

Bank-Specific and Macroeconomic Determinants of Islamic Banks Profitability: The Case of GCC Countries

العوامل المرتبطة بخصائص البنوك و الأقتصاد الكلي المؤثرة في ربحية البنوك الإسلامية: حالة
دول مجلس التعاون الخليجي

by

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of the requirements for the degree of
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DEDICATION

I would like to dedicate this achievement to my Father soul who was my first teacher, and who has always inspired me towards learning and success.

Abstract

Generally, profitability for a business firm is the primary factor to survive. It helps the organization to grow, compete and remain attractive to investors as well as analysts. The purpose of the present study is to research in the bank-specific as well as macroeconomic determinants of Islamic banks in a region that's consider to play an important role in Islamic finance development, namely the GCC region. The study used 28 Islamic banks operating in the GCC stock exchanges as a sample for the time of period from 2011 up to 2016, namely Boursa Kuwait, Abu Dhabi Securities Exchange, Doha Securities Market, Bahrain Stock Exchange, Saudi Stock Exchange, Muscat Securities Market, and Dubai Financial Market. Pooled OLS regression is used to estimate the empirical model. The bank's profitability is measured by the return on asset (ROA), whereas the independent variables that tested are capital adequacy ratio, operational efficiency, assets quality, financial leverage, bank size, liquidity risk, GDP growth, and inflation rate.

The regression results indicate that bank-specific determinants including capital adequacy ratio, financial leverage, and operational efficiency are statistically significant and have negative relationship with the Islamic bank's profitability. However, the bank size is the only tested variable that's have a positively and significantly relationship with the banks' profitability. Whereas, the study proves that there is nonlinear relationship between bank's size and profitability. On the other hand, assets quality and liquidity risk are found to be insignificant determinants for Islamic banks' profitability. Regarding the macroeconomic variables, GDP growth is the only variable shown that it is relating positively to Islamic banks profitability, whilst the inflation rate has no association with the Islamic banks profitability for the sample studied.

These findings provide valuable policy implications which may assist Islamic banks operating in the GCC region to improve their performance and increase their profitability.

Keywords: Islamic banks, GCC countries, Panel data, Pooled OLS regression, Banks' profitability, Bank-specific determinants, Macroeconomic factors.

العوامل المرتبطة بخصائص البنوك و الأقتصاد الكلي المؤثرة في ربحية البنوك الإسلامية: حالة دول مجلس

التعاون الخليجي

ملخص

بشكل عام ان ربحية مؤسسات الاعمال تعتبر العامل الاساسي في بقاءها، فهي تساهم في نمو المؤسسات و زيادة قدرتها التنافسية وتعتبر عامل جذب للمستثمرين. يهدف هذا البحث الى دراسة العوامل المرتبطة بخصائص البنوك و الأقتصاد الكلي المؤثرة في ربحية البنوك الإسلامية في منطقة تلعب دوراً هاماً في تطوير التمويل الإسلامي ، وتحديدأ دول مجلس التعاون الخليجي. استخدمت الدراسة عينة من 28 مصرفاً إسلامياً تعمل في بورصات دول مجلس التعاون الخليجي للفترة من 2011 إلى 2016 ، وهي سوق أبوظبي للأوراق المالية والسوق المالية السعودية وسوق البحرين للأوراق المالية وبورصة الكويت وسوق مسقط للأوراق المالية وسوق دبي المالي وسوق الدوحة للأوراق المالية.

تم استخدام معادلة الانحدار المجمععة (pooled OLS) لتقدير النموذج التجريبي. اعتمدت الدراسة الى قياس ربحية البنك من خلال العائد على الأصول (ROA) ، في حين أن المتغيرات المستقلة التي تم اختبارها هي نسبة كفاية رأس المال والكفاءة التشغيلية وجودة الأصول والرافعة المالية وحجم البنك ومخاطر السيولة ومعدل التضخم ونمو الناتج المحلي الإجمالي.

اظهرت نتائج الدراسة المستمدة من نموذج الانحدار أن المحددات الخاصة بالبنك كنسبة كفاية رأس المال والكفاءة التشغيلية والرافعة المالية لها دلالة إحصائية ولها علاقة سلبية بربحية البنوك الإسلامية. في حين إن حجم البنك هو المتغير الوحيد الذي تم اختباره والذي يدل على وجود علاقة هامة وإيجابية مع ربحية البنوك. كما اثبتت الدراسة أن العلاقة بين حجم البنك وربحيته هي علاقة غير خطية. من ناحية أخرى ، اظهرت النتائج ان عوامل كنوعية الأصول ومخاطر السيولة لا تعتبر محددات هامة لربحية البنوك

الإسلامية. فيما يتعلق بمتغيرات الاقتصاد الكلي ، فإن نمو الناتج المحلي الإجمالي فقط هو الذي يؤثر بشكل إيجابي على ربحية البنوك الإسلامية ، في حين أن معدل التضخم ليس له علاقة ذو دلالة احصائية بربحية البنوك الإسلامية قيد الدراسة.

تقوم نتائج هذه الدراسة بتوفير نصائح وتوصيات تساعد البنوك الإسلامية في دول مجلس التعاون الخليجي على تحسين أدائها وزيادة ربحيتها.

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CHAPTER 1

INTRODUCTION

1.1 Background

Profitability for any organization is important in order to survive, be more success, more safety and remain in the business. It helps the organization to grow, compete and remain attractive to investors as well as analysts. In addition to that, generating a profit is crucial for a business that has a desire to grow its operations. Profit earnings allow the business to expand their size by acquire another business, opening other business locations, target other markets, and expand operations globally. According to Johnson (2019), expansion business purpose is to increase the organization's profits more. To expand any business, a profit earning is not the only aspect that effects the expansion decision. However, if any business owners desire to grow their business, the management team as well as the team in the back office should have capability to take more responsibility by creating a business strategy for expansion and analyzing economic factors and trends that impact the business. In addition to business credit score and collateral that are the main factors determining lending decision for banks, business profit also have a role in taking the decision by the bank or financial institution whether to lend money or not to the particular business considering they have to ensure that the money lent will be repaid back. A business that cannot generate profit is usually having a risk probability for defaulting by the lender. Moreover, business evidenced that it has ability to generate profit continuously seen as a potential investment option for investors and good chance for them to earn an attractive return on their investment (Johnson, 2019). Added to that, a profitable business always manages to pay the salaries for its employees than a business that is financially struggling, which will enable the business to hire new professional and experienced employees.

According to Lacy (2017), as well as profit is essential for survival, attracts investors, hire better employees and covering working capital needs, it is also essential for funds growth. As the grow in business revenue, expand in key assets (accounts receivables, inventory, and rolling stock), and to sustain with that asset growth, either liabilities or equity or both of them have also to grow. Profit is the main factor that grows balance sheet equity, and the equity growth allows growth in lender/vendor debt. On the other hand, lenders also look at profitability as a way to measure the management ability to run the business such as; great management for those businesses that have consistently profitable, OK management for those businesses that have profitable but unsteadily, and poor management for those businesses that lose money – (run away as soon as possible) (Lacy, 2017). Also, profit leads to grow in business market value as it is the biggest component of EBIDTA (earnings before interest, depreciation, taxes, and amortization), that's measure the business overall financial performance. Likewise, profit measures the management effectiveness. All investors, lenders, and vendors use the profit as a measurement tool to measure capability of management in running their business. Besides that, profit enables the business to builds there cash in banks. Lastly, profit enhances the ability and flexibility for the business to participate, give charities and engage more with society.

1.2 Significance of the study

The purpose of this study is to examine the impact of bank-specific and macroeconomic determinants on the profitability of Islamic banks in the Gulf Cooperation Council (GCC) Countries for the period from 2011 up to 2016. Due to lack of studies of this particular topic within the GCC context, this study will contribute to finance literature by shedding the lights on what factors determine Islamic banks profitability in this important region and will provide a ground of comparison for other future studies. In addition, the result of this study may benefit the shareholders

and investors in the stage of decision makings either by employing a new policy or selecting the investment. It will benefit the banks to have more understanding on the elements that influencing their profitability, it may help the bank in evaluating which element impacted their performance, and accordingly, the bank will be able to enhance the overall performance. The study is also crucial for investors since it is giving better understanding about the bank and how well it is performing before they make a decision to invest their money, as they are always looking for acquiring reasonable return with less risk.

From the internal users' point of view such as bank's managers, this research is valuable for them where they can identify the main factors affecting their business profitability in order to make appropriate decisions and find the weaker parts that required to be developed. Also, bank's managers will be able to come out with the proper strategies either to expand the business size or improve the operational activities. Also, Central Banks could benefit from the outcome of this research where they can amend the existing policies, implementing new policies which will contribute in improving the financial system of the country.

1.3 Research aim and objectives

Research objectives can be defined as the purposes for the research conducting. In the last part of the research, all research objectives have to be achieved.

1.3.1 Aim

The study aim is to inspect which internal and external determinants that could affect the Islamic banks profitability in the GCC region. More specifically, what are the bank-specific and macro-economic factors that impact the profitability for Islamic banks?

1.3.2 Specific Objectives

- To test the relationship between the bank size and the profitability of the Islamic banks.
- To test the relationship between capital adequacy and the profitability of the Islamic banks.
- To test the relationship between efficiency and the profitability of the Islamic banks.
- To test the relationship between asset quality and the profitability of the Islamic banks.
- To test the relationship between liquidity risk and the profitability of the Islamic banks.
- To test the relationship between financial leverage and the profitability of the Islamic banks.
- To test the relationship between inflation and the profitability of the Islamic banks.
- To test the relationship between the GDP growth and the profitability of the Islamic banks.

1.4 Research questions

The main purpose of conducting this research is to recognize the variables that affect the Islamic banks profitability in GCC region. Therefore, the present research will attempt to answer the following questions:

- I. What is the association between bank size and the profitability of the Islamic banks?
- II. What is the association between capital adequacy and the profitability of the Islamic banks?
- IV. What is the association between efficiency and the profitability of the Islamic banks?
- V. What is the association between financial leverage and the profitability of the Islamic banks?
- VI. What is the association between the asset quality and the profitability of the Islamic banks?
- VII. What is the association between liquidity risk and the profitability of the Islamic banks?

VIII. What is the association between inflation and the profitability of the Islamic banks?

IX. What is the association between GDP growth and the profitability of the Islamic banks?

1.5 Islamic banking and finance: Historical background

Despite being seen as a present phenomenon, the Islamic finance is old as the Islamic religion itself with its rules that's mainly derived from the Holy Quran, which was show up around 1400 years ago. There are Islamic finance principles stem from previous Abrahamic traditions, whereas some historical instruments in Islamic finance have been adopted into new conventional products for example cheques and letters of credit. Products in the Islamic finance are based on permitted commerce and economic activity as outlined in the Holy Quran which is exposed allowable sources of income. Islamic banks operating their business according to sharia law. Based on sharia law, usury (Riba) is prohibited for both receiving and paying interest. This prohibition against interest applies for all Islamic financial organizations including; banks, mortgage companies, insurance companies, and mutual funds (Venardos, 2005). However, Islam indeed is not the first religion forbid the usury (Riba). In old India, regulations based on the oldest Hinduism scriptures, namely Veda, condemned usury (interest) as a big sin and bounded the interest rates operations (Rangaswami, 1927; Gopal, 1935). According to Neusner (1990), "in Judaism, usury (interest) prohibited between the Jews as per the Torah (the Hebrew name of the Law of Moses or the Pentateuch, the first five books of the old evidence), while in Talmud (the oral law which complements the written scriptures for orthodox Jews) at least one authority sees a harmonic bias versus the appearance of usury or profit". Moreover, under Christianity, severe restrictions or prohibitions upon interest (usury) operated for more than 1400 years; however, Christian Church gradually bowed to the improver theologians' pressures and the trade needs and came to consider only excessive interest as usurious.

According to Chapra, (1985, p.35) “Islamic financial and banking system exists to deliver a diversity of faithfully suitable financial services and needs to the Muslim societies. Moreover, the financial institutions anticipated to richly contribute to the achievement of the main socio-economic aims of Islam”. While a large and different characteristics number of contracts in Islamic finance, there are certain kinds of central transactions such as: equity participation namely (musharaka), trustee finance namely (mudaraba), and the mark-up methods specifically (murabaha, salam, ijara, istisnaa, bai bi-thamin ajil). Some of these profit-sharing activities such as musharaka and mudaraba probably were prior the beginning of Islam. The business partnership was in central of mudaraba model coexisted actually prior the Islamic specifically in Middle East together with loans interest as resources of financing economic activities (Crone, 1987; Cizaka, 1995; Kazarian, 1991). Since the beginning of Islam religion, the financial transactions based on interest were prohibited; accordingly the finance has to be proceeded on the basis of a profit-sharing. The business partnership technique that using the principles of mudaraba was employ by the Prophet Mohammad (PBUH) himself while he acted as agent (mudarib) on behalf of his wife Mrs. Khadija Bent Khouiled. While Omar Ibin Al-Khattab, the second successor of prophet Mohammad (PBUH), invested orphans’ money with traders engaged in business between Madinah and Iraq. Over the centuries, this type of the simple sharing profit trade partnerships remain practically in unchanged system. Until the growth of Islamic financial institutions, significant investments including funds collection from a lot of investors did not develop into vehicles.

According to KFH Research Ltd (2013), basically, Islamic finance as well as conventional system shares similar objectives in terms of enabling people to facilitating trade, acquire goods and property, providing capital for start-ups business and existing businesses in addition to embark in real part investments and projects. The structure of Islamic financing are based on principles which make

sure that transactions are associated to actual economic activities, in addition to promote transparent interactions between involved parties, while averting excessive leverage.

1.6 Globalization of Islamic banking including GCC countries

According to Lahrech et al, (2014), with a quick expansion of Islamic banking over the last recent years, Islamic banking became one of the most vital parts in the global economy; it had recorded an annual growth rate of 15 to 20% per annum. As per the Association of Islamic Banking Institutions Malaysia, (2011), Islamic banking section is the most progressive side of the segment related to Islamic finance; it provides a wide pool of financial instruments that depends on Islamic Shariah regulations. The establishment of Islamic Sharia regulation and law is based on the ban of the receipt or payment on agreed onto rate of return that shut-down the access of the lending based on interest in conventional system. The profit and loss sharing (PLS) is the principle that Islamic banks operating under it, where the agreements based on interest are exchanged by the agreements that based on return (Humayon and Presley, 2000).

According to Hassan and Lewis, (2007) and Venardos, (2005), the establishment of first Muslim-owned banks was in the years 1920s and the years 1930s. Initially, they implemented practices like the conventional banks practices, but in the years 1940s and the years 1950s, a few trials of Islamic banks were there. During 1963, specifically in Egypt, the first noteworthy and considerable achievement of a bank that has a business consistent with Islamic ethics was there. This modern Islamic banking movement gradually grew in the year 1973 in Middle East to turn into a small emerging finance industry. As a global orientation for Islamic banking specifically in the GCC region started there, many investment accounts were denominated in foreign currency such as US dollars. Trade financing in Islamic banks have a big share of its asset portfolio, due to that, there is

a particular kind of business available in Islamic banks for international trade finance. As Al-Baraka and DMI considered from the two larger Islamic groups and have worldwide presence, many Islamic banks, investment houses, and business groups were controlled by them. Many Islamic banks' capital resources have been provided by Oil-related wealth, and that was the main reason behind there establishments. Islamic Development Bank (IDB) that created in 1974 and it is based on Jeddah in Saudi Arabia was the first Islamic organization benefited from the oil money flows. Islamic Development Bank was created and supported by the government of Saudi Arabia and Organization of Islamic Countries (OIC) considering it is a multidimensional body. Mainly, it is an intergovernmental bank which intended to provide funds for the purpose of expansion ventures in member states. The bank provides the member countries a profit-sharing financial assistance and fee-based financial services. Obviously, the IDB operations are based on Islamic shariah principles and it is free of interest. Benefiting from the successful beginning, the bank has been grow and became a enormous group providing a structured finance, corporate finance, in addition to consultation services for ventures and private segment organizations in the most important zones with. The subdivisions of IDB, ICIEC is providing export credit and insurance services, where IRTI providing training and researches. And so on, the IDB generally gave a drive to the Islamic banking and financing movement. Being followed subsequently by private Islamic institutions as well as government institutions, the Islamic private institution like Dubai Islamic Bank in the United Arab Emirates, Faisal Islamic Bank of Egypt, and Bahrain Islamic Bank in the years 1974, 1977, 1979 respectively. In addition to the government establishments such as Kuwait Finance House in 1977, (Iqbal et al., 1998).

Starting the 21st century, a lot of Western, Asian, and Middle Eastern financial organizations acknowledged Islamic banking and financing as a significant opportunity to grow. They

implemented Islamic operational transactions and performs to serve the expanding in the market (Venardos, 2005; Hassan and Lewis, 2007). Nowadays, with the increase in gas and oil demands and in energy prices, large amounts of cash have accumulated in most of the Gulf's oil-producing countries. Islamic banks were alternative of conventional banks to manage the cash as decided by some of the cash owners. This assists better to establish the banking industry to growth. In the early 1980s, Islamic banking started in Europe. In United Kingdom, Islamic Bank of Britain (IBB) has established. European governments and European municipalities are dealing in Islamic banking products, mostly bonds (Sukuk). Where in Asia, several countries have Islamic financing companies and Islamic banks. For example, across the world, Malaysia consider as a sophisticated and pioneering Islamic banking industries (Abdul-Rahman, 2011).

As stated by KFH Research Ltd (2013), in the early development stages in the 1980s and 1990s, the concentration of Islamic finance and banking industries was mainly in Muslim's based countries, mostly in Middle East region and South East Asia. Since then, the industry of Islamic financing has developed in difficulty with its geographical dispersion spreading across 75 countries. Several new jurisdictions are working step by step to allow the introduction of Islamic financing and banking in their financial zones. In order to cover the needs of the individuals for faith-based finance, Islamic banking was the starting step for jurisdictions that like to respond to the people needs. In 1990s the Islamic banking services was basic. From that time, the Islamic banking industry has developed and grown-up to improve other financial markets segments including asset management, sukuk (Islamic bonds), and takaful (Islamic insurance). Thereafter, to meet several market needs, Islamic banking industry has progressed to provide a wide products range to retail customers as well as corporate customers. The Islamic financial and banking industry has grown-up significantly in the last few periods. Nowadays, it is consider from the most rapid progressing and growing sectors across the

international financial system. From \$ 150 billion in 1990s, Islamic financial assets have expanded to reach \$ 1.7 trillion as at 2013, the industry of Islamic banking generated strong growth with CAGR rate of 20.4% in the decade from 2007 to 2012, Sukuk also have appeared as a productive new class of assets, providing an opportunity for issuers to get an alternate sources of funding. As at 2013, Sukuks outstanding reached \$ 245.3 billion (KFH Research Ltd, 2013).

According to Union Arab Banks (nd), over than 700 Islamic financial institutions and banks registered globally offering Islamic financial services and products. Effectively it is operating in over than 60 countries, they are serving around 38 million customers all over the world. In the GCC region, there are 250 Islamic banks and financial institutions, where around 100 located at other Arab countries. But, about 80% of the potential customer's base related to Islamic finance and banking industry remains unused, and the Sharia-compliant assets have approximately 1% of global financial assets.

As reported by Union Arab Banks (nd), in the GCC, Islamic banking industry expected to continue grow considering the support that provides by strong economic fundamentals. For example, consolidation of Bahraini Islamic banks, the increase of Islamic banks number in Oman and Saudi Arabia, and regulation changes in Qatar will lead to benefit the Islamic banking industry. Out of total banking sector assets in GCC, Islamic banking market share in 2013 reported that Islamic banking assets was around 50% in Saudi Arabia, followed by 42% in Kuwait, 23% in Qatar, 15% in UAE, and 13% in Bahrain. And considering the Islamic finance concentrating is in the MENA region with 77.85% of global Sharia-compliant assets, the GCC region holds 39.21% out of total global Sharia-compliant assets. Asia has 20.8%, Sub-Saharan Africa has 0.84%, while Europe, Australia, and America have 4.28% combined. With regards to the Islamic banking assets spread, 16% of these assets hold by Saudi Arabia, then Malaysia with 8%, UAE with 5%, Kuwait with 4%

and Qatar with 3%. In terms of size and number, the Arab Islamic banks lead the Islamic banking sector globally. For example, between the 100 biggest Islamic commercial banks, there are 42 Arab Islamic banks, among of them there are 34 Islamic banks including the top 10 existing in the GCC region. In the year 2011, the total assets for Islamic banks were worth \$390 billion in the GCC region, where in 2012, it is increased to reach \$445 billion, then to \$490 billion in the first half of 2013. Saudi Arabia leads the GCC region and has the lion share with the percentage of 49%, followed by UAE with share 19%, Kuwait with share 16%, Qatar with share 11%, and then, Bahrain with share 5%, while this segment in Oman was still nascent (Union Arab Banks, nd).

In international financial system, Islamic finance developed to be the fastest growing segment, Islamic banks assets are growing also faster than those in conventional banks peers. During 2009 to 2012, the CAGR (compound annual asset growth rate) for the main Islamic banking markets overall was 11% versus 6.8% for conventional banking system in the same market. During the years 2009-2012, Islamic banks profitability did not raise harmonize with assets; it continued to slow behind it. The aggregate ROA (return on assets) for Islamic banks (excluding those in Sudan and Iran subject to all banks should be fully Islamic) during the years 2009-2012 was 1.51%, while in the same countries the conventional bank's ROA was 12%. The 20 leading Islamic banks in 2012 posted an average ROE (return on equity) of 12.6% less than those in conventional peers with ROE 15%. Though, in the long run, due to initiatives of the leading Islamic banks, the large scale restructuring programs and operational transformation will strengthen more the Islamic banking industry and supposedly will close the gap of profitability with their peers in conventional banks (Union Arab Banks, nd).

As per Basu, et al. (2015), the GCC Islamic banking market share crossed the 25 % edge, suggested that Islamic banks in these countries have become systemically important. In Kuwait,

Saudi Arabia, and United Arab Emirates, Islamic banking has picked up systemic proportions consistent with Islamic Financial Services Board (IFSB's) that describes the systemic proportion to be minimum 15% out of total banking system assets. For example, in Saudi Arabia, Islamic banks have exceeded the systematic proportion with a record of 50% approximately of assets share. On the other hand, 6 % out of total banking system assets represented by the Islamic banks and windows combined assets. End of the year 2011, Oman access to Islamic banking industry, a comprehensive regulations for the Islamic banking sector improved by the Central Bank of Oman, it decided to authorize Islamic banking services with the aim of widening and diversifying it note that two new domestic banks (Bank Nizwa followed by Al Izz Islamic Bank) were obtained the authorization to operate as Islamic banks in August 2015. The growing of Islamic banking assets have developed in a case of fixed exchange rate rules, it provided significant presenter for the economies in GCC region, it is also affected successfully in anchoring the expectations of inflation at low levels. Except Kuwait, GCC countries exchange rates are pegged to the U.S. dollar. But, this is actually restricts the monetary policy independency. Macroeconomic management generally depends on monetary policy, wise regulations, and numerous controls in order to guarantee a favorable balance between the stability of the prices and the growth. Particularly, the monetary policy and the short-term liquidity conditions in GCC managed by monetary authorities through issuing Treasury-bills, short-term central bank instruments, and standing facilities. On the other hand, to manage the structural liquidity situations, they are using the reserve requirements, long-term government bonds, and macro-prudential instruments (Espinoza and Prasad, 2012).

As stated by Basu, et al, (2015), in GCC, Islamic banks are remaining to capture the market share; they get rid of their peers in conventional banks. The total Islamic banking assets in GCC as of 2014 were \$564 billion. Islamic banking assets in this region represent 38.2 % out of worldwide Islamic

banking assets as reported by IFSB (Islamic Financial Services Board) in 2015. In Saudi Arabia, Islamic banking sector recorded 51 % out of total domestic banking assets. Where the share in Kuwait was 38 %, Qatar 25 %, and 17 % the share in the United Arab Emirates. The compound growth rate of their assets recorded 17.4 % against 8.1 % for conventional banks for the period from 2008-2012, whereas customer's deposits and the net lending for Islamic bank raised by 19.9 % and 18.2 % respectively comparing to conventional banks with 10 % and 8.1 % respectively, (Standard & Poor's Rating Services, 2014). The strongest growth recorded by Qatar as the Islamic banks loans grew by 32 %, it followed by 22.3 %, 14.5%, 13 %, and 10.5 % in Saudi Arabia, the United Arab Emirates, Bahrain, and Kuwait respectively (Basu, et al, 2015).

In terms of assets regarding the GCC overall, Islamic banks holdings of securities recorded 14.6 % comparing to conventional banks with 18.4 %, more noticeable difference even regarding the securities portfolio held for sale. Through issuing the Shari'ah-compliant treasury bonds and treasury bills, Qatar develops its money market domestically. Qatari banks with these efforts abnormally showed high securities holdings. The treasury bonds issuances were design at Islamic and conventional banks in 1999 in Qatar. A significant increase recorded in issuing volumes in 2004, while in 2011, treasury bills issuances started with the aim of developing debt markets domestically. On the other hand, in United Arab Emirates and Saudi Arabia, the total holding securities were much higher regarding the conventional banks. Conventional banks had less liquid assets with 19.8 % out of total assets compared to 23.0 % for Islamic banks. Gross loans and non-performing loans (NPLs) for conventional banks were higher than Islamic banks throughout the period of 2008 to 2014. Country-specific factors in the United Arab Emirates and Bahrain particularly appeared to be driving the trends of NPLs. Islamic banks average NPLs were 4.2 % and for the conventional banks recorded 5.2 %. For conventional banks, In 2008, the NPLs doubled from 2.6 % to 6.0 % in 2012, where in

2010 to 2011 NPLS peaking at 6.5-6.4 % respectively. But for in 2008 the Islamic banks NPLs increased from 2.5 % to 4.7 % in 2013 where the highest percentage recorded in 2012 with 6.3 % . For example, in the United Arab Emirates NPLs for Islamic and conventional banks significantly declined throughout that decade with 4.6 and 6.7 percentage point for Islamic banks and conventional banks respectively. The NPLs In Bahrain between the years 2008 and 2013 increased by 8.2 and 7.5 percentage points for Islamic banks and conventional banks respectively. After a spike in 2010, NPLs get down for the Islamic banks in Qatar by a lower rate than its conventional banks peers. In Saudi Arabia, Islamic bank's as well as conventional bank's NPLs were similar in terms of trends and magnitude. In Kuwait, the NPLs for Islamic banks did not appear to be a greater than conventional banks (Basu, et al, 2015).

According to Basu, et al., (2015), over 2008 to 2014, on average Islamic banks share of total and liquid assets was slightly more than their peers in conventional banks. In Saudi Arabia, Kuwait, and Qatar, the country-specific factors seen to be leading the trends for GCC banks. Islamic banks comparing to conventional banks in GCC after the crisis were less profitable. For the period from 2008 to 2014, Islamic banks average return on assets (ROA) recorded 1.3 % against conventional banks that recorded 1.6 %; Islamic banks return on equity (ROE) registered 6.7 % which is lower than the conventional banks with 10.2 % . However, Islamic banks presented that it is less leveraged. The Islamic banks had a minor pool of revenue-generating assets per unit of equity suggesting that their opportunity for further growing in risk-weighted assets is more. In addition to that mostly in a real estate, their portfolio concentration needs higher provisions that combined with a lack of yielding liquid assets in addition to higher operating expenses interprets into a lower return on assets. During the crises time, Islamic banks profitability drop more rapidly, stabilizing somewhat at end of 2013. In Saudi Arabia, Islamic banks return on equity dropped after the crisis of 2008; thereafter it

improved to beat the profitability of conventional banks. In Bahrain at the end of the period, the Islamic banks ROE shows an initial recovery, but it was still significantly lower than their counterpart in conventional banks. Moreover, after the contraction in 2009, Kuwait and Qatar ROE in Islamic and conventional banks seemed to be converging.

According to Citi Research (2018), with \$800 billion in assets of Sharia compliant, GCC banks have market share of 50% in global Islamic banking in assets terms for the year 2016. This is led by Saudi Arabia with 47% expressing approximately half of the Islamic banking assets pool in GCC. In addition to that it has market share of 23% out of Islamic banking assets pool across the world. The United Arab Emirates has 21% of GCC assets pool and 10% out of the Islamic banking pool across world. Qatar and Kuwait have 11% each; Where Bahrain and Oman have the smallest GCC Islamic banking assets of 9% and 1% respectively at the end of 2016.

Islamic banking space became active in the year 1974 in the GCC region after established of Dubai Islamic Bank (DIB) in the United Arab Emirates. Many Islamic banks proved themselves among the successful Islamic Banks, for example, Dubai Islamic Bank (DIB) continue to operate successfully from the establishment date. At the end of 2017, it was the leading Islamic bank in the UAE and third one among the GCC countries with \$56 billion in terms of assets. Another example from GCC region, Al Rajhi Banking corporation that established in 1988 in Saudi Arabia keep continuing to operate successfully with expansion as it is recorded as the largest Islamic lender in GCC's region at the end of 2017 with assets \$90 billion. Going to Kuwait, in 1977, Kuwait Finance House (KFH) was establish. Due to bank continues grow, it became the second largest Islamic bank in GCC region with \$57 billion in assets at the end of 2017 (Citi Research, 2018). On the other hand, from an economic perspective, whereas the markets in GCC region are similar in multiple ways, there are obvious differences of these markets among the Islamic banking and financing landscape. Islamic

banking is completely fragmented in case of the kingdom of Bahrain where the number of operating Islamic banks is 24; while the number of Islamic banks or Islamic windows in most of other geographies domains from 6-8. In Oman, two Islamic banks and six conventional banks windows are providing the Islamic banking services. with regards to the leading Islamic banks market share in each market in GCC, the market share of Islamic banking in Kuwait handling by Finance House in Kuwait with 40-60%, but the largest Islamic bank in Oman (Bank Nizwa) has only 15% market share out of the Islamic banking assets; where in Bahrain, Al Baraka has 30% of domestic Islamic asset market share; in the United Arab Emirates, Dubai Islamic bank has 28%. Lastly, Al Rajhi bank in Saudi Arabia has 25% (Citi Research, 2018).

In terms of Sharia compliant assets relative size against conventional banking assets, Islamic banking covered little over the half of total banking assets in Saudi Arabia, although in Kuwait the same stood at 40% where in Qatar with 30%, Oman with 10% considered the lowest share of Islamic banking assets out of pool of the total banking asset in Oman. In most GCC markets like Bahrain, the United Arab Emirates, Oman, and Saudi Arabia, the regulator license for conventional banks to have Islamic banking windows in order to operate accompany with the pure and clear Islamic banks, but both Qatar and Kuwait have restrictions and limitations on conventional banks that delivering Islamic products.

Over the past period, Islamic banking in the GCC has grown at a rapid pace. GCC Islamic assets grew at compound annual asset growth rate of 17% from 2008-2012; it was led by and Qatar Saudi Arabia followed by the United Arab Emirates. From 2012, Islamic banking assets growth has been driven by Oman generally through their low base. Over the period from 2013 to 2016, Islamic banking assets outside Oman grew at the fastest step; for example; in the United Arab Emirates both pure Islamic banking and Islamic windows have 12% compound annual asset growth rate, followed

by Saudi Arabia, the pure Islamic banks have 9% compound annual asset growth rate from 2013-2016. Kuwait and Bahrain have relatively fall behind the mentioned countries with relation to the growth of Islamic banking assets in GCC. With regards to the profitability, whilst Islamic banks in the United Arab Emirates and Saudi Arabia are most profitable in the GCC region (relatively due to both countries have higher market share and weight), Islamic banks especially in Oman have struggled in order to generate positive returns. Conversely, the conventional banks' Islamic windows in Oman have produced a stronger pre-tax return on equities and also in return on assets. With looking at the GCC key Islamic banks against non-GCC peers, GCC Islamic banks show that they are more profitable significantly comparing to non-GCC Islamic banks. While Islamic banks in GCC have higher loan loss provisions and more less net interest margins on an aggregate basis (percentage of Average assets), this is much more than stabilizer by a significant cost and the advantage of tax related comparing to non-GCC Islamic banks. Leverage for Islamic banks in GCC is half of leverage in the non-GCC Islamic banks leading to decent return on equities for the non-GCC Islamic banks comparing to Islamic banks in GCC (Citi Research, 2018).

Khan (2019) argued that, in the Arabian Gulf countries, Islamic banks and Islamic financial institutions as a Shariah-compliant lenders are expected to remain resilient in 2019 and in the next future, despite tough operating settings, mid-single digit growth in GCC Islamic banks' assets might be seen bases over the next one to two years as per S&P Global Ratings. For the years 2019-2020, the forecasted growth for Islamic banks expected to be the same as conventional lenders in GCC as per estimated by S&P rating agency. However, Islamic lenders in the GCC like their peers have seen some slowdown in growth and headwinds in recent years. Performance of some Islamic banks that having exposure with Turkey are worse than others. Anyhow, despite these challenges, several Islamic banks in GCC maintained profitability indicators and sound asset-quality.

In addition to that, the funding profiles for the banks remain healthy, controlled by core customer deposits, the major positive rating factor which is still the capitalization as said by the rating agency. As per S&P rating agency forecasting, several factors affected the mid-single-digit growth for both types of banks including the prediction of muted economic growth in GCC over this period despite some benefit from strategic initiatives, governments spending, and national transformation plans. Islamic banks anticipated to be overall “little profit growth” at the current year and next year in GCC. However, with banks prioritizing quality over quantity financing and averting lucrative but more risk exposures, growth expected to remain limited. Due to lower growth opportunities in 2019 and 2020, the Islamic banks in GCC will focus more on efficiency gains. Also, the banks have to benefit from a free deposits bounty, mainly with the pause in local and international interest rate rises. The muted loan growth and oil prices stabilization at the range of \$60 mean that over the next few years all types of banks will continue to accumulate deposits which lead to increase in banks liquidity (Khan, 2019).

According to recent study about Islamic banks in GCC by Bridge (2019), in the GCC region, Islamic bank mergers and acquisitions are probably to be increased as many banks are remaining absence from the needed market position to race with strong and solid peers mostly in the countries that have overbanked markets like United Arab Emirates according to Fitch ratings. For the Islamic banking sector in GCC, consolidation should be positive at the end by creating more efficient, larger, and stronger Islamic banks. To have more growth opportunities, Islamic banking mergers and acquisitions (M&A) driven by seeking for more competitive advantages through proceeds deposits with low-cost, and through cost synergies as example. These deals need support from the government by taking in the considerations the expected significant risks that the governments grasp in many of Islamic banks. as per Fitch records, “Most merger and acquisition is between Islamic

banks or include a conventional bank that acquiring the Islamic bank as subsidiary, in addition to that Islamic banks cannot acquire conventional banks easily”. Islamic banking industry over the last 10 years in GCC has been a growth area trying to create domestic Islamic finance centers and strength their Islamic financing capabilities. Openness to Islamic products and Islamic instruments has rapidly grown with the innovation of products. Though, in overbanked region like GCC, there are innovative franchises struggling to obtain decent chances of growth and to have stable and cheap deposits leaving the power to the existing competitors. In some countries, they delayed by ability of conventional banks to obtain Islamic deposits in addition to offer Islamic financing. Kuwait Finance House's in Kuwait as one of some examples for Islamic banks merger and acquisition in GCC intending to acquire the Bahraini bank namely Bahrain's Ahli United Bank, if achieved, Kuwait Finance House will be a big Islamic player bank in GCC region and might be the leading Islamic bank domestically in Kuwait. Dubai Islamic Bank and Noor Bank in the United Arab Emirates are probably to merge; this will lead to create a new developed leading Islamic bank player, this mainly benefiting from business development, cost efficiencies, and products (Arabian Business, 2019).

Bridge, (2019) point out that; strong Islamic franchises do exist whereas a lot of Islamic banks still absence from the competitive market position. Al Rajhi Banking and Investment Corporation in Saudi Arabia is world's biggest Islamic bank lender where \$97 billion is the Islamic financing assets by end of 2018, and with 17% percent market share out of domestic credit, note that it is the biggest bank in the country also. In Saudi Arabia also, National Commercial Bank is the second biggest bank. It is discussing a merger with a conventional bank namely (Riyad Bank). If the merger proceeds, the bank’s plan to convert completely to an Islamic bank may have to leave off.

Numerous Islamic financial institutions in GCC registered there self’s recently as one of the best and strongest organizations among the Islamic financial institutions across the world. As stated by

Stubbing (2019), many Islamic financial institutions honored the Global Finance's Islamic Finance Awards 2019, where several of those organizations operating in GCC region, as they focused in innovation of product supported by service and technology, they successfully applied it to generate an outstanding financial performance. They provided a strong atmosphere for innovation, their basics remained solid considering the healthy increases in returns and earnings with maintaining sound margins, deficiency costs was lower generally, also fee income was literally higher, that's in addition to strengthen the balance sheets. An accurate analysis with high standard of studies as well as independent researchers have been conducted based on a series of subjective factors and objectives used to select the winners of these awards.

Kuwait Finance House (KFH) as one of the pioneers in the industry of Islamic banking was the winner of the global best Islamic financial institution. KFH showing a strong financial profile as well as continuing progresses of new products and services. KFH has gradually extended its business and nowadays across all over the world, in terms of assets with a huge network across the world with over than 500 branches, it is considered as one of the largest Islamic financial institutions as its ranking is 5th among the Islamic financial institutions in all over the world. The bank have a wide range of Islamic banking services and products, it covers retail banking, commercial, corporate, trade finance, investments, and real estate. The bank dedicated to spreading its business opportunities and investment by growing globally. Today, KFH's provides 20 advanced banking services where many of them are unique, providing one of the examples; the bank provides innovative XTM service that allowing audio communication and visual options. As of closing of the year 2018, total assets of the bank was \$58.5 billion, equity \$6.8 billion. Increasing by 24% year-on-year, net profit grew strongly; the return on average equity significantly increases from 10.48% to 13.14%. In 2018, the bank recognized as the best Islamic financial institution- best Sukuk bank. In Turkey, KFH's is

actively operating via its subsidiary. The bank's subsidiary is Kuveyt Turk Participation Bank (KTPB) which is considering from the leading Islamic banks in Turkey. Kuveyt Turk Participation Bank got a license in order to operate in Germany as an Islamic bank; the name of the bank is KT Bank AG. The mentioned bank in Germany is the first bank to perform credit finance facilities with accepting deposits that complying with Islamic rules. The bank stay to grow and originate the Islamic banking footprint in Europe with launching a new mobile application and installment card type comply with Shariah as alternative of a Western-style credit card. In addition to that, the bank promotes Islamic finance ideas via vehicles for example; finance conference, the global faith, Turkish-German Health Foundation and the Islamic finance task force. On the other hand, KFH undertakes to go forward with its plan to takeover a Bahraini bank namely Bahrain's Ahli United Bank, this may create the GCC 6th largest bank with total assets more than \$92 billion. Moreover, across the Middle East, KFH considered as one of the largest financiers due to its strong balance sheet, good financial performance, and product innovation (Stubbing, 2019).

Similarly, Samba Financial Group in Saudi Arabia named as the best Islamic investment bank at the end of 2018 with total assets that hit \$61.3 billion and equity \$11.3 billion, the bank's net profit rose to \$1.5 billion and recorded return on average assets 2.41%. The bank succeeded to have strong deals in making business over the past couple of years across the GCC. Samba was successfully arranged syndicated deals with over than \$44 billion by taking a dynamic part in coordinating, structuring, and arranging debt facilities for its borrowers. Various market segments such as; capital markets (sukuk), corporate-level financing, and project financing Bank's Islamic debt-structuring proficiency covers by the bank's Islamic debt-structuring proficiency. Practically, this is mostly includes transactions of Islamic syndicated financing; the bank has served as coordinator, adviser, book runner or arranger. The bank has fashioned multifaceted Islamic treasury products like forex

Wa'aed target redemptions (FX-TARN), cancellable swap, trigger swaps, and Islamic structured deposit (dual Murabaha structure). There are other activities that contain collateralized murabaha. The recent bank's contribution was in the conversion of a large corporate with \$800 million that's equivalent to 3 billion Saudi Riyal. It was an exclusive deal for Samba considering the providing of the agency, Shariah structure, in addition to the Islamic operational support via intraday funding commodities. In addition to that, Samba financial group was the best Islamic corporate bank in 2018 with considering its large balance sheet and the solid corporate banking division which assisted the bank to expand in the past years. In 2018, many of high-profile ventures in the GCC region and in Saudi Arabia offered an Islamic finance solution significantly including petrochemicals, power, in addition to other industrial projects. The Samba's corporate banking team is very dynamic in tawaruq (cash financing), murabaha finance, goods financing, gold financing and derivatives, and Islamic corporate deposits, (Global Finance, 2019).

In Saudi Arabia, Jadwa investment was the best Islamic fund manager in 2018, Jadwa investment offering comprehensive Shariah-compliant funds for the customer segments from retail institutional, and government with total assets of \$6.8 billion under management, and the assets under advisory is \$3.1 billion includes public equity, private equity, fixed income, and real estate. The bank's investment considered as one of the main Shariah-dedicated asset managers across the world. Its funds mostly have beaten their one year; three; and five year's benchmarks (Global Finance, 2019).

The best Islamic asset manager also from Saudi Arabia in 2018 was Al Rajhi Capital; it is considering the leader of Shariah-compliant asset management in the world, where the assets under management approximately is \$10 billion. Al Rajhi provides Shariah-compliant investment products through all investment styles and main asset classes covering the range of risk appetites varieties and investment objectives. Offerings includes commodity mudaraba, index funds, sectoral, sukuk,

IPOs, equity, MENA and GCC-specific funds, multi asset and international funds, discretionary portfolios, private equity and real estate funds (Global Finance, 2019). Shifting to Qatar, the global sixth-largest Islamic bank, Qatar Islamic Bank (QIB) honored the best Islamic project finance provider in 2018. The bank mainly produced strong outcomes on the back of the venture finance proficiency. Supported by its assets of \$42 billion and equity of \$4.2 billion, Qatar Islamic bank is active in deals arrangements for variety of big tickets Islamic project finance, mostly in the local market. New deals obtained, its providing \$467 million (1.7 billion Qatari riyals) for 10 years in direct finance toward the expansion of two five stars hotels, in addition to providing a mixed-financing deal includes direct finance, an advance-payment bond, and a performance bond for Hassanesco trading and contracting (Stubbing, 2019).

Standard Chartered Saadiq–Aldar Investment Properties obtained a year best real estate deal for the year 2018, Aldar Sukuk (Tie) in Abu Dhabi the capital of United Arab Emirates acting as joint lead manager, joint book runner and joint global coordinator for the real estate deal. In September 2018, Standard Chartered Saadiq priced a seven-year registered Sukuk-al-Wakala (senior unsecured fixed-rate Sukuk) with value of \$500 million for Aldar Investment Properties. This transaction within the GCC region obviously is the first-ever corporate sukuk in the seven-year tenor (Global Finance, 2019).

According to Stubbing (2019), at its country level, there are Islamic financial institutions winners at the end of the year 2018 such as; Al- Salam Bank in Bahrain through its wide network including digital and branches networks. A comprehensive range of unique and innovative Islamic financial services and products like Bahrain’s first contactless credit cards, IBank, and online home applications are providing by the mentioned bank. Besides that, the bank also provides retail banking, private banking, corporate banking, treasury and investment services. At the end of 2018,

total asset of Al Salam bank was \$4.5 billion, whereas net profit increased to \$49 million. Al Salam Bank boasts a strong balance sheet with a core Tier 1 capital ratio that exceeds 18%.

In Oman, Bank Nizwa is the fastest-growing and largest Islamic bank. Its customers base from both corporate and retail segments are increasing, the last boosted by the bank with the advanced features that servicing corporate clients will support and enhance the electronic channels that support the online banking. Total assets recorded observable increase of 25% to reach \$2.3 billion, in addition to significant increase in the net profit with 98% to reach \$19.5 million at end of 2018. In Qatar, Qatar Islamic bank remains flagship Islamic bank in Qatar. Approximately, Qatar Islamic bank has the market share of 42% of Islamic banking assets industry in Qatar; it has a strong operation across retail banking and wholesale. In addition, the bank has a stake in several Shariah-compliant financial services firms in the country, covering consumer finance, investment banking, and takaful. At the end of 2018, the total bank's asset was \$42 billion; and the net profit increased to reach \$757 million explicit 15% over last year. In Saudi Arabia, Al Rajhi Banking Corporation considers the biggest Islamic bank across the world in addition to the biggest retail banking network in Middle East. Its customer base in Saudi Arabia is also the biggest one with more than 9 million customers. Moreover, out of total banks deposits in Saudi Arabia, Al Rajhi has the highest percentage in the market of noncommission deposits. By the end of 2018, total assets were \$97 billion, and net profit of \$2.7 billion express 13% higher than previous year. The bank's return on assets (ROA) grows to 2.9% in 2018 compared to 2.7% in 2017(Global Finance, 2019).

According to Stubbing (2019), in the United Arab Emirates, Abu Dhabi Islamic Bank (ADIB) during 2018 have improved digital-banking platforms that assisted the bank to attract more than 60,000 new clients. Structurally, the bank's capital position was the higher achievement strengthening via issuance of a Tier 1 perpetual sukuk and successful rights issue. In the same year, ADIB reported

\$681 million net profit comparing to 2017 expressing an increase of 8.7% driven by the growth in customers financing and the decrease of the provision impairment charges.

1.7 Organization of the dissertation.

This dissertation comprise of five chapters. Following this chapter, the introduction, chapter two reviews the relevant literature. Chapter three discusses the methodology, data, measurement of variables and the research hypotheses. Chapter four reports the results and discussion of findings. Chapter five concludes the study, provides recommendations and highlights the limitation of the study.

CHAPTER 2

LITERATURE REVIEW

2.1. Introduction

The factors which affecting banks profitability can be traced back to the pioneering work of Bourke (1989) and Short (1979). These studies employed data of banks operating in developed countries including Canada, Western Europe, Japan, North America and Australia. Since then, numerous studies have emerged investigating the factors that impact banks' profitability in developed and emerging markets (see, for example, Molyneux and Thornton, 1992, Alexiou and Sofoklis, 2009, Alper and Anbar, 2011 and Almaqtari et al., 2019, among others). It is worth mentioning that, however, most of the focus by the existing literatures can find on the conventional banks rather than the Islamic banks.

Furthermore, those studies who examined the factors that affecting Islamic banks' profitability (e.g. Haque and Farzana, 2018, Alharbi, 2017, Masood and Ashraf, 2012, and Karim et al., 2010), were not devoted solely to GCC countries. Therefore, the current study will try to fill this gap in our body of knowledge. The following sections will review the relevant literature on both conventional and Islamic banks.

2.2. Prior researches on conventional banks.

Petria, Capraru and Ihnatov (2015) study the banks' profitability determining factors for 27 commercial banks operating in Europe by covering the period starting from 2004 to 2011. Using panel data techniques, fixed and random effects, they examine the influence of bank characteristics, industry characteristics and macroeconomic factors on profitability. Petria et al., demonstrate that bank internal factors such as cost to income ratio (management efficiency), liquidity risk, and credit

risk have significant and negative association with the profitability of the bank as measured by both ROA and ROE, while size of the bank and capital adequacy indicates that they are positively related to ROA. In relation to industry-specific measured by market concentration, it is negatively associated with the bank profitability. Regarding to macroeconomic factors, the study finds positive (no) association between economic growth, inflation and the profitability of the bank.

Similarly, Alexiou and Sofoklis (2009) examine the impact of bank's internal factors and macroeconomics variables on the profitability of the bank in Greek's banking sector. They use a panel data method (fixed effect model), it have been implemented and effectively applied for six major Greek banks over the period from 2000-2007. An anticipated signs are there based on the estimated parameters considering that all signs have significance level excluding the private consumption that statically have positive but not significant relationship with profitability. Inflation has positive but minor effect on banks profitability. GDP show a highly insignificant relationship with the bank's profitability. Regarding the internal variables, the bank's size is showing positively significant, but the credit risk is significantly negative. Cost-to-income ratio, the ratio of assets over personnel, and liquidity show that they have inverse and significant impact on bank's profitability.

Alper and Anbar (2011) study the internal and external factors that affecting the profitability of commercial banks in Turkey. They use a balanced panel data set for ten banks over the period from 2002 to 2010. Regarding to bank-specific determinants, an empirical results indicate that non-interest income to asset ratio, and bank size have a positive and significant effect on the bank profitability. Relating to credit portfolio size and loan under follow-up, the study show that both factors have inverse and important impact on bank's ROA. They find also a negative relation between bank's loans and profitability. Regarding the macroeconomic variables, real interest rate only finds that it has positive effects on bank's performance as measure by ROE. However, all other

internal and external factors like (liquidity, deposit/assets ratio, capital adequacy, net interest margin, GDP growth rate and inflation) show that they don't have significant effect on bank's profitability.

Likewise, Almaqtari et al., (2019) inspect in the banks' profitability determining factors for 69 Indian commercial banks over the period 2008-2017. They employ a balanced panel data approach. The results revealed that the internal factors like bank size, branches number, asset quality ratio, operational efficiency, assets management ratio, and liquidity ratio have positive effect on ROA, but the leverage shows that it has a negative influence on ROA. The external factors such as the interest rate, inflation rate, exchange rate seems to have inverse impact on ROA. Regarding the profitability while measure it by ROE, the result indicates that the internal and external factors like (bank size, asset quality ratio, liquidity ratio, assets management ratio, and inflation rate) have significant and positive relation with it, but there is an inverse association between other factors like (economic growth, interest rate, exchange rate, and financial crises) and ROE.

Singh (2010) examines the bank's internal variables and macroeconomic variables that affecting the bank profitability in Indian banking industry by taking 35 banks as a sample. The study conduct for the period from 2003-2008. He uses a trend analysis data, GDP find that it has positive relation and supreme importance in impact the profitability. The asset quality and expense have poor effect on the bank profitability. Moreover, the size of the bank doesn't evidence that it has an important determining factor of the profitability. In the meantime, with regards to the macroeconomic variables, the domestic banks find that it has more influence on banks performance than the foreign banks operating in India.

Sufian and Kamarudin (2012) examine the bank internal variables and macroeconomic variables that affecting the profitability of Bangladesh banks for the years from 2000 to 2010. They take 31

commercial banks as a sample by using multiple regression analysis; GLS (generalized least square) approach is applied following by FEM (fixed effect model). They examine six bank-specific determinants contains of (bank size, asset quality, liquidity, management quality, capitalization, and non-traditional activities). Meanwhile, (GDP, inflation, global financial crisis, and concentration) are the four external or macroeconomics determinants. However, the results shows the all bank-specific determinants except the asset quality impact the profitability of the banks in Bangladesh. The Practical findings of the study propose that bank internal variables like (bank size, capitalization, and management quality) have significant and positive influence on the performance of the bank. But, non-traditional bank's activities have an inverse association with profitability of the bank. The results advise that impact of liquidity and non-traditional activities are not constant considering they have mix (positive and negative) impact on the profitability of the bank across the several profitability measures that employ. On the other hand, with regards to macroeconomic variables, market concentration and GDP have inverse and important influence on the performance of the bank. Inflation displays negative relationship with the banks' profitability. Though, no important impact on the bank's profitability show related to the global financial crisis.

Almazari (2013) examines the capital adequacy, cost income ratio, and Saudi banks performance over the decade 2007-2011. He collects a sample of nine Saudi banks. To describe, classify, compare, and measure the selected banks financial positions, he uses a descriptive financial analysis. The results indicate that size of the bank is statistically positive and significantly related to ROA. Cost to income ratio shows that it is a statistically negative and has relationship with ROA. The results also indicate that ROA is positively associated with; ROE, size of the bank, debt to equity ratio, and assets to liabilities ratio. ROA has inverse relationship with; cost to income ratio, core capital to weighted-risk assets ratio, total equity capital to total assets ratio, and core capital to total

assets ratio. The banks in Saudi Arabia are mostly intense on guaranteeing that their capital levels are more than minimum required constitutional limits.

Dietrich, and Wanzenried (2014) analyze how bank internal features, macroeconomic features, and industry-specific features impact profitability of 10,165 commercial banks in 118 countries in the world over the decade 1998-2012 by split the countries on groups in three levels of income; low-income; middle-income; and high-income countries. They indicate that the bank's profitability determining factors which comprise in the model is able to clarify the differences of existing profitability between the commercial banks in those countries. They present adjective statistics set, it delivers some introductory correlation proof between the ROA and the descriptive variables. GMM estimator technique employ by the researchers, the mentioned technique has been defined earlier by Arellano and Bover (1995). Besides that, the results indicate observable differences in the profitability level and profitability determining factors among the banks in all types of country income. In low income countries, the under developed markets inclined to be relatively competitive as proposed by their moderately high profitability as measures by ROA and ROE, in addition to NIM. But in the more developed countries based on the country's income, measurement of profitability goes together with a harder competition. Also, capital allocation has more efficiency but with a lower profitability as measure by loan loss provisions coverage ratio. Thus, in high-income countries, more efficiency is needed for the banks doing business and dealing with lower margins which will lead for more efficiency. In low-income countries, market concentration and industry-specific variables shows that they are statically positive and have a significant impact on bank's profitability. Anyway, banks' profit indicates that it is very essential source of equity. In low-income countries also, this relation supported by equity to assets ratio, where capital ratios show that they are higher more than the one in the countries with higher income. In both low and middle income

countries the results indicate that no impact for Banks' capital level on the bank's profitability. But in the high-income countries, Capital ratio is statically positive and has significant impact on bank's profitability. They find a remarkable result also in the low and middle income countries and regarding the bank ownership, government owned banks show that it has less profitability than the private owned banks, but it is not such as the effect in the countries with a high-income level. Moreover, the bank's return in the public owned banks is less than privately owned banks. In low and middle income countries, the results suggest that banks privatization could be encouraged. Lastly, in low-income countries, domestic banks seem to be less profitable than foreign-owned banks.

Gilces et al., (2019) argue that, the study empirically examine the profitability determining factors for the private banks in Ecuador for the period of time from 2002 to 2017 with 316 observations. They use unbalanced panel data analyses and information for 23 private banks in Ecuador, data obtains from bank's financial statement. However, macroeconomic information obtains from the n Central Bank of Ecuador. There results indicate that the micro-stable determining factors for banks' profitability are ; size, capital ratio, efficiency, lending rate, assets composition, and labor productivity. Moreover, market power indicates that it is an effective and strong influencer for the bank's profitability in Ecuador. Macroeconomic factors show that cycle of GDP, spread, and inflation are profitability determining factors, whereas there is any relation confirm by regulatory variable. Lastly, dollarization derived factors impact the private banking profitability.

Obamuyi, (2013) investigates in the impact of the variables including; bank size, bank capital, expenses management, interest income, and the status of the economy on the profitability in the banking industry in Nigeria as a developing economy. Fixed effects regression model employ by the author on a panel data that got from the bank's financial statements including 20 banks over the

period 2006-2012. The results specify that favorable economic condition, efficient expenses management, interest income, and improved bank capital have effect on rise the Nigerian banks' performance and growth. Accordingly, government policies which relating to the banking system should motivate banks to regularly increase their capital in addition to offer the supporting atmosphere that can speed up the economic growth in the country. Banks' portfolio must manage efficiently to protect the long run profit-making interests.

Fang et al., (2019) examine the mutual effect of different types of risk and efficiency, in addition to the competition on the bank's profitability in different banking markets using the commercial banks in China as a sample for the period from 2003 to 2017. The recent results indicates that the competition in China banking industry including the markets of loans, deposits, and non-interest income markets for the years 2003 to 2005, and 2014 to 2017 are more stronger. Additionally, they find that the sizes of the bank, profit and cost efficiency, in addition to the inflation are associated significantly to bank's profitability. The cost efficiency positive effects on the profitability of the bank appear to be stronger while the bank has more competitors and undertake higher levels of risk.

Bouzgarrou et al., (2018) examine the domestic and foreign bank's profitability by covering the period from 2000 to 2012 (prior, though, and after the financial crisis), the studied years prior the financial crises specifically from 2000–2006, while the years during and after the financial crisis are from 2007–2012. However, all periods have investigated separately. The authors collect the sample from the French banking industry for 170 domestic and foreign commercial banks operating in France. They use ROA, ROE, and NIM as the measures of the bank's profitability. A dynamic panel data model adopts by authors to evaluate the determining factors for banks profitability. GMM method estimation employs in order to investigate in the operating banks in France. Results indicate that domestic banks through the financial crisis are less profitable than foreign banks. And this is

confirmed by robustness check analysis specifically for advanced economies foreign banks' comparing to emerging economies banks' operating in France. While investigates the stability of bank profitability. The results show that domestic banking sector inspire by foreign banks penetration. Moreover, financial crisis seems to have a significant impact on stability of France financial system. A positive impact of lagged profitability throughout the financial crisis observe for foreign banks, whereas an inverse impact observe for domestic banks because they takes time for operational and managerial skills to adapt with the changes occur. Hence, domestic banks seem to be unprotected from the threat of the competitors.

A new study by Martins et al., (2019) examine how the bank's features, macroeconomic variables and industry features impact the profitability of USA, UK, and Germaine's real estate banks for the period from 2000 to 2014 (prior, throughout, and after the financial crises). A sample of 108 real estate banks (50 banks in UK; 40 banks in Germany, and 18 bank USA) examine and panel data has use, describe the profitability determinants of real estate bank's profitability is nearly none existent. They exists some literatures to examine the financial crisis effect on bank's profitability. The authors separately consider the years prior, throughout, and after the financial crisis. As indicate by the results, the bank's characteristics related to the growth of total loans, operational efficiency, credit risk, liquidity risk, implicit interest payments, and opportunity cost are explain the real estate bank's profitability. GDP, market power (Lerner index), and volatility of interest rate have an important effect on bank's profitability. The increase in real estate prices has an important influence on the profitability of the real estate banks.

2.3. Prior researches on Islamic banks.

Haque, and Farzana (2018) examine the bank's internal variables and external variables that determining the profitability of the Islamic banks operating in Bangladesh. A panel data approach

employ to study the data of eight Islamic banks from Bangladesh banking industry over eight-years from 2010-2017. Empirical results show the significance of the liquidity ratio and capital to assets ratio while ROA is the measure for the bank's profitability. Liquidity ratio has positive impact while ROE is the measure for the bank's profitability. Where, operating efficiency and bank size seems to be statistically significant. They have constant mark while the net investment margin is the measure for the bank's profitability. The results show that GDP growth, inflation, and nonperforming investment don't have important effect on Islamic bank's profitability in any of the model employ for this study. Lastly, results show that no serial correlation in any of the 3 models of the panel data to measure if the bank internal factors and external factors have any effect on Islamic banks profitability.

Masood and Ashraf (2012) investigate the Bank characteristics and economic variables affecting the profitability of Islamic banks by taking sample from several banks in different countries. They use a balanced panel data regression fixed effects model to inspect in ROE and ROA as a measures for internal and external factors affecting bank's profitability. From 25 Islamic banks operating in different countries and regions the sample was obtain. The countries that the data collect from are located at Africa, Middle East, South Asia, and East Asia over the period of five years from 2006 to 2010. However, the researchers find that the size of assets seems it is statically positive and have important effect on Islamic banks profitability. Loans to assets, assets management, and the capital adequacy are statically positive and have important association with ROE and ROA. It plays a dynamic role in the profitability of the Islamic banks. Non-performing loans negatively impact the profitability of the Islamic banks; this is because of the impact of the credit volume and assets quality on the financial matters of the banks. Gearing ratio affecting positively the ROA and negatively the ROE. This expresses that the gearing ratio increases the ROA and contrariwise impact the ROE. The

financial risks affecting positively and have important relationship with the ROA, this lead to increase the Islamic banks profitability, but financial risk is negatively impact it from the equity side. The customers deposits use as a sort of leverage for Islamic banks based on risk sharing. Bank's profitability inversely impact by GDP, while inflation does not seems to have important impact on it. Deposits liquidity and operating efficiency indicates that they are not important or they have less effect on bank's profitability.

Karim et al., (2010) examine the bank internal variables, economic variables, and industry variables that affecting the profitability in African Islamic Banks' for the years 1999-2009. The researchers use panel data techniques, they took nine banks operating in Africa including 66 observations. This study estimates numerous specifications in order to study the effect of bank's internal variables along with country variables on the profitability of the banks. The result displays that those variables are vital in explaining the profitability on the Islamic banks operating in Africa. Capital and the size of the bank show that they are higher the bank's profitability. Operating efficiency and credit risk show that they decrease the bank's profitability. On the other hand, the economic factors such as GDP growth, and higher in inflation show that they drive the bank's profitability. where, market concentration effect positively the bank's profitability. And also, the results demonstrate robust supports which propose that more developed bank cause to lower its profitability.

Al Harbi (2017) investigates in the determining factors of the profitability for the Islamic banks globally. In his study for the decade 1992-2008, he employs un-balanced panel data, longitudinal data to practically examine most of operating Islamic banks across the world. From 110 Islamic banks the data obtains, those banks are operating in the member countries in Organization of Islamic Cooperation (OIC). Data take out from the consolidated and non-consolidated balance sheets and income statements. Islamic banks show that they are not depend on the loans as a main revenue

source as indicated by the results, but they are depending on off-balance sheet activities to generate the revenue. Furthermore, to reduce the financial risk, OIC countries must improve their regulatory structures, legal and financial systems. Due to their high credit risk, Islamic banks' attention must be paid by supervisory bodies and bank management to the risk management. They have to revise their public policies considering the inverse impact of foreign ownership on bank's profitability. Interest rate and Oil prices show that they have a direct and important influence on Islamic bank profitability, while an inverse effect on bank's profitability by the Interest rate adjusted for inflation (real interest rate).

Rahaman and Akhter (2015) examine the bank's internal variables containing (the size of the bank, loan, operating expense, equity and deposits) that influencing Islamic bank's profitability in Bangladesh. They use a panel data set for this study that obtains from eight Islamic banks operating in Bangladesh across the decade 2009 to 2013. Empirical results indicate that deposits and the size of the bank have significant and inverse impact on bank's profitability as measured by ROA, while equity is positively and importantly affected by it. However, loans and expenses management indicates that they are insignificantly affect the banks profitability.

Daly and Frikha (2015) inspect on determining factors of Bahraini bank's performance across the years 2005 to 2009. Performance of twelve banks operating in Bahrain including (six conventional and six Islamic banks) examined through a comparative study. The data collection obtained from the financial reports of the respective banks by for each year. International standards adopted to facilitate the comparisons. The researchers employ a panel data. ROA and ROE and bank's efficiency used as a proxy of determining the bank's performance. Bank size, solvability indicators, income diversity, and loans to assets influence the Islamic banks performance while measured by ROE as per the study show, while market share, net loans to total assets (NL/TA), and solvability indicators indicate that

they have an important impact on the ROE for the conventional banks. The same observe is there for ROA and EFF. Some variables like bank size display that it is more suitable on the ROA for Islamic banks, while other variables indicate that they have significant impact on the profitability for conventional banks. Both usurious and non-usurious banks show that they have an important role in Bahraini banks performance. Under these circumstances, no differences find by customers between the banks types considering that their practices are almost similar.

Mokni and Rachdi (2014) study the comparison between Islamic and conventional banks in order to discover which type of them is more profitable in the operating banks in MENA region. A sample of 30 banks including 15 banks from each type across the years 2002-2009 covers in this empirical study. The years 2002-2006 show the pre-crises time, while throughout the crises time are the years 2007-2009. These decades inspect separately to investigate the financial crises impact on the particular banks. The database Fitch-IBCA bank scope is the bank characteristics main data source. Information about ownership structure, bank age, merger, and acquisition obtain from bank's annual reports, bank scope database and the websites. While the information obtains from the International Monetary Fund about the external variables including the GDP growth and inflation. Authors employ the generalized method of moments. The findings indicate that Bank's internal variables and economic variables are significantly affecting the bank's profitability, and there is a significant different between the two types of banks. There is inverse impact of non-performing loans on the bank's profitability. Whereas, liquidity is positively and importantly affecting the profitability for the Islamic banks. Capital is significantly affecting the profitability of the conventional banks. Off-balance sheet activities affecting Islamic banks negatively, but affecting the conventional banks positively. Expenditure management efficiency is inversely associated to profitability of the Islamic banks. Islamic banks ownership status is importantly clarifying the profitability indicating that they

are generating slightly higher profits. Economic growth shows that it has impact on the conventional banks performance.

Abduh and Issa (2018) investigate in financial crisis and profitability determining factors that for conventional and Islamic banks in Kuwait banking Industry. The data obtain from nine banks operating in Kuwait (five conventional and four Islamic Banks) across the period 2005-2012. Pooled ordinary least square (OLS) panel data regression use for this study. To measure profitability, the authors use ROA and ROE. Bank size, credit risk, capital strength, bank diversification, liquidity, and efficiency use as bank specific variables. GDP growth, inflation, and financial crisis are the three external variables use to measure macroeconomic condition. The finding indicates that credit risk, liquidity, and efficiency are importantly impact both types of bank's profitability. While GDP growth as one of economic variables is positively and significantly affecting the Islamic banks profitability. Inflation shows it is negatively affecting the profitability in case of conventional banks. Generally, according to the results, bank's performance throughout and after the crisis period indicates that Islamic banking industry have more stability than conventional banking industry.

Zarrouk et al., (2016) investigate to find out if the forces that influencing the profitability in the conventional banking industry are the same forces that influencing the profitability in the Islamic banking industry in MENA region. The authors employ a dynamic panel data model in this study to identify internal and external factors that influence the bank's profitability. They apply the GMM estimator technique in this study. The sample for this study collects from data of 51 Islamic banks operating in the MENA region across the decade from 1994 – 2012. The result show that large number of determinant variables related to bank-specific have significant impact on the profitability for the Islamic banks. As prove by the results, the capital variables are related positively to the profitability of the Islamic banks. But, loan loss provision and costs to total income have inverse

effect on the profitability of the Islamic banks. Moreover, the non-financing activities have a significant impact which leads to produce a higher profit for the selected banks, and those banks consider a good contributor in the economy. The inflation find to be inversely affect the Islamic bank's profitability, however, the real economic activity affect positively the bank's profitability. Also, the investment and economic growth seems to have positive and important effect on the profit of both conventional banks as well as and Islamic banks. Both types of banks seem to have similar results while measuring the capital, asset quality, operations variables and bank's profitability. This is a strong sign that many techniques and tools available in conventional banks industry are also appropriate for the Islamic banking industry. Lastly, the result indicates that higher market capitalization (MK) and Book value per share (BVPS) are negatively impact the Islamic bank profitability.

Recently, Supiyadi et al. (2019) investigate the Islamic banks internal and external determinants of profitability, the sample obtain from Sharia banking industry in Indonesia over the decade 2010 – 2017 for 34 Islamic banks based on 272 observations over the eight years. They use the panel balance data set and fixed effect where bank profitability measures by ROA. The empirical results indicate that the bank internal factors and the economic factors seem to have a strong influence on banks profitability. The bank-features such as; capital adequacy, size of asset, and credit risk are negatively and significantly effect on bank profitability. Whereas, the bank's liquidity indicate that it is positively and significantly affect the profitability. Though, from the external factors as find by the the researcher, only the inflation is positively and significantly affect the bank profitability, whereas GDP is negatively and significantly impact the bank profitability.

Yanikkaya et al., (2018) analyze and compare the dynamics of both types of banks namely (Islamic and conventional banks) profitability in the Organization of Islamic Cooperation countries (OIC)

and United Kingdom (UK) for the period from 2007 to 2013. The researchers collect the data from 428 banks including 74 Islamic banks and 354 commercial banks as a sample. ROA and NIM are the variables that use to measure the profitability. Financial services Penetration, agriculture price and crude oil index, asset ratio of non-murabahah assets, and digital banking channels are new variables that introduce in this study. The study indicate that all profitability variables for Islamic and conventional banks are practically not similar; suggesting that the profitability for both types of banks relies on different dynamics. ROA and NIM profitability measures seem to be not constant for the studied time. As per the study, both of them indicate that they haven't significant association with economic and country-specific variables. In addition to that, the empirical results indicate how effectively the development of the alternative channels and the new products improving the profitability of the Islamic banks.

CHAPTER 3

DATA, METHODOLOGY AND RESEARCH HYPOTHESES

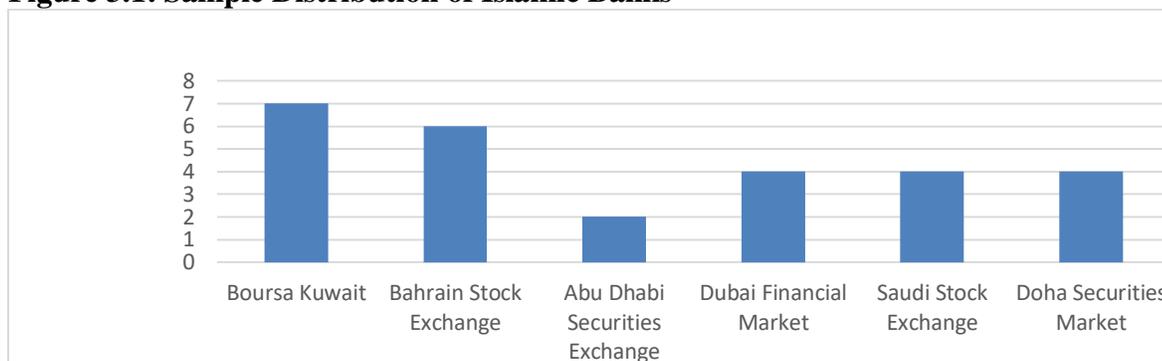
3.1 Introduction

This chapter provides a detailed explanation of the data, variables and methodology employed in the study. First, the chapter discusses the data collection and the sample. Second, the chapter presents the bank-specific and macroeconomic determinates of profitability and the research hypotheses. Finally, the econometric model and the estimation method are discussed.

3.2 The Data

The purpose of the present study is to examine the bank's internal factors and macroeconomic factors of Islamic banks in a region that's consider to play a significant role in the progress of global Islamic finance namely the GCC region. OSIRIS database was used to collect bank-specific data while the World Bank database was used to obtain macroeconomics data. Based on data availability, the study used a sample of 28 Islamic banks listed on seven GCC stock markets namely Boursa Kuwait, Abu Dhabi Securities Exchange, Bahrain Stock Exchange, Saudi Stock Exchange, Dubai Financial Market, Doha Securities Market and Muscat Securities Market. Note that, some of the Islamic financial institutions such as Amlak Finance PJSC were classified by OSIRIS database as an Islamic bank. Figure 3.1 displays the sample distribution of Islamic banks listed through the GCC stock markets. The study period covers 6 years from 2011 to 2016.

Figure 3.1: Sample Distribution of Islamic Banks



To obtain the maximum number of observations available, pooled cross-sectional (28 banks) and time-series (6 years) data is used. Since we have 28 banks and 6 years this yields a total number of 168 bank-year observations (28×6) included in the analysis. Since the number of year-observations is the same for each bank, we have balanced panels.

The use of panel data, or longitudinal data, has several advantages. According to Baltagi (2005) “panel data give more informative data, more variability, less collinearity among the variables, more degrees of freedom and more efficiency” (p.5), “Micro panel data gathered on individuals, firms and households may be more accurately measured than similar variables measured at the macro level” (p.7). Several studies have examined banks’ profitability using panel data (see, for example, Martins et al., 2019; Bouzgarrou et al., 2018; Almaqtari et al., 2018; Alharbi, 2017; Petria et al., 2015; Dietrich and Wanzenried, 2014; Sufian and Kamarudin, 2012; Alper and Anbar, 2011; Alexiou and Sofoklis, 2009, among others). Since each variable is available for each bank, our panel data is balance.

3.3 Measurements of Variables and the Research Hypotheses

This part provides detailed description for the variables used in the present study including both variables (dependent and independent). The anticipated relationship between dependent variable namely (banks' profitability) and the explanatory variables (bank-features and macro-economic factors) will be identified based on the relevant theories and literature. Lastly, formulating testable research hypotheses.

3.3.1 Dependent Variable (Banks' Profitability)

There are various measures for profitability. However, the most common measurement for evaluating bank profitability is the ROA. As Martins et al. (2019, p. 286) stated that, "ROA is perhaps the single most important ratio for comparing the efficiency and operational performance of banks". Thus, in the present study, the dependent variable, bank's profitability will be measured by ROA, calculated as end of year net income divided by total assets. This ratio reflects the bank's ability to generate profit from its overall assets. In other words, this measure shows how efficiently the assets of the bank have been used to generate profit (Dietrich and Wanzenried, 2014). This measure is widely used in the literature as a key ratio for evaluating bank profitability (see, e.g. Martins et al., 2019; Bouzgarrou et al., 2018; Yanikkay et al., 2018; Almaqtari et al., 2018; Kumar and Gupta, 2018; Lahrech et al, 2014; Alharbi, 2017; Dietrich and Wanzenried, 2014; Masood and Ashraf, 2012; Demirgüc-Kunt and Huizinga, 1999, among many others).

3.3.2 Independent Variables and Research Hypotheses

This section will be split into two sub-sections. Section 3.3.2.1 defines bank-specific factors affecting the Islamic banks' profitability in GCC region. Section 3.3.2.2 describes the macroeconomic factors that impact the profitability of the banks. Based on both the theoretical arguments and prior research, the research hypotheses will be formulated.

3.3.2.1 Bank-specific determinants of profitability

The literature has suggested various banks' internal factors affecting bank's profitability including the capital adequacy, operational efficiency, assets quality, financial leverage, liquidity risk, and size.

Capital adequacy ratio (CCADEQR)

Capital adequacy ratio (CADEQR) measures the bank's capital strength. It acts as a buffer in case of adverse circumstances and banks with high CADEQR are more likely to meet their obligations. Rahaman and Akhter (2015, p. 26) suggest that "it could be the case that higher levels of equity would decrease the cost of capital, leading to a positive impact on profitability". Furthermore, Hussien et al. (2019) argue that "well-capitalized banks are in a better position to lend excess fund beyond the regulatory capital requirements and are more efficient in diversifying their investment opportunities, which contribute positively to profitability". Earlier studies by Bourke (1989), Molyneux and Thornton (1992), and Demirgüç-Kunt and Huizinga (1999) find positive relationship between capital ratio and profitability. Most recently, Hussien et al. (2019) report positive relationship between capital adequacy measured by equity to total assets, and ROA for Islamic banks listed in stock markets in the GCC region. Similar findings reported by Daly and Frikha (2017) for Bahrain, and Abduh and Issa (2018) for Kuwait.

The risk-return hypothesis suggests inverse relationship between CADEQR and bank profitability (Dietrich and Wanzenried, 2014). As per risk-return hypothesis, the greater the risk the greater the expected return, thus, higher capital ratio reduces the bank's risk, accordingly reducing profitability. Based on the above debate, the association between CADEQR and profitability can be positive or negative. As per Basel Accords and following Yanikkaya et al. (2018) CADEQR is calculated as "Tier capital plus Tier II Capital divided by Risk Weighted Asset".

Hypothesis 1: CADEQR is positively/negatively associated with banks' profitability.

Operational efficiency (OPEFF)

Operational efficiency (OPEFF) is considered one of the determinants keys for the bank's profitability. OPEFF refers to ability of the bank to control operating costs. That is, better cost management will increase efficiency and reduce expenses, therefore improving profitability (Martins et al., 2019). This suggests inverse association between OPEFF and bank's profitability. The cost-to-income ratio is used to measure operational efficiency or the efficiency in managing expenses (see, e.g. Hussien et al., 2019; Almaqtari et al., 2018; Dietrich and Wanzenried, 2014; Maredza, 2014; Zarrouk et al., 2016, Masood and Ashraf, 2012, among others). A high cost-to-income ratio reflects lower efficiency, hence less profitability.

Hypothesis 2: OPEFF is negatively associated with banks' profitability.

Assets quality (ASETQ)

Islamic banks are unlike conventional banks, they are not involved in lending activities that contain interests (riba or usury). The central principles of Islamic banking are the prohibition of Riba (usury), gharar (uncertainty) and maysir (gambling). Therefore, all the Islamic banks transactions should be complied with Sharia (Islamic Law). In general, the Islamic modes of financing are based on profit

and loss sharing or risk-sharing like Musharakah and Mudarabah. The assets quality proxy is the net loans to total assets ratio (e.g. Martins et al., 2019; Almaqtari et al., 2018; Ahmed, 2017; Masood and Ashraf, 2012). “This variable captures the extent to which a bank is engaged in traditional intermediation activities” (Martins et al., 2019, p.288). According to Masood and Ashraf (2012, p.259), this ratio measures “the banks income source and expected to affect the bank profitability positively except the bank is at unbearable level of risk”. They report an important and positive association between assets quality measured by loans to total assets, and Islamic banks profitability.

Hypothesis 3: ASETQ is positively associated with banks' profitability.

Financial leverage (FLEVER)

Financial leverage is the use of debt financing by the company to finance its assets. The standard measure of financial leverage is the debt-to-equity ratio (Abubakar, 2015). In line with prior research by Masood and Ashraf (2012), debt-to-equity ratio is for Islamic banks used to measure their financial leverage. Athanasoglou et al. (2008, p.126) state that “Banks with lower leverage (higher equity) will generally report higher ROA, but lower ROE”. This suggests an inverse association between leverage and banks' profitability as measured by ROA.

Hypothesis 4: FLEVER is inversely related to banks' profitability.

Bank size (BSIZE)

Bank size is another vital determinant of profitability (Dietrich and Wanzenried, 2014; Athanasoglou et al., 2008). An obvious proxy for the bank size is total assets (see, e.g., Athanasoglou et al., 2008; Pasiouras and Kosmiou, 2007; Demirgüç-Kunt and Huizinga, 1999; Almaqtari et al., 2018; Hussien et al., 2019). Following many of the previous studies, the natural logarithm of the total assets

(BSIZE) is used to measure bank size (Hussien et al., 2019; Martins et al., 2019; Almaqtari et al., 2018). According to Athanasoglou et al. (2008, p. 123). “Size is introduced to account for existing economies or diseconomies of scale in the market”. Hussien et al. (2019, p. 409) specify that “large banks enjoy the benefit of economies of scale, which can reduce cost of inputs, and enjoy the benefit of economies of scope, which results in product diversification and accessibility to advanced markets”. They find positive and significant connection between bank size and profitability (ROA) for a sample of GCC Islamic banks throughout the global financial crisis. Similarly, the results of Yanikkaya et al. (2018), Alharbi (2017) and Masood and Ashraf (2012) reveal significant and positive association between bank size and ROA.

The above discussion suggests positive association between BSIZE and profitability. However, Athanasoglou et al. (2008, p. 125) show that “the effect of size is non-linear, with profitability initially increasing with size and then declining”. That is, up to certain levels, the relationship between BSIZE and profitability is positive then it turns to be negative. To control for this non-linear relationship, the size square (BSIZESQ) is included (Athanasoglou et al. 2008). To prove this argument BSIZE should be positive and significant and BSIZESQ should be negative and significant.

Hypothesis 5: BSIZE (BSIZESQ) is positively (negatively) associated with banks' profitability.

Liquidity risk (LIQRISK)

Liquidity risk (LIQRISK) is another factor suggested by the literature as a bank-specific factor affecting the bank's profitability. The term liquidity refers to the bank's ability to meet its short-term obligations when they fall due (see, e.g. Pasiouras and Kosmiou, 2007). Liquidity risk arises when a bank is unable to liquidate its assets without incurring losses or in other words when a bank is

unable to sell its assets, as needed, at rational price. Poor liquidity is a main reason of bank failure (Athanasoglou et al., 2008). Based of limited Islamic money market instruments and less-developed infrastructure, Islamic banks are subject to greater liquidity risk comparing to the conventional banks (Ali, 2013).

The present study measures liquidity risk by the liquidity gap ratio, which can be defined as the maturity mismatch between assets and liability. Following Dezfouli et al. (2014), the calculation of liquidity gap ratio is $(\text{total assets} - \text{total liabilities}) - (\text{fixed assets} - \text{equity})$ divided by total assets. Dezfouli et al. (2014) find negative association between this ratio and the profitability of the bank, measured by ROA. According to Kashif, Khan and Syed (2013, p. 65) “The liquidity gap displays the maturity gap between assets and liabilities, so higher liquidity gap will disturb and affect the performance of the banking industry negatively”. Khasif et al. report negative association between liquidity gap and the profitability of the Pakistani banks. Earlier studies by similarly, Molyneux and Thornton (1992) show weak negative association between liquidity ratios and profitability of European banks while Bourke (1989) finds opposite results.

Hypothesis 6: LIQRISK is negatively associated with banks' profitability.

3.3.2.2 Macroeconomic determinants of profitability

In line with previous studies including Mirzaei et al., (2013); Pasiouras and Kosmidou (2007); Bouzgarrou et al. (2018); Dietrich and Wanzenried (2014); Mokni and Rachdi (2014); Masood and Ashraf (2012), among many others, this research will inspect in the effect of two macro-economic factors on the profitability of the bank's namely inflation and gross domestic product (GDP) growth.

Inflation rate (INFR)

Inflation is believed to be a vital macroeconomic determining factor of bank profitability. High levels of inflation may lead to greater costs and greater income. For example; if the income for the bank grows faster (slower) than its costs, the inflation will have positive (negative) effect on the profitability (Bouzgarrou et al., 2018). As stated by Pasiouras and Kosmidou (2007), if a bank can forecast inflation, it can adjust interest rates leading to faster growth in its revenues than costs, hence inflation positively influences profitability (studies found positive impact, e.g. Pasiouras and Kosmidou, 2007, Dietrich and Wanzenried, 2014, Brouke, 1989; Molyneux and Thornton; 1992). However, if a bank cannot predict inflation and does not adjust appropriately the interest rates, the costs of the bank will raise faster than its revenues, hence inflation adversely affect profitability (studies reported negative impact, e.g. Sufian and Chong, 2008; Almaqtari et al. 2019; Bouzgarrou et al., 2018).

Hypothesis 7: INFR is positively/negatively associated with banks' profitability.

GDP growth (GDPG)

Finally, GDP growth is another macroeconomic factor is to be considered as a determinant of banks' profitability. Generally, this macroeconomic factor is used to measure economic growth and to control for the business cycle fluctuations, which ultimately affect the banking system performance (Dietrich and Wanzenried, 2014). Economic growth leads to expansion in the economic activities, which may result in boosting the demand for loans, thereby enhancing banks' profitability (Bouzgarrou et al., 2018). Moreover, the credit risk will be lower during the economic expansion. However, "poor economic conditions can worsen the quality of the loan portfolio, generating credit losses and increasing the provisions that banks need to hold, thereby reducing banking profitability" (Martins et al., 2019, p.289). Prior research documents a positive association between the growth of

GDP and profitability of the banks' (e.g. Dietrich and Wanzenried, 2014, Hussien et al., 2019; Bouzgarrou et al., 2018; Zarrouk et al., 2016; Pasiouras and Kosmidou, 2007).

Hypothesis 8: GDPG is positively associated with the banks' profitability.

Table 3.1 below summarizes both dependent and independent variables used in the study and their expected relationship.

Table 3.1: Summary of variables used in the study

| Variable | Notation | Measurement | Expected relationship |
|-----------------------------------|----------|---|-----------------------|
| Bank profitability | ROA | Return on total assets | Dependent variable |
| Bank-specific determinants | | | |
| Capital adequacy ratio | CADEQR | Tier I capital plus Tier II Capital divided by Risk Weighted Asset | Positive/Negative |
| Operational efficiency | OPEFF | Cost-to-income ratio | Negative |
| Assets quality | ASETQ | The ratio of net loans to total assets | Positive |
| Financial leverage | FLEV | Debt-to-equity ratio | Negative |
| Bank size | BSIZE | Natural log of total assets | Positive |
| Square of bank size | BSIZESQ | (Natural log of total assets) ² | Negative |
| Liquidity risk | LIQRISK | liquidity gap ratio, calculated as (total assets - total liabilities) - (fixed assets - equity) divided by total assets | Negative |
| Macroeconomic determinants | | | |
| Inflation rate | INFR | Annual inflation rate | Positive/Negative |
| GDP growth | GDPG | Natural log of GDP | Positive |

3.4 The Empirical Model and Estimation Method

To examine the impact of bank-features and macroeconomics variables on the profitability of the Islamic banks' within the GCC context, the literature often suggests the following model (see, e.g. Almaqtari et al., 2018):

$$\text{Bank's Profitability} = f(\text{bank-specific determinants, Macroeconomic determinants}) \quad (3.1)$$

Where bank's profitability is a function of bank-specific and macroeconomic determinants. More specifically, based on the research hypotheses developed in Section 3.3, the following model will be estimated, for bank i (28 banks) in period t (1-6 years):

$$\begin{aligned} ROA = & \beta_0 + \beta_1 CADEQR + \beta_2 OPEFF + \beta_3 ASETQ + \beta_4 FLEVR + \beta_5 BSIZE + \\ & \beta_6 BSIZESQ + \beta_7 LIQRISK + \beta_8 INFR + \beta_9 GDPG + \varepsilon \end{aligned} \quad (3.2)$$

Where the variables are defined in Table 3.1 above, β_0 is the intercept, $\beta_1 - \beta_9$ regression coefficients, ε is the error term.

Following previous studies for example Ashraf and Masood (2012), Supiyadi et al. (2019) and Almazari (2013), Abduh and Issa (2018), Equation (3.2) is estimated by pooled ordinary least squares (OLS) regression.

CHAPTER 4

RESULTS AND DISCUSSION

4.1 Introduction

This chapter provides detailed discussion of the results of the regression model. First, the chapter provides the summary statistics of all variables that used in the analysis. Second, it reports the results of pooled OLS regression. Third, relevant diagnostic tests will be discussed. Finally, the chapter will present in-depth the results discussion to identify the main internal and external factors affecting the GCC bank's profitability. The outcomes are obtained using GRETL statistical software that we studied in Quantitative Methods for Finance module.

4.2 Summary Statistics

Table 4.1 provides summary statistics of the variables that used in the analysis for 28 Islamic banks recorded in the GCC stock markets over the period 2011-2016. The table reports the main summary statistics of central tendency and variation measures namely the mean, median, standard deviation (Std. Dev.), minimum and maximum. The average ROA for the banks studied is 0.992% with a median of 1.17%, minimum of -7.14% and maximum of 7.03%. In their study, Hussien et al. (2019) reported an average ROA of 1.93% of 30 Islamic banks in the GCC countries across the period 2005 - 2011 (before crisis ROA = 3.7% and after crisis ROA = 0.71%), which is close to the one that found our study.

The mean capital adequacy ratio (CADEQR) is 20.6% with a median of 18.7% (Std. Dev. = 6.88%) indicating that GCC Islamic banks are well-capitalized and above the international regulatory requirements of Basel III (8%). In 31 December 2018, the capital adequacy ratio of GCC banks as reported by KPMG is 18.5%. Masud and Ashraf (2012) reported a mean capital adequacy ratio of

16% and standard deviation of 10% for 25 Islamic banks working in 12 countries including 12 banks operating in GCC region as a sample. The mean (median) of the bank size as measured by the log of total asset, is 8.75 (8.96), with standard deviation of 1.36%. Previous study by Hussien et al. (2019) reported an average log total asset of 7.05 for GCC Islamic banks.

Table 4.1: Summary Statistics

| Variable | Mean | Median | Std. Dev. | Minimum | Maximum |
|----------|-------|--------|-----------|----------|---------|
| ROA | 0.992 | 1.17 | 1.69 | -7.14 | 7.03 |
| CADEQR | 20.6 | 18.7 | 6.88 | 11.6 | 47.5 |
| OPEFF | 60.6 | 61.8 | 18.5 | 21.2 | 92.4 |
| ASETQ | 53.0 | 58.9 | 18.7 | 1.44 | 81.3 |
| BSIZE | 8.75 | 8.96 | 1.36 | 5.91 | 11.4 |
| BSIZESQ | 78.4 | 80.3 | 23.6 | 35.0 | 130.3 |
| FLEV | 0.111 | 0.0693 | 0.116 | 0.000285 | 0.626 |
| LIQRISK | 0.405 | 0.282 | 0.350 | -0.0170 | 1.96 |
| INFR | 2.64 | 2.91 | 1.14 | -0.400 | 4.76 |
| GDPG | 5.22 | 5.24 | 0.456 | 4.46 | 5.87 |

Notes: ROA is return on assets. CADEQR is capital adequacy ratio. OPEFF is operational efficiency. ASETQ is assets quality. OPEFF is operational efficiency. ASETQ is assets quality. FLEV is financial leverage. BSIZE is bank size. BSIZESQ is square of bank size. FLEV is financial leverage. LIQRISK is liquidity risk. INFR is inflation rate. GDPG is GDP growth.

Table 4.1 also indicates that the average cost-to-income ratio (OPEEF) is 60.6%, which indicate that for the sample studied, the Islamic banks in the GCC region have high costs relative to their income. The mean ratio of loans to total assets (ASETQ) is 53% and standard deviation of 18.7%. The mean inflation rates and GDP growth, measured by log GDP, during the study period 2011-2016 in the GCC countries are 2.64% and 5.22, respectively.

4.3 Testing for Multicollienarity (Correlation Matrix and VIF test)

Table 4.2 shows the correlation matrix of the independent variables included in the regression. The correlation values between the variables are lower than 0.80, expect between BSIZE and BSIZESQ,

indicating that there is no multicollinearity problem. Since the relationship between BSIZE and BSIZESQ is not linear, this will not cause a multicollinearity problem. To make sure, the variance inflation factors (VIF) are calculate for the variables except for BSIZESQ. The results of VIF test reveal that all the values are less than 10 (see Table 4.3).

Table 4.2: Correlation Matrix of Independent Variables

| | <i>CADEQR</i> | <i>OPEFF</i> | <i>ASETQ</i> | <i>BSIZE</i> | <i>BSIZESQ</i> | <i>FLEV</i> | <i>LIQRISK</i> | <i>INFR</i> | <i>GDPG</i> |
|----------------|---------------|--------------|--------------|--------------|----------------|-------------|----------------|-------------|-------------|
| CAEQR | 1 | | | | | | | | |
| OPEFF | 0.2823 | 1 | | | | | | | |
| ASETQ | -0.2245 | -0.3976 | 1 | | | | | | |
| BSIZE | -0.4198 | -0.5863 | 0.5467 | 1 | | | | | |
| BSIZESQ | -0.4043 | -0.5833 | 0.5354 | 0.9966 | 1 | | | | |
| FLEV | -0.2980 | -0.1730 | -0.0552 | 0.0741 | 0.0523 | 1 | | | |
| LIQRISK | 0.4975 | 0.3026 | -0.4161 | -0.6443 | -0.5976 | -0.1902 | 1 | | |
| INFR | -0.0666 | 0.0238 | 0.0181 | 0.0825 | 0.0900 | -0.1872 | 0.0597 | 1 | |
| GDPG | 0.1209 | -0.0599 | 0.0301 | 0.0758 | 0.0729 | 0.0331 | -0.0003 | 0.1033 | 1 |

Notes: ROA is return on assets. CADEQR is capital adequacy ratio. OPEFF is operational efficiency. ASETQ is assets quality. OPEFF is operational efficiency. ASETQ is assets quality. FLEV is financial leverage. BSIZE is bank size. BSIZESQ is square of bank size. FLEV is financial leverage. LIQRISK is liquidity risk. INFR is inflation rate. GDPG is GDP growth.

Table 4.3: Variance Inflation Factors (VIF)

| Variable | VIF |
|-----------------|------------|
| CADEQR | 1.553 |
| OPEFF | 1.669 |
| ASETQ | 1.560 |
| BSIZE | 3.015 |
| FLEV | 1.289 |
| LIQRISK | 2.138 |
| INFR | 1.111 |
| GDPG | 1.394 |

Notes: Minimum possible value = 1.0

Values > 10.0 may indicate a collinearity problem

4.4 Testing for Heteroskedasticity

One of the OLS regression basic assumptions is that the variance of the error term must be constant or homoskedastic. The term heteroskedasticity means that the error term variance is not constant. If the regression suffers from heteroskedasticity it will produce inefficient estimates. To test for heteroskedasticity, the White's test is performed.

If the null hypothesis is rejected, this suggests that there is evidence of the presence of heteroskedasticity problem in the model of the regression. The result of White's test is as follows:

White's test for heteroskedasticity -
Null hypothesis: heteroskedasticity not present (homoscedasticity)
Test statistic: $LM = 71.4618$
with $p\text{-value} = P(\text{Chi-square}(53) > 71.4618) = 0.0462595$

The null hypothesis of homoscedasticity is rejected at 5% level. This indicates that the error term in the model of the regression is not constant. In order to solve this problem, the regression model is estimated with robust standard errors.

4.5 Testing for cross-sectional dependence

Since our sample consist banks located in the same region, the problem of cross-sectional dependency may arise because the GCC countries generally have similar socioeconomic characteristics and affected by similar political and economic factors. According Rodríguez-Caballero (2016, p. 2) “The presence of cross-sectional dependence can noticeably complicate statistical inference in a panel data model”. Therefore, Pesaran CD test is performed to detect this problem. The result of Pesaran CD test suggests that the null of no cross-sectional dependence as shown below is not rejected ($p\text{-value} > 0.05$). Therefore, the regression residuals are not cross-sectionally dependent and there is no evidence of having this problem in the model.

Pesaran CD test for cross-sectional dependence:

Null hypothesis: No cross-sectional dependence

Asymptotic test statistic: $z = -1.19135$

with $p\text{-value} = 0.233515$

4.6 Empirical Results and Discussion

The aim of this study is to inspect the impact of internal and external factors on the Islamic banks profitability in GCC region. As discussed in the methodology chapter, pooled OLS regression is used in order to estimate the empirical model.

Table 4.4 report the result of pooled OLS regression. The F-test for joint significance rejects the null hypothesis that all the coefficients are mutually equal to zero (F-statistic = 13.32968, P-value = 0.0000). The regression R-squared is 0.32 indicating that 32% of the variation in the dependent variable (ROA) is clarified by the independent variables, which suggests that the model reasonably fits the data.

As shown in Table 4.4, the regression results reveal those five bank-specific variables (CADEQR, OPEFF, BSIZE, BSIZESQ, and FLEV) and one macroeconomic variable (GDP) are statistically significant and have impact on Islamic banks profitability in the GCC region. The following section will provide detailed discussion of the results.

**Table 4.4: Pooled OLS, using 168 observations
Included 28 cross-sectional units
Time-series length = 6
Dependent variable: ROA
Robust (HAC) standard errors**

| | <i>Coefficient</i> | <i>Std. Error</i> | <i>t-ratio</i> | <i>p-value</i> | |
|--------------------|--------------------|-------------------|--------------------|----------------|-----|
| const | -13.0384 | 7.14586 | -1.825 | 0.0791 | * |
| CADEQR | -0.0572665 | 0.0265764 | -2.155 | 0.0403 | ** |
| OPEFF | -0.0340909 | 0.00574794 | -5.931 | <0.0001 | *** |
| ASETQ | -0.0165736 | 0.0122646 | -1.351 | 0.1878 | |
| BSIZE | 2.99238 | 1.64169 | 1.823 | 0.0794 | * |
| BSIZESQ | -0.158127 | 0.0890699 | -1.775 | 0.0871 | * |
| FLEV | -1.93071 | 1.02712 | -1.880 | 0.0710 | * |
| LIQRISK | 1.02311 | 0.910158 | 1.124 | 0.2709 | |
| INFR | 0.0938204 | 0.0787703 | 1.191 | 0.2440 | |
| GDPG | 0.751887 | 0.307623 | 2.444 | 0.0213 | ** |
| Mean dependent var | 0.992321 | | S.D. dependent var | 1.691547 | |
| Sum squared resid | 324.8844 | | S.E. of regression | 1.433956 | |
| R-squared | 0.320102 | | Adjusted R-squared | 0.281373 | |
| F(9, 27) | 13.32968 | | P-value(F) | 8.00e-08 | |
| Log-likelihood | -293.7801 | | Akaike criterion | 607.5603 | |
| Schwarz criterion | 638.7999 | | Hannan-Quinn | 620.2388 | |
| rho | 0.346247 | | Durbin-Watson | 1.041717 | |

Notes: ROA is return on assets. CADEQR is capital adequacy ratio. OPEFF is operational efficiency. ASETQ is assets quality. OPEFF is operational efficiency. ASETQ is assets quality. FLEV is financial leverage. BSIZE is bank size. BSIZESQ is square of bank size. FLEV is financial leverage. LIQRISK is liquidity risk. INFR is inflation rate. GDPG is GDP growth.

4.6.1 Bank-specific determinants of Islamic banks profitability

Capital adequacy ratio (CADEQR):

The first bank-specific factor namely capital adequacy ratio (CADEQR) is significant at 5% level (p-value = 0.0403). The negative coefficient of CADEQR indicates that capital adequacy is negatively linked to the profitability of the Islamic banks as measured by ROA. That means, on average, a 1 percentage point increase in CADEQR leads to lower the ROA by 0.057 percentage point. This result is in line with the risk-return hypothesis. This result is inconsistent with Hussien et al. (2019) who reported positive association between capital adequacy and ROA for GCC Islamic

banks. Similarly, Masood and Ashraf (2012) revealed positive association between capital adequacy and Islamic banks ROA in different countries. However, the finding of this study is in line with previous studies of Supiyadi et al. (2019) and Hassan and Ahmed (2019) who found negative association between CADEQR and Islamic bank's profitability in Indonesia and Bangladesh, respectively. For conventional banks, Almazari (2013), Dietrich and Wanzenried (2014) and Martins et al. (2019) reported negative association between capital adequacy ratio and ROA.

Operational efficiency (OPEFF)

As expected, the coefficient of operational efficiency (OPEFF) as measured by cost-to-income ratio is found to be negative and highly significant (p-value = 0.0001). This indicates that OPEFF is negatively related to Islamic banks profitability. On average, if the cost-to-income ratio increased by 1 percentage point, the ROA will decrease by 0.034 percentage point. That is, the higher the cost-to-income ratio (higher overhead costs or lower operational efficiency) the lower the bank profitability. The evidence shows that GCC Islamic banks need to improve its operational efficiency or control their costs in order to boost their profitability. Other studies including Hassan and Ahmed (2019) and Zarrouk et al. (2016) reported negative association between cost to income ratio and the profitability in the GCC Islamic bank's. Similar results were reported for conventional banks (e.g. Dietrich and Wanzenried, 2014, Pasiouras and Kosmidou, 2007; Martins et al.; 2019.; Alexiou and Sofoklis, 2009, and Petria et al., 2015).

Assets quality (ASETQ)

The variable assets quality (ASETQ) as measured by the ratio of net loans to total assets is found to be insignificant determinant of Islamic banks profitability. The coefficient of ASETQ is negative but statistically not different from zero (p-value = 0.1878). This indicates that the ASETQ is not related to GCC countries Islamic banks' profitability for the sample studied. Alharbi (2017, p.339)

showed similar results and argued that “loans are not the major source of income for Islamic banks and that Islamic banks operate in risky environments, including weak economies and underdeveloped financial legal systems”.

Financial leverage (FLEV)

The results reveal that financial leverage (FLEV) as measured by debt-to-equity ratio is significantly related to Islamic banks' profitability. The coefficient of FLEV is negative, it is statistically significant at 10% level (p-value = 0.0710). This indicates that increasing the financial leverage or financial risk leads to reduce the Islamic bank's ROA. As stated by Athanasoglou et al. (2008, p.126) “Banks with lower leverage (higher equity) will generally report higher ROA, but lower ROE”.

Bank size (BSIZE)

As expected, the coefficient of Bank Size as measured by the natural log of total assets is showing positive. BSIZE is statically significant at 10% level (p-value = 0.0794). This indicates that an increasing in BSIZE is positively correlated with the profitability of the Islamic banks. On Average, the bigger the bank size leads to increase the profitability in case of GCC region Islamic banks. The finding of this study is consistent with previous studies on Islamic banks such as Yanikkaya et al. (2018), Karim et al. (2010), Alharbi (2017), Abduh and Issa (2018), and Masood and Ashraf (2012) Also the same results reported for the conventional bank including Alexiou and Sofoklis (2009), Alper and Anbar (2011), Almaqtari et al. (2019), Sufian and Kamarudin (2012), and Almazari (2013), among others.

Square of bank size (BSIZESQ)

As hypothesized, the coefficient of Square of bank size is negative and statistically significant, which specifies that the connection between the bank size and bank profitability is non-linear. That is up to certain level of bank size, the association with profitability is positive (advantage of economies of scale), then this relationship may turn to be negative because of diseconomies of scale (increase in the average cost per unit due to large size). This result is in line with the study of Athanasoglou et al. (2008).

Liquidity risk (LIQRISK)

The coefficient of liquidity risk (LIQRISK) as measured by liquidity gap ratio that calculated as $(\text{total assets} - \text{total liabilities}) - (\text{fixed assets} - \text{equity})$ divided by total assets is found to be positive. However, it is statistically not different from zero (p-value = 0.2709). This suggests that the LIQRISK is not impacting GCC Islamic bank's profitability for the sample studied. The same result was reported by Hussien et al. (2019) in the case of GCC Islamic banks.

4.6.2 Macroeconomics determinants of Islamic banks profitability

Inflation rate (INFR)

The coefficient of inflation rate (INFR) is statistically not different from zero (p-value = 0.2440), which express that the inflation rate and Islamic banks profitability the in GCC region are not statistically associated together. Haque, and Farzana (2018), Masood and Ashraf (2012), and Abduh and Issa (2018) showed the same result in case of Islamic banks. But for conventional banks, the same result found by Petria et al., (2015), Sufian and Kamarudin (2012), Alper and Anbar (2011), and Gilces et al., (2019).

GDP growth (GDPG)

The results reveal that GDP growth (GDPG) is significantly linked with Islamic banks' profitability. As expected, GDPG is statically significant at 5% level (p-value = 0.0213). This indicates that a growth in the GDP is positively relating to Islamic banks profitability. Prior researchers reported the same result that there is positive association between GDP growth and conventional banks' profitability (e.g. Bouzgarrou et al., 2018; Pasiouras and Kosmidou; 2007 , Dietrich and Wanzenried, 2014;). While Zarrouk et al. (2016), Karim et al. (2010) and Hussien et al. (2019), in addition to Abduh and Issa (2018) reported the same results for Islamic banks.

4.7 Summary of results

Table 4.5 summarizes the results of the empirical model developed to examine the profitability determinants of Islamic banks in the GCC region. As seen in the table below, the Bank-specific determinants including (capital adequacy ratio, operational efficiency, financial leverage, and square of bank size) are statistically significant and have negative association with the Islamic bank's profitability. But, the bank size is the only tested variable that shows a significant and positive connection with the bank's profitability. Both variables Assets quality and liquidity risk show that they haven't significant relationship with the bank's profitability. Regarding the macroeconomic variables, only GDP growth is positively affecting the profitability in the Islamic banks, while the there is no association between inflation rate and the bank's profitability.

Table 4.5: Summary of Results

| Variable | Notation | Expected relationship | Results |
|-----------------------------------|-----------------|------------------------------|-----------------------|
| Bank-specific determinants | | | |
| Capital adequacy ratio | CADEQR | Positive/Negative | Negative/ Significant |
| Operational efficiency | OPEFF | Negative | Negative/ Significant |
| Assets quality | ASETQ | Positive | Not Significant |
| Financial leverage | FLEV | Negative | Negative/ Significant |
| Bank size | BSIZE | Positive | Positive/ Significant |
| Square of bank size | BSIZESQ | Negative | Negative/ Significant |
| Liquidity risk | LIQRISK | Negative | Not Significant |
| Macroeconomic determinants | | | |
| Inflation rate | INFR | Positive/Negative | Not Significant |
| GDP growth | GDPG | Positive | Positive/ Significant |

CHAPTER 5

SUMMARY AND CONCLUSION

5.1 Introduction

As Islamic banking is improving and spreading in a rapid way, nowadays, it became a key player and competitor to its peers from the conventional banking system which impact significantly the countries' economies especially in Islamic countries and MENA region. In the Islamic countries, many customers are keen to find their financial solutions based on Islamic Shari'ah, this generally the main reason behind the spreading of Islamic banking, considering it is following the principles and rules of Islamic law that forbids (Riba, Gharar, and any unlawful transaction) which is the major difference between both types of finance in Islamic and conventional banks (Mirakhor and Smolo, 2014). As stated by Hasan and Dridi (2010), Islamic banking proved itself and competed its counterparts from the conventional banking after the financial crises in 2008 with more stability and with a bigger size of assets. Of course, Islamic banks' profitability was one of the major contributors for their assets growth, stability and success. Therefore, more research is required to understand what determine Islamic banks profitability.

This dissertation examined what are the internal and external determining factors that could affect the profitability of the Islamic banks operating in the GCC countries?, more specifically, which bank-features and macroeconomic variables affecting the Islamic banks profitability?, 28 Islamic banks operating in GCC used as a sample in this study, they are listed in seven GCC stock markets namely Muscat Securities Market, Boursa Kuwait, Abu Dhabi Securities Exchange, Bahrain Stock Exchange, Saudi Stock Exchange, Dubai Financial Market, and Doha Securities Market. The study

period covers 6 years from 2011 to 2016. Pooled OLS regression is used to estimate the empirical model. This research used the ratio of ROA as a proxy of the profitability for Islamic banks. The explanatory variables included in the regression model are bank's internal and external factors that affecting the profitability. The tested independent internal variables are capital adequacy ratio, operational efficiency, assets quality, financial leverage, bank size, and liquidity risk, whereas the tested external factors are inflation rate and the GDP growth.

Chapter one presented the introduction of the dissertation. First, it provides a general background about the study. Second, the significance of the study was highlighted. Due to lack of studies on this particular topic within the GCC context, this study contributes to the existing body of knowledge. It also showed the aim and objectives for this research in addition to research questions that identified the determining variables affecting the GCC Islamic banks profitability. The introduction also included the Islamic banking and finance historical background, globalization of Islamic banking including GCC countries, and organization of the dissertation.

Chapter two critically discussed the literature review on the banks profitability internal and external determining factors. It reviewed prior research on Islamic and conventional banks. The chapter showed that there is gap in literature since there is lack of studies within the GCC context, this study attempted to fill this gap.

Chapter three discussed the data, methodology and research hypotheses. It provided a detailed explanation about the data, variables and methodology employed in the study. It discussed the data collection and the sample. The chapter presented the bank-specific and macroeconomic determinates of profitability and the research hypotheses. The study developed eight research hypotheses. Finally, the econometric model and the estimation method are discussed.

Chapter four reports the results and discussion of findings. The regression results demonstrate that bank internal variables including capital adequacy ratio, operational efficiency, and financial leverage are statistically significant and have negative association with the Islamic banks profitability. The bank size is the only tested variable that positively and significantly has relationship with the banks' profitability. The study proves that the correlation between bank's size and profitability is nonlinear. Assets quality and liquidity risk show that they are insignificant determinants of Islamic banks' profitability. Regarding the macroeconomic variables, only GDP growths show that it is positively and significantly related to Islamic banks profitability, while the inflation rate is not associated with Islamic banks' profitability for the sample studied.

5.2 Practical Implications and Recommendation

The present dissertation provided several practical implications. Islamic banks managers in the GCC region should focus on the factors that are found to be related to profitability. Considering the capital adequacy ratio is statistically significant and have inverse association with profitability in the Islamic banks, and since the GCC Islamic banks are well chaptalized and their capital adequacy ratio (about 20% in the sample studied) which is higher than requirements recommended by Basel III accord (8%), therefore, it is suggested not to maintain a capital adequacy ratio higher than Basel III requirements because it will have negative effect on Islamic banks profitability. Operational efficiency showed that it has negative association with the profitability in the GCC Islamic banks. Therefore, it is recommended to improve their efficiency by reducing the overhead cost and have more control over the cost since it has been observed that the cost to income ratio for the sample studied is about 60%. For example banks can reduce their cost by merging their units or branches. Also, banks may rely on outsourcing rather depend on the bank staff especially for the inefficient units and operations. Furthermore, the finding shows that there is positive relation between bank size

and Islamic bank's profitability which suggests that the banks are benefiting from the economies of scale. However, this relationship is found to be nonlinear indicating that increasing the bank size above a certain level will have negative effect on profitability (diseconomies of scale). As the present study about the Islamic banks in GCC region that have wealthy economies, It is recommended for the banks to be more focused in innovation of products supported by service and technology. Providing a strong atmosphere for innovation is helping the banks to remain their basics strong and solid which lead to healthy increases in returns and earnings. For example, they have to improve their digital channels such as opening digital branches rather than operating traditional branches that require more staff and extra cost, also to adopt a new era and latest improvements on technology that provides high standards and quality of service such as innovative the XTM service that allowing audio communication and visual options.

Bank-specific variable namely assets quality that measured by net loan to total assets indicates that it is not significantly related to banks profitability, thus, the banks may try to seek for alternative solutions by finding other sources to generate more income and enhance their profitability.

Finally, Islamic banks managers have to focus on the macroeconomic determinants in particular GDP growth and the economic conditions because it was found positively related to banks profitability. They should always observe the economic conditions and set strategies that in line with the economic environment and factors that affect the overall economy.

5.3 Future research and limitations of the study

This study provides empirical evidence on Islamic banks profitability determining factors in the GCC region. This research can be developed further to include other Islamic banks in other regions around the world especially the MENA region. Future research can extend the present study and

conduct comparative studies between Islamic and conventional banks. Furthermore, future studies may include other internal factors and other external factors that affecting the banks profitability.

Like any other studies, this study has some limitations. For example, the study considered relatively small sample size and short time series period. Future research can use larger sample and longer time period. Another limitation is related to the availability of Islamic banks data. Finally, the current study used simple OLS regression while future research can employ more advanced estimation methods.

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