idris et al (2011), "Determinant of Islamic Banking Institutions' Profitability in Malaysia", *World Applied Sciences Journal 12* (Special Issue on Bolstering Economic Sustainability): 01-07, 2011.

Angbazo, L. (1997), "Commercial Bank Interest Margins, Default Risk, Interest-rate Risk, and Off-balance Sheet Banking," *Journal of Banking and Finance*, Vol. 21, 55-87.

Bank Negara Malaysia, Fincial Sector in Malaysia, Saturday 28th of March, http://www.bnm.gov.my/index.php?ch=fs_mfs&pg=fs_mfs_list&lang=en.

Bashir, A. M. and M. K. Hassan (2003), Determinants of Islamic Banking Profitability, presented on the ERF 10th Annual Conference. (www.erf.org.eg/tenthconf/Financial_Markets_Presented/Kabir_Bashir.pdf)

Bashir, A.H.M. (1999), "Risk and Profitability Measures in Islamic Banks: The Case of Two Sudanese Banks," *Islamic Economic Studies*, 6(2), 1–24.

Bashir, A.H.M. (2001), "Assessing the Performance of Islamic Banks: Some Evidence from the Middle East," paper presented at the American Economic Association Annual Meeting, New Orleans, Louisiana.

Bashir, A. (2000), 'Assessing the Performance of Islamic Banks: Some Evidence from the Middle East', *Paper Presented at the ERF 8th meeting in Jordan*.

Bashir, A. and M. Hassan (2004), 'Determinants of Islamic Banking Profitability', *ERF paper, 10th Conference*.

Ben Naceur, S. and M. Goaied (2001), 'The Determinants of the Tunisian Deposit Banks Performance', *Applied Financial Economics*, 11(3), 317-19.

Berger, Allen N. and R. Deyoung. (2006). Technological progress and the geographic expansion of the banking industry. Journal of Money, Credit & Banking, 38(6), 1483.

Berger, A. (1995), "The Relationship between Capital and Earnings in Banking," Journal of Money, Credit and Banking, Vol. 27, No. 2, 432-456.

Bourke, P. (1989), "Concentration and Other Determinants of Bank Profitability in Europe, North America and Australia," Journal of Banking and Finance, Vol. 13, 65-79.

Bourke, P. (1989), 'Concentration and other Determinants of Bank Profitability in Europe, North America and Australia', *Journal of Banking and Finance* 13, 65-79.

Consulate General of Switzerland, Pakistan Banking Sector, Karachi 25th February 2011, www.osec.ch.

Demirguc-Kunt, A. and H. Huizinga (1999), "Determinants of Commercial Bank Interest Margins and Profitability: Some International Evidence," World Bank Economic Review, Vol. 13, 379-408.

Devid Tripe(2002), Efficiency In Integrated Banking Markets – Australia And New Zealand, http://www.rbnz.govt.nz/research/workshops/27apr2004/27apr04_tripe.pdf

Gul et al. (2011), Affecting bank profitability in Pakistan, The Romanian Economic Journal, Year XIV, no. 39.

Elizabeth (2004), What is the Economy of Malaysia Like? , Sunday 25th March, http://wiki.answers.com/Q/What_is_the_economy_of_Malaysia_like.

Faisal Khan et al (2011), "Determinants of Bank Profitability in Pakistan: A Case Study of Pakistani Banking Sector", *World Applied Sciences Journal*, 15 (10): 1484-1493, 2011.

Faysal A. Alkassim(2005), The Profitability of Islamic and Conventional Banking in the GCC Countries: A Comparative Study, http://www.failaka.com/downloads/.

Gischer, H., and J. D. Juttner (2001), Profitability and Competition in Banking Markets: An Aggregative Cross Country Approach. (www.econ.mq.edu.au/staff/djjuttner/BankProfit1.pdf).

Goddard, J., P. Molyneux and J. Wilson (2004), 'The Profitability of European Banks: Cross-Sectional and Dynamic Panel Analysis', *The Manchester School,* 72(3), 363-381.

Hussein, K.A. (2003), "Operational Efficiency in Islamic Banking: The Sudanese Experience," Working Paper, Islamic Research and Training Institute (IRTI), Islamic Development Bank.

Infoplease, Friday 29th of April, http://www.infoplease.com.

Kosmidou et al.(2002), Determinants of profitability of domestic UK commercial banks: panel evidence from the period 1995-2002, Economics-Finance and Accounting Applied Research Paper Series, pp.2 2002.

Kosmidou (2004), Measurement Of Bank Performance In Greece, *South-Eastern Europe Journal of Economics*, 1 (2008) 79-95.

Katib, M.N. (2004). Market Structure and Performance in the Malaysian Banking Industry: A Robust Estimation, 8th Capital Markets Conference, Indian Institute of Capital Markets Paper.

Kumar et al. (2012), Analyzing Soundness in Indian Banking: A CAMEL Approach, *Research Journal of Management Science,* Vol. 1(3), 9-14, October 2012.

Kathryn (2009), What is the Importance of Banks, http://www.blurtit.com/q197532.html, 17th March 2013.

Molyneux, P. and J. Thornton (1992), "Determinants of European Bank Profitability: A Note," Journal of Banking and Finance, Vol. 16, No. 6, 1173-8.

Miller, S.M. and Noulas, A. (1997), "Portfolio Mix and Large Bank Profitability in the USA," *Applied Economics*, 29(4), 505-512.

Masood O., Akhtan B. and Chaudhary S., 2009, "An Empirical Study on the Banks Profitability in the KSA: a co integration approach," *African journal of Business Management,* 3(8) August, 374-382.

Naceur (2003), The Tunisian Banking Industry Profitability: Panel Evidence, University Libre de Tunis Working Papers.

Official Web Administration, Invest in Malaysia Sat. 9th of March in 2013, http://www.mida.gov.my/env3/index.php?page=banking-system#top.

Perry, P. (1992), "Do Banks Gain or Lose from Inflation," *Journal of Retail Banking*, 14(2), 25-40.

Pakistan and Gulf Economist, Member's Of Pakistan Bank Association, 29th of March, http://www.pakistaneconomist.com/database2/pakbanks.asp.

Staikouras, C. and G. Wood (2003), The Determinants of Bank Profitability in Europe, Paper presented at the European Applied Business Research Conference.

Spathis, C., K. Kosmidou, and M. Doumpos (2002), 'Assessing profitability factors in the Greek banking system: A multicriteria methodology', *International Transaction in Operational Research,* 9(5), 517-530.

Short, B. (1979), 'The Relation between Commercial Bank Profit Rates and Banking Concentration in Canada Western Europe, and Japan', *Journal of Banking and Finance,* 3, 209-219.

Sufian, F. (2009). Determinants of bank efficiency during unstable macroeconomic environment: Empirical evidence from Malaysia. *Research in International Business and Finance* (23) pp. 54–77.

Siti Rohaya R. et al (2012), "Islamic Vs. Conventional Bank Stability: 'A Case Study Of Malaysia", *PROSIDING PERKEM* VII, JILID 2 (2012) 839 – 850.

SBP, Statistics Data Warehouse Department(2010), Sunday March 10, 2013 www.sbp.org.pk.

Saba Sehrish et al(2012), "Financial Performance Analysis of Islamic Banks and Conventional Banks in Pakistan: A Comparative Study", *Interdisciplinary Journal Of Contemporary Research In Business,* Vol 4, No 5.

The Columbia Electronic Encyclopedia, 6th ed. Copyright © 2012, Columbia University Press, Pakistan Economy Sunday 10th of March 2013, http://www.infoplease.com/encyclopedia/world/pakistan-economy.html.

Tejvan Petinger(2011), Macroeconomical factors around the Globe, Sunday 10th of March 2013, http://www.economicshelp.org.

The banking sector of Pakistan, 29th of March, www.osec.ch.

World Bank database, Sunday 10th of March 2013, http://data.worldbank.org/indicator/NY.GDP.MKTP.KD.ZG/countries/MY?display=default.

APPENDIX

Table 5.1: Panel unit root test: Summary of All Banks

Series: ROA			Series: ROE		
Method	Statistic	Prob.**	Method	Statistic	Prob.**
Null: Unit root (assumes common unit root process)			Null: Unit root (assumes common unit root process)		
Levin, Lin & Chu t*	-15.789	0.0000	Levin, Lin & Chu t*	-46.4263	0.0000
Im, Pesaran and Shin W-stat	-2.9981	0.0151	Im, Pesaran and Shin W-stat	-3.25504	0.0104
Series: CPTLAD			Series: ASQL		
Method	Statistic	Prob.**	Method	Statistic	Prob.**
Null: Unit root (assumes common unit root process)			Null: Unit root (assumes common unit root process)		
Levin, Lin & Chu t*	-13.776	0.0000	Levin, Lin & Chu t*	-5.21743	0.0000
Im, Pesaran and Shin W-stat	-2.3745	0.0354	Im, Pesaran and Shin W-stat	2.46372	0.0678
Series: MNGQL			Series: ERNQL		
Method	Statistic	Prob.**	Method	Statistic	Prob.**
Null: Unit root (assumes common unit root process)			Null: Unit root (assumes common unit root process)		
Levin, Lin & Chu t*	-18.926	0.0000	Levin, Lin & Chu t*	-25.3093	0.0000
Im, Pesaran and Shin W-stat	-5.35	0.0332	Im, Pesaran and Shin W-stat	-10.008	0.0256
Series: LIQUID					
Method	Statistic	Prob.**			
Null: Unit root (assumes common unit root process)					
Levin, Lin & Chu t*	-17.55	0.0000			
Im, Pesaran and Shin W-stat	-2.2505	0.0105			

Table 5.2: Panel unit root test: Summary of Malaysian Banks

Series: ROE			Series: ROA		
Method	Statistic	Prob.**	Method	Statistic	Prob.**
Null: Unit root (assumes common unit root process)			Null: Unit root (assumes common unit root process)		
Levin, Lin & Chu t*	-45.293	0.0000	Levin, Lin & Chu t*	-11.3487	0.0000
Im, Pesaran and Shin W-stat	-2.6424	0.0041	Im, Pesaran and Shin W-stat	-2.51076	0.0135
Series: CPTLAD			Series: ASQL		
Method	Statistic	Prob.**	Method	Statistic	Prob.**
Null: Unit root (assumes common unit root process)			Null: Unit root (assumes common unit root process)		
Levin, Lin & Chu t*	-14.304	0.0000	Levin, Lin & Chu t*	-5.42817	0.0000
Im, Pesaran and Shin W-stat	-3.9342	0.0175	Im, Pesaran and Shin W-stat	-3.93415	0.0175
Series: MNGQL			Series: ERNQL		
Method	Statistic	Prob.**	Method	Statistic	Prob.**
Null: Unit root (assumes common unit root process)			Null: Unit root (assumes common unit root process)		
Levin, Lin & Chu t*	-16.647	0.0000	Levin, Lin & Chu t*	-20.4093	0.0000
Im, Pesaran and Shin W-stat	-2.6167	0.0287	Im, Pesaran and Shin W-stat	-20.008	0.0156
Series: LIQUID					
Method	Statistic	Prob.**			
Null: Unit root (assumes common unit root process)					
Levin, Lin & Chu t*	-7.5505	0.0000			
Im, Pesaran and Shin W-stat	2.20914	0.0582			

Table 5.3: Panel unit root test: Summary of Pakistani Banks

Series: ROA			Series: ROE		
Method	Statistic	Prob.**	Method	Statistic	Prob.**
Null: Unit root (assumes common unit root process)			Null: Unit root (assumes common unit root process)		
Levin, Lin & Chu t*	-13.063	0.0000	Levin, Lin & Chu t*	-3.4684	0.0003
Im, Pesaran and Shin W-stat	-3.3107	0.0780	Im, Pesaran and Shin W-stat	2.86748	0.0802
Series: CPTLAD			Series: ASQL		
Method	Statistic	Prob.**	Method	Statistic	Prob.**
Null: Unit root (assumes common unit root process)			Null: Unit root (assumes common unit root process)		
Levin, Lin & Chu t*	-5.1892	0.0000	Levin, Lin & Chu t*	-6.41701	0.0000
Im, Pesaran and Shin W-stat	3.46069	0.0675	Im, Pesaran and Shin W-stat	3.14343	0.0570
Series: MNGQL			Series: ERNQL		
Method	Statistic	Prob.**	Method	Statistic	Prob.**
Null: Unit root (assumes common unit root process)			Null: Unit root (assumes common unit root process)		
Levin, Lin & Chu t*	-8.0607	0.0000	Levin, Lin & Chu t*	-5.7527	0.0000
Im, Pesaran and Shin W-stat	0.11705	0.5466	Im, Pesaran and Shin W-stat	-0.14745	0.0414
Series: LIQUID					
Method	Statistic	Prob.**			
Null: Unit root (assumes common unit root process)					
Levin, Lin & Chu t*	-14.092	0.0000			
Im, Pesaran and Shin W-stat	-1.9079	0.0282			

Table 5.4: Correlation Analysis of All Banks

	ROA	ROE	CPTLAD	ASQL	MNGQL	ERNQL	LIQUID
ROA	100%	-18%	-11%	-61%	-40%	-58%	17%
ROE	-18%	100%	-18%	2%	-19%	-15%	-6%
CPTLAD	-11%	-18%	100%	3%	47%	25%	-2%
ASQL	-61%	2%	3%	100%	44%	50%	-4%
MNGQL	-40%	-19%	47%	44%	100%	53%	-23%
ERNQL	-58%	-15%	25%	50%	53%	100%	-10%
LIQUID	17%	-6%	-2%	-4%	-23%	-10%	100%

Table 5.5: Correlation Analysis of Malaysian Banks

	ROE	ROA	MNGQL	LIQUID	ERNQL	CPTLAD	ASQL
ROE	100%	-56%	-3%	-21%	17%	-29%	50%
ROA	-56%	100%	13%	17%	-13%	39%	-38%
MNGQL	-3%	13%	100%	7%	-34%	40%	-11%
LIQUID	-21%	17%	7%	100%	4%	11%	-20%
ERNQL	17%	-13%	-34%	4%	100%	-68%	27%
CPTLAD	-29%	39%	40%	11%	-68%	100%	-12%
ASQL	50%	-38%	-11%	-20%	27%	-12%	100%

Table 5.6: Correlation Analysis of Pakistani Banks

	ROE	ROA	MNGQL	LIQUID	ERNQL	CPTLAD	ASQL
ROE	100%	91%	-52%	-22%	-71%	-22%	-67%
ROA	91%	100%	-52%	-26%	-75%	-13%	-75%
MNGQL	-52%	-52%	100%	27%	49%	34%	52%
LIQUID	-22%	-26%	27%	100%	40%	39%	27%
ERNQL	-71%	-75%	49%	40%	100%	20%	50%
CPTLAD	-22%	-13%	34%	39%	20%	100%	-2%
ASQL	-67%	-75%	52%	27%	50%	-2%	100%

Table 5.7: Regression Analysis of All Banks

Dependent Variable: ROA
Method: Panel EGLS (Cross-section random effects)
Date: 05/04/13 Time: 11:16
Sample: 2006 2011
Periods included: 6
Cross-sections included: 16
Total panel (unbalanced) observations: 84
Swamy and Arora estimator of component variances
White cross-section standard errors & covariance (d.f. corrected)
WARNING: estimated coefficient covariance matrix is of reduced rank

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	2.427427	0.928079	2.615540	0.0107
CPTLAD	0.025240	0.006307	4.002116	0.0001
ASQL	-0.156594	0.050069	-3.127570	0.0025
MNGQL	-0.074175	0.157297	-0.471564	0.6386
ERNQL	-0.022597	0.005252	-4.302486	0.0000
LIQUID	0.003814	0.012225	0.311960	0.7559
DUM	0.425120	0.958354	0.443594	0.6586

R-squared	0.412542	Mean dependent var	0.265887
Adjusted R-squared	0.366766	S.D. dependent var	2.072695
S.E. of regression	1.649629	Sum squared resid	209.5382
F-statistic	9.012202	Durbin-Watson stat	1.649195
Prob(F-statistic)	0.000000		

Table 5.8: Regression Analysis of All Banks

Dependent Variable: ROE
Method: Panel EGLS (Cross-section random effects)
Date: 05/04/13 Time: 11:21
Sample: 2006 2011
Periods included: 6
Cross-sections included: 16
Total panel (unbalanced) observations: 84
Swamy and Arora estimator of component variances
Cross-section SUR (PCSE) standard errors & covariance (d.f. corrected)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	33.58123	21.97257	1.528325	0.1305
CPTLAD	-0.236281	0.237602	-0.994439	0.3231
ASQL	0.874792	0.910632	0.960643	0.3397
MNGQL	-1.727668	4.566299	-0.378352	0.7062
ERNQL	-0.126184	0.110187	-1.145181	0.2557
LIQUID	-0.403152	0.415182	-0.971025	0.3346
DUM	23.03988	20.84184	1.105463	0.2724

R-squared	0.069229	Mean dependent var	11.96827
Adjusted R-squared	-0.003298	S.D. dependent var	53.68598
S.E. of regression	53.75910	Sum squared resid	222533.2
F-statistic	0.954523	Durbin-Watson stat	1.225515
Prob(F-statistic)	0.461675		

Table 5.9: Regression Analysis of Pakistani Banks

Dependent Variable: ROA

Method: Panel Least Squares
Date: 04/07/13 Time: 20:16
Sample: 2006 2011
Periods included: 6
Cross-sections included: 8
Total panel (unbalanced) observations: 41

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	2.783536	0.623369	4.465312	0.0001
CPTLAD	-0.011353	0.011892	-0.954661	0.3463
ASQL	-0.142901	0.028876	-4.948697	0.0000
MNGQL	0.015281	0.123486	0.123749	0.9022
ERNQL	-0.029750	0.005993	-4.964200	0.0000
LIQUID	0.020026	0.015598	1.283845	0.2076

R-squared	0.762091	Mean dependent var	-0.253659
Adjusted R-squared	0.728104	S.D. dependent var	2.594041
S.E. of regression	1.352627	Akaike info criterion	3.576433
Sum squared resid	64.03596	Schwarz criterion	3.827199
Log likelihood	-67.31687	Hannan-Quinn criter.	3.667748
F-statistic	22.42305	Durbin-Watson stat	1.806010
Prob(F-statistic)	0.000000		

Table 5.10: Regression Analysis of Pakistani Banks

Dependent Variable: ROE
Method: Panel Least Squares
Date: 04/07/13 Time: 20:18
Sample: 2006 2011
Periods included: 6
Cross-sections included: 8
Total panel (unbalanced) observations: 41

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	23.04951	4.579711	5.032962	0.0000
CPTLAD	-0.158348	0.087365	-1.812481	0.0785
ASQL	-0.784333	0.212147	-3.697120	0.0007
MNGQL	-0.031136	0.907216	-0.034320	0.9728
ERNQL	-0.186575	0.044028	-4.237636	0.0002
LIQUID	0.197828	0.114597	1.726295	0.0931

R-squared	0.679368	Mean dependent var	4.358537
Adjusted R-squared	0.633563	S.D. dependent var	16.41617
S.E. of regression	9.937362	Akaike info criterion	7.564939
Sum squared resid	3456.291	Schwarz criterion	7.815706
Log likelihood	-149.0813	Hannan-Quinn criter.	7.656255
F-statistic	14.83188	Durbin-Watson stat	1.294445
Prob(F-statistic)	0.000000		

Table 5.11: Regression Analysis of Malaysian Banks

2Dependent Variable: ROA
Method: Panel Least Squares
Date: 04/07/13 Time: 20:20
Sample: 2006 2011
Periods included: 6
Cross-sections included: 8
Total panel (unbalanced) observations: 43

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-2.304319	2.115286	-1.089366	0.2830
CPTLAD	0.230243	0.073318	3.140333	0.0033
ASQL	-0.278334	0.098393	-2.828804	0.0075
MNGQL	-0.071929	0.341445	-0.210661	0.0343
ERNQL	0.059001	0.030212	1.952877	0.0584
LIQUID	0.000756	0.014401	0.052478	0.9584

R-squared	0.334317	Mean dependent var	1.337209
Adjusted R-squared	0.244360	S.D. dependent var	2.539593
S.E. of regression	2.207606	Akaike info criterion	4.550482
Sum squared resid	180.3204	Schwarz criterion	4.796231
Log likelihood	-91.83536	Hannan-Quinn criter.	4.641107
F-statistic	3.716409	Durbin-Watson stat	1.49785
Prob(F-statistic)	0.007959		

Table 5.12: Regression Analysis of Malaysian Banks

Dependent Variable: ROE
Method: Panel Least Squares
Date: 04/07/13 Time: 20:21
Sample: 2006 2011
Periods included: 6
Cross-sections included: 8
Total panel (unbalanced) observations: 43

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	57.09956	62.84175	0.908625	0.3694
CPTLAD	-4.687370	2.178162	-2.151984	0.0380
ASQL	10.27347	2.923090	3.514593	0.0012
MNGQL	8.837936	10.14378	0.871266	0.3892
ERNQL	-0.928037	0.897562	-1.033953	0.3079
LIQUID	-0.214020	0.427837	-0.500238	0.0199

R-squared	0.347813	Mean dependent var	24.57442
Adjusted R-squared	0.259679	S.D. dependent var	76.22386
S.E. of regression	65.58445	Akaike info criterion	11.33334
Sum squared resid	159148.8	Schwarz criterion	11.57909
Log likelihood	-237.6668	Hannan-Quinn criter.	11.42397
F-statistic	3.946436	Durbin-Watson stat	1.574509
Prob(F-statistic)	0.005734		