QATAR UNIVERSITY

COLLEGE OF BUSINESS AND ECONOMICS

THE IMPACT OF CAMELS FRAMEWORK ON THE BANK'S MARKET PERFORMANCE

BY

AISHA RASHID ALKUBAISI

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COMMITTEE PAGE

The members of the Committee approve the Project of Aisha Alkubaisi

defended on 07/01/2018.

_____

Professor Adam Mohamedali Fadlalla

Thesis/Dissertation Supervisor

_____

Professor Belaid Aouni

Committee Member

ABSTRACT

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Title: The Impact of CAMELS Framework in the Bank's Market Performance

Supervisor of Project: Prof. Adam, Mohamedali, Fadlalla.

The aim of this study is to evaluate the overall financial situation, strengths, and weaknesses of the Qatari banks listed on Qatar stock exchange by using the CAMELS framework and to analyze relationship between the CAMELS framework indicators and the bank's stock market price. The sample used in this study consists of eight publicly listed Qatari banks. Three ratios were used for each CAMELS framework indicator. The analysis consists of several parts: descriptive analysis, scoring, Islamic Vs. conventional banks, comparative analysis and regression. The study concludes that out of the 18 ratios only five have statistically significant impact on the banks stock market price.

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INTRODUCTION

Qatari economy witnessed a major development in recent years due to the increase of population and the expansion of hydrocarbons and infrastructure projects. This expansion in the whole economy led to an expansion in the banking sector in Qatar. This expansion can have many positive or negative impact in the bank's financial health and market performance. There are many ways to evaluate and analyze the bank's performance such as CAMELS, Balance Score Card, DEA, etc. The most common method is the CAMELS framework which was established in 1979 by the Uniform Financial Institutions Rating System (UFIRS) and was implemented in U.S. banking institutions, and later globally, following a recommendation by the U.S. Federal Reserve. At the beginning, the system became internationally known with the abbreviation CAMEL, reflecting five assessment areas: capital, asset quality, management, earnings and liquidity. But in 1995 the Federal Reserve and the OCC improved the CAMEL by adding "S" which stands for sensitivity to Market Risk which makes it CAMELS. This paper aims to evaluate eight listed banks in Qatar stock exchange by following the CAMELS framework. Five of these banks are conventional banks and the remaining three are Islamic banks. The study result in a model designed based on the CAMELS framework in order to financially evaluate the bank's performance. Different ratios are used with respect to each indicator in the CAMELS framework. An analysis for each ratio will be stated. Statistical tools will be used to test the relationship between the CAMELS score and the bank's market performance.

This study is different from previous studies in the following ways:

- To the best of our knowledge, this is the first comprehensive CAMELS framework study in Qatar.

- The uniqueness of the study is the link between CAMELS framework and market performance.
- To the best of our knowledge, in the sensitivity to the market risk indicator three meaningful ratios were created and used for the first time.

LITERATURE REVIEW

According to (Sekar M. and Gowri M., 2015) a bank's performance was defined as efficiency, liquidity, and profitability. While (DR. U.JERINABI, 2013) defined it as productivity and profitability. (Hirofumi Fukuyama and William L. Weber, 2015) defined a bank's performance as efficiency and productivity. Also (Dr. Shalini Aggarwal and Tanu, 2013) defined the bank's performance as its profitability.

In the MENA region (Mohammad Bitar, Wadad Saad, Mohammed Benlemlih,2016) used profitability and efficiency as determinants of the performance, where they examined the relationship between capital requirements and bank risk and performance. (Guglielmo Maria Caporale, Suman Lodh, Monomita Nandy, 2017) used return on average assets as a determinant of the performance in finding how global financial crisis impacted the MENA region bank's performance. In the GCC (Ramakrishnan Ramanathan, 2007) measured the bank's performance by the efficiency of the bank through data envelopment analysis (DEA) and Malmquist productivity index methods. In Kuwait (Mejbel Al-Saidi and Bader Al-Shammari,2013) defined the performance as Tobin's Q (book value of debt + market value of common stock/total assets) and return on asset while the independent variables are non-executive director, family directors, role duality and board size; their study was designed to examine the relationship between board composition and bank performance. In Dubai (Attiea Marie, Amjad Al-Nasser and Mohamed Ibrahim, 2013) defined the performance of the bank as: operational, profitability and quality. In Qatar (Ali Mirzaei, Tomoe Moore, 2015) defined bank performance measures of competition, efficiency, profitability and stability; where their linked performance of the bank to economic growth. Many studies were conducted in evaluating the banks performance, and several methods

were used. (Vuslat Us, 2015) used random effect model with several variables such as: capital adequacy, asset quality, profitability and income-expenditure structure. (Satish Sharma, Mikhail Shebalkov and Andrey Yukhanaev,2016) focused on risk-adjusted performance indicators -such as risk adjusted return on capital, return on risk adjusted capital and risk adjusted return on risk adjusted capital -instead of the traditional performance indicators. Additionally (El Mehdi Ferrouhi, 2014) used four bank's performance ratios, six liquidity ratios, five specific determinants and five macroeconomic determinants of bank performance. Also (Dr. Vijay Kumar Sharma and Anuj Kumar, 2013) used total income as a dependent variable while total assets, net-interest margin, total expenditure and total business as independent variables. All of these studies used methods other than CAMELS in assessing the performance of the banks.

In evaluating the Islamic banks performance (Muhammad Faza Firdaus and Muhamad Nadratuzzaman Hosen, 2013) used modified CAMELS framework by excluding the management efficiency factor. While (Aasma Ashraf and Yasir Bin Tariq, 2016) used Bankometer model and a z-score model. (Abdul Rashid and Sana Jabeen, 2016) created the financial performance index (FPI) based on CAMELS' ratios and ran the computed index in order to find the determinants of the bank's performance. (Jill Johnes, Marwan Izzeldin, Vasileios Pappas, 2013) only examined the banks efficacy as a performance indicator.

(Hasan Dincer, Gulsah Gencer, Nazife Orhan and Kevser Sahinbas, 2011), (Malihe Rostami ,2015), (Prof. Lynn L. de Claro,2013), (Mihir Dash and Annyesha Das,2013), (Maya Indriastuti,Luluk Muhimatul Ifada,2016), (Elizabeth K. Kiser , Robin A. Prager & Jason R. Scott, 2015) and (A. SARATH BABU and RUCHI MEHROTRA,2015) evaluated

the banks performance by using the CAMELS framework with the six indicators – capital adequacy, asset quality, management efficiency, earnings, liquidity and sensitivity to the market risk, but (Golam Mohiuddin, 2014), (Mohammad Kamrul Ahsan,2016),(Ahlem-Selma MESSAI and Fathi JOUINI, 2013), (Chen Jo-Hui and Hsu Carol Ying-Yu, 2016), (Gazia Jamil Sayed and Najmus Sahar Sayed, 2013), (Prabhjot Kaur,2015), (Vijay Kumar Sharma,2017),(Janeth N. Isanzu,2016), (Dr. Tesfatsion Sahlu Desta, 2016), (Gowri. M and Ramya. G, 2013), (A. Sambaraju, Durgaprasad Navulia and Dr. G. Sunitha, 2016), (Pankaj Chadha and Vanitha Chawla, 2013) and (Mukesh Keshari, 2015) ignored the impact of the market risk on the sample as their studies eliminated the sixth indicator which is the sensitivity to the market risk. (Șargu Alina Camelia and Roman Angela, 2013) used a modified CAMELS model which replaces the sensitivity to the market risk with the size of the bank. Table 01 exhibits the ratios used in the CAMELS framework through the literature.

Table 01: CAMELS framework through the literature.

No.	Article Ref.	Capital Adequacy	Asset Quality	Management Efficiency	Earnings and Profitability	Liquidity	Sensitivity to the Market Risk
1	**(Hasan Dincer, Gulsah Gencer, Nazife Orhan & Kevser Sahinbas, 2011)**	Shareholder's Equity/(Loan + Market + Principle Amount Subject to Operational Risk Shareholder's Equity /Total Assets Shareholder's Equity /(Deposit + Non-deposit Sources).	Financial Assets (Net)/Total Assets Total Loans and Receivables/Total Assets Permanent Assets/Total Assets	interest expenses/total expenses interest incomes/total incomes total incomes/total expenses.	Net Profit (Losses)/Total Assets Net Profit (Losses)/Total Shareholders' Equity.	liquid assets/total assets liquid assets/short term liabilities liquid assets/(deposit + non- deposit sources)	Total Assets/ Sector Assets Total Loans and Receivables/ Sector Loans and Receivables Total Deposits/ Sector Deposits
2	**(Prof. Lynn L. de Claro,2013)**	Total Capital to Total Risk Assets (CAR)	Loans to Total Assets	Operating Expense to Operating Income	Return on Average Capital/Return on Average Equity (ROE) Return on Average Total Assets (ROA)	Liquid Assets to Deposits	Interest Expense to Deposits

No.	Article Ref.	Capital Adequacy	Asset Quality	Management Efficiency	Earnings and Profitability	Liquidity	Sensitivity to the Market Risk
3	**(Mihir Dash & Annyesha Das,2013)**	Tier I capital Tier II capital capital adequacy ratio	gross non-performing assets net non-performing assets net non-performing assets to total advances ratio	total investments to total assets ratio total advances to total deposits ratio business per employee profit after tax per employee	return on net worth operating profit to average working fund ratio profit after tax to total assets ratio	the government securities to total investments ratio government securities to total assets ratio	beta
4	**(A. Sarath Babu & Ruchimehrotra,2014)**	coverage ratio CAR debt-equity ratio	net NPA to total advances ratio	total investments to total assets ratio, total advances to total deposits, business per employee profit per employee	interest spread to total assets ratio. Return on net worth PAT to total assets ratio	Government securities to total investment government securities to total assets ratio	Beta

*Continued.

No.	Article Ref.	Capital Adequacy	Asset Quality	Management Efficiency	Earnings and Profitability	Liquidity	Sensitivity to the Market Risk
5	(Malihe Rostami ,2015)	Total shareholders 'equity/Total risk- weighted assets Total complementary capital/Total risk- weighted assets Total capital base/ Total complementary capital Liabilities/ Equity Deposits/ Equity	Rate base assets /Total assets Bank shares of income/ Total assets Deposits/ Total assets Fix assets/ Equity Fix assets/ Total assets	Net profit/ Number of branches Total assets/ Number of branches Total liabilities/ Number of branches Total deposits/ Number of branches Total loans/ Number of branches	Fees and commissions/ Total Income Loan income/ Loans Loan income/ Deposit cost Cost/ Income Deposit cost/ Deposit	(Investment/ Total assets) Current liquidity/ Deposits Security/ Total assets Current liquidity/ (Demand deposits) Liquidity/ Assets	(Bad debts + Overdue)/ Loans Long term deposits/ Deposits Demand deposits/ Deposit Doubtful debts/Loans Provisions of loan/Loans
6	(Maya Indriastuti & Luluk Muhimatul Ifada,2016)	Capital Adequacy Ratio	Non-Productive Assets ratio	Net Profit Margin	ROA	Quick ratio	Net Open Position

Based on the above literature review this study will test the following hypotheses:

H1: Capital adequacy impacts the market price.

H2: Assets quality impacts the market price.

H3: Management efficiency impacts the market price.

H4: Earnings and profitability impacts the market price.

H5: Liquidity impacts the market price.

H6: Sensitivity to the market risk impacts the market price.

METHEDOLOGY

The sample of the study is eight Qatari banks listed on Qatar Stock Exchange. Five are conventional banks and three are Islamic banks. The five conventional banks are: Qatar National Bank, Commercial Bank of Qatar, Doha Bank, Khaliji Bank and Ahli Bank. The three Islamic banks are: Qatar Islamic Bank, Qatar International Islamic Bank and Masraf Alrayan. The use of these eight was due to the availability of data as these banks are listed in Qatar stock exchange and the other listed financial institutions are neither conventional nor Islamic banks, and therefore were excluded from the study.

Qatar National Bank (QNB)

Established in 1964 as the country's first Qatari-owned commercial bank, with an ownership split to 50/50 between the Qatar Investment Authority and the public (Qatar National Bank, 2017). QNB Group has gradually grown to be the biggest bank in Qatar and a leading financial institution in the Middle East and Africa regions. Table 02 provides a five-year summary of total capital, total assets, and net profit of QNB.

Table 02: QNB financial summary.

Year	Total capital ($000)	Total Assets ($000)	Net Profit ($000)
2012	2,073,698	15,162,428	2,313,195
2013	3,073,041	18,390,220	2,619,398
2014	3,101,042	20,737,468	2,888,415
2015	3,620,746	22,868,381	3,111,180
2016	3,674,457	24,815,309	3,408,765

*source SNL.

Commercial Bank of Qatar

Commonly known as Commercial Bank, is a private sector bank operating in Qatar since 1975 (Commercial Bank of Qatar, 2017). The bank offers a range of products and services across retail, and corporate banking divisions. Table 03 provides a five-year summary of total capital, total assets, and net profit of Commercial Bank.

Table 03: CBQ financial summary.

Year	Total capital ($000)	Total Assets ($000)	Net Profit ($000)
2012	4,102,647	21,979,940	552,630
2013	4,546,105	31,061,035	440,915
2014	4,859,433	31,758,663	532,833
2015	4,749,644	33,887,333	393,712
2016	5,300,363	35,804,005	137,701

*source SNL.

Doha Bank

Doha Bank is one of the largest commercial banks in the State of Qatar was established in 1979 and has been steadily reporting a strong growth during the last decade with participative leadership philosophy (Doha Bank, 2017). Doha Bank provides domestic and international banking services for individuals, commercial, corporate and

institutional clients through four business groups. Table 04 provides a five-year summary of total capital, total assets, and net profit of Doha Bank.

Table 04: Doha bank financial summary.

Year	Total capital ($000)	Total Assets ($000)	Net Profit ($000)
2012	2,073,698	15,162,428	358,381
2013	3,095,041	18,390,220	360,518
2014	3,101,042	20,737,468	373,123
2015	3,620,746	22,868,381	371,715
2016	3,674,457	24,815,309	289,415

*source SNL.

Al Khaliji Bank

Started in 2007 Al khaliji is Qatar's pioneer "next generation bank", offering a full range of conventional banking products and services to premium, business, corporate and international customers in Qatar, UAE and France (AlKhaliji Bank, 2007). Table 05 provides a five-year summary of total capital, total assets, and net profit of AlKhaliji Bank.

Table 05: Al Khaliji bank financial summary.

Year	Total capital ($000)	Total Assets ($000)	Net Profit ($000)
2012	1,557,378	9,247,029	140,669
2013	1,547,829	11,329,850	151,368
2014	1,587,876	14,071,308	154,589
2015	1,643,924	15,549,829	171,784
2016	1,931,287	16,640,739	117,158

*source SNL.

Al Ahli Bank

With 34 years of growth and 15 branches in Qatar, Ahli Bank maintains its traditional values, as it embraces change in its many forms. Ahli Bank offers a broad range of products and services spanning corporate banking, retail and private banking, international banking, treasury and investments and brokerage services (Al Ahli bank, 2017). Table 06 provides a five-year summary of total capital, total assets, and net profit of Al Ahli Bank.

Table 06: Al Ahli bank financial summary.

Year	Total capital ($000)	Total Assets ($000)	Net Profit ($000)
2012	945,134	5,658,851	127,745
2013	978,504	7,188,370	144,379
2014	1,145,402	8,617,201	165,125
2015	1,246,631	8,868,223	177,881
2016	1,334,670	10,480,629	173,506

*source SNL.

Qatar Islamic Bank (QIB)

Is the first Islamic bank operating in the country since 1982 and is still the largest today (Qatar Islamic Bank, 2017). QIB's growth strategy is built on its position as a leading Islamic bank with deeply rooted customer relationships and strong engagement with the local communities. Table 07 provides a five-year summary of total capital, total assets, and net profit of QIB.

Table 07: QIB financial summary.

Year	Total capital ($000)	Total Assets ($000)	Net Profit ($000)
2012	3,584,062	20,099,979	309,145
2013	3,754,575	21,241,829	364,075
2014	3,891,604	26,391,274	458,227
2015	4,715,621	34,958,974	557,585
2016	5,491,875	38,400,145	579,698

*source SNL.

Qatar International Islamic Bank (QIIB)

Established in 1991as a privately owned Islamic bank in the State of Qatar providing personal and corporate Islamic banking solutions (Qatar International Islamic Bank, 2017). QIIB remains true to its Qatari heritage and values. The family-friendly attitude and personal approach are some of the many reasons customers choose QIIB as a banking partner for their personal and business needs. Table 08 provides a five-year summary of total capital, total assets, and net profit of QIIB.

Table 08: QIIB financial summary.

Year	Total capital ($000)	Total Assets ($000)	Net Profit ($000)
2012	1,382,995	7,842,874	186,479
2013	1,410,683	9,347,667	206,072
2014	1,474,122	10,544,117	226,791
2015	1,518,111	11,130,953	215,349
2016	1,833,593	11,685,009	215,533

*source SNL.

Masraf Al Rayan

Masraf Al Rayan was established in 2004 and it is the country's fourth-largest bank, and the second-largest sharia-compliant bank in the country (Masraf Al Rayan, 2017). The bank is structured into three main business divisions: retail banking, wholesale banking, and private banking. Table 09 provides a five-year summary of total capital, total assets, and net profit of Masraf Al Rayan.

Table 09: Masraf Alrayan financial summary.

Year	Total capital ($000)	Total Assets ($000)	Net Profit ($000)
2012	2,673,166	16,924,366	417,403
2013	2,939,476	18,274,285	477,632
2014	3,218,503	21,994,252	553,973
2015	3,393,159	22,880,045	556,431
2016	3,353,223	25,135,448	570,177

*source SNL.

In order to assess the banks, we used the CAMELS framework. To accurately assess each indicator, we considered using 3 famous and meaningful ratios for each indicator. The source of these data is SNL database. In in this study, the CAMELS framework consists of the following ratios.

C Capital Adequacy

Tier 1 ratio

Capital adequacy ratio

Leverage ratio

A Asset Quality

Non-performing loans (NPLs) / Total loans ratio

NPLs / Risk-weighted assets ratio

Reserves / NPLs ratio

M Management

Asset growth ratio

Cost to income ratio

Operating expense / total asset ratio

E Earnings

Return on average assets (ROAA) ratio

Return on average equity (ROAE) ratio

Net interest margin ratio

L Liquidity

Loans to deposits ratio

Liquid asset to total assets ratio

Liquid asset to (deposits + short term liabilities) ratio

S Sensitivity

Market risk weighted asset / equity ratio

Market risk weighted asset / total risk weighted asset ratio

Market risk weighted asset/ total assets ratio

Capital adequacy

Capital adequacy is the first indicator in the CAMELS framework and it is the amount of capital the bank has to hold as required by its financial regulator. The three famous ratios used in measuring the bank's capital adequacy are

- Tier 1 ratio: to assess the bank's ability in covering the risk weighted assets from the tier one capital which is the main capital of the bank (common stock, disclosed reserves or retained earnings and non-redeemable non-cumulative preferred stock).

- Capital adequacy ratio: to assess the bank's ability in covering the risk weighted assets from the Tier one capital and Tier two capital (Supplementary capital).
- Leverage ratio: to assess the bank's ability in covering its obligations from its assets.

Asset Quality

Asset quality measures the credit risk part of the banks since loans have the highest default risk, an increasing number of non-performing loans shows a weak asset quality. The three famous ratios used in measuring the bank's asset quality are:

- NPLs / Total loans: to know the proportion of the non-performing loans from the Bank's loans.
- NPLs / Risk-weighted assets: to know the proportion of the non-performing loans from the bank's risk weighted assets.
- Reserves / NPLs: to know the banks' ability in covering the non-performing loans from the loan loss reserve.

Management Efficiency

Management efficiency is a qualitative aspect but it is possible to quantify it by using some ratios that will show the management efficiency, some of these ratios are:

- Asset growth: to assess the ability of the management in growing the bank's assets.
- Cost to income ratio: to assess the management efficiency in generating income comparing that income to its cost.
- Operating expense / Total assets: this ratio assesses the management ability in covering the expenses of operating the bank from its assets.

Earnings and Profitability

Profitability is the key indicator for the banks financial performance since the more profitable the bank is the better its financial performance. The main three ratios for this indicator are the following:

- ROAA: to evaluate how profitable the bank is in comparison to its average assets.
- ROAE: to evaluate how profitable the bank is in comparison to its average equity.
- Net interest margin: to evaluate the net interest income as a percent of average earning assets.

Liquidity:

Liquidity is defined as the extent to which an asset or security can be quickly bought or sold in the market without affecting the asset's price. The main three ratios used to assess the bank's liquidity are:

- Loans to deposits: to evaluate the customer loans as a percent of deposits.
- Liquid assets to total assets: to know the percentage of liquid assets from total assets.
- Liquid assets to (deposits + short term liabilities) to evaluate the bank's ability in covering its short-term obligations from the liquid assets.

Sensitivity to the Market Risk

Market risk is the risk of losses in positions resulting from the market prices movements. The ratios used in this study for measuring the bank's sensitivity to the market risk are the following:

- Market risk weighted assets / equity: to know the bank's ability in covering the market risk from the equity.

- Market risk weighted assets / total risk weighted assets: to know the proportion of the market risk from the total risk.
- Market risk weighted assets / total assets: to know the proportion of the market risk from the total assets.

For each of the eight banks all of these ratios were calculated for the most recent five years (2012-2016). Descriptive Statistics in SPSS will be used to analyze the overall Qatari Banks condition in each indicator. Following, using ranking of various ratios, banks were assigned scores for each year to observe the overall bank's situation compared to each other and over the years. Then Watson Analytics will provide us with a comparative analysis for Islamic and conventional banks for each ratio. After that, also with the use of Watson analytics banks will be compared to each other in each ratio. Finally, Regression analysis tool in SPSS will be used to test the relationship between the CAMELS framework and the Banks market price.

Table 10 summarizes the CAMELS indicators, the chosen ratios for each indicator, and the qualitative assessment for each ratio in terms of bank's soundness.

Table 10: CAMLES framework assessment biases.

	Indicator	Ratios	Impact	Acceptable Range
C	Capital Adequacy	Tier 1 Ratio	The higher the better	>= 12%
		Capital adequacy ratio	The higher the better	>= 15%
		Leverage ratio	The Lower the better	6% - 20%
A	Asset Quality	NPLs / Loans	The Lower the better	<= 5%
		NPLs / Risk-weighted assets	The Lower the better	<= 5%
		Reserves / NPLs	The higher the better	>= 100%
M	Management	Asset growth	The higher the better	>= 15%
		Cost to income ratio	The Lower the better	15%-40%
		Operating expense / total assets	The Lower the better	<= 1%
E	Earnings	ROAA	The higher the better	1.5% - 2%

		ROAE	The higher the better	10% - 20%
		Net interest margin	The higher the better	> 2%
L	Liquidity	Loans to deposits	The lower the better to a certain extent. Explain	50% - 100%
		Liquid Assets to total assets	The higher the better to a certain extent	>= 30%
		Liquid assets to (Deposits +Short-term Liabilities)	The higher the better to a certain extent	>= 40%
S	Sensitivity	Market risk weighted assets / equity	The Lower the better	<=30%
		Market risk weighted assets / total risk weighted assets	The Lower the better	<=10%
		Market risk weighted assets / total assets	The Lower the better	<=5%

ANALYSIS AND DISCUSSION

Descriptive Analysis

In the first part of the analysis an overall evaluation of the Qatari banking system will be presented. The mean of each ratio will be compared to assess whether it's in the optimal range or not. A descriptive analysis for each of the six indicators will be presented separately for the overall sample.

Capital Adequacy

The mean of all Qatari banks for the Tier 1 ratio is 16.08% which is superior since a well capitalize bank should maintain a tier one capital ratio of 12% and above. For the total capital adequacy ratio, the optimal situation is to have 15% and above: here we have 16.78% which indicates a good capital ratio for those Qatari banks. Leverage ratio mean is 10.09% and the minimum that the bank should keep is 6% but not above 20% in order to be well capitalized. Table 11 provides the overall descriptive statistical summary of the capital adequacy ratios.

Table 11: Capital adequacy ratios descriptive statistical summary.

	N	Minimum	Maximum	Mean	Std. Deviation
Tier 1 ratio	40	10.90	21.04	16.08	2.28
Capital adequacy ratio	40	13.51	21.38	16.78	2.12
Leverage ratio	34	7.41	13.69	10.90	1.72

Assets Quality

For the first two ratios in the asset quality the banks should manage to keep them 5% or below. In this sample, we have for NPLs / Loans ratio a mean of 1.71 and for NPLs / Risk-weighted assets ratio a mean of 1.42 both of these ratios consider to be good as it represents a good bank asset quality. Unlike the first two ratios, the third ratio should be 100% or above as it shows the ability of the bank to cover its non-performing loans. In our sample, we have a mean of 106.15% which represent good situation. Table 12 provides the overall descriptive statistical summary of the asset quality ratios.

Table 12: Assets Quality ratios descriptive statistical summary.

	N	**Minimum**	**Maximum**	**Mean**	**Std. Deviation**
NPLs / Loans (gross or amortized)	**40**	**.10**	**5.22**	**1.71**	**1.28**
NPLs / Risk-weighted assets	**40**	.09	3.57	1.42	.94
Reserves / NPLs	40	43.05	407.52	106.15	66.68

Management Efficiency

In the management part to have an efficient management asset growth should be around 15% and in our sample, we have a mean of 15.22% which is considered to be good. In the last two ratios, the lower the better for and the sample means for these ratios is appropriate as it indicates that the operating cost is kept as minimum as possible. Table 13 provides the overall descriptive statistical summary of the Management efficiency ratios.

Table 13: Management efficiency ratios descriptive statistical summary.

	N	Minimum	Maximum	Mean	Std. Deviation
Asset Growth	40	2.25	41.32	15.22	9.41
Cost to income ratio	40	16.82	46.57	30.17	7.67
Operating expense / total assets	40	.53	1.55	.99	.31

Earnings and Profitability

The ROAA mean for banks in Qatar is 1.95% compared to the best performing banks in the world, ROAA should be between (1.5%-2 %) which means the sample represent good return on average assets. ROAE for the sample mean is 13.52% which is considered to be good compared to the best performing banks having (10%-20%) ROAE. Net interest margin should be above 2% to conclude that the bank is efficient in investing their assets, in our sample we have a mean of 2.28%. Table 14 provides the overall descriptive statistical summary of the earnings ratios.

Table 14: Earnings and profitability ratios descriptive statistical summary.

	N	Minimum	Maximum	Mean	Std. Deviation
ROAA	40	.40	2.74	1.95	.54
ROAE	40	2.68	19.52	13.52	3.94
Net Interest Margin	40	1.56	3.19	2.28	.46

Liquidity

Loans to deposit shouldn't be too low (below 50%) or too high (above 100%) a range of 50%-100% is a good Loans to deposit ratio. As too low figure indicates unproductive capital and too high figure indicates vulnerability to any change in the bank deposits.

Liquid assets / Total assets ratio and Liquid assets/ (deposits + short term liabilities) should be 30% and 40% or above in best case scenario, respectively. In this sample, we have Liquid assets / Total assets ratio and Liquid assets / (Deposits + short term liabilities) means equal to 23.21% and 27.92%, respectively. From these two ratios, we can conclude that banks in Qatar might face serious problems with liquidity. Table 15 provides the overall descriptive statistical summary of the Liquidity ratios.

Table 15: Liquidity ratios descriptive statistical summary.

	N	Minimum	Maximum	Mean	Std. Deviation
Loans to deposits	40	19.98	117.84	96.44	16.47
Liquid assets to total assets	40	6.74	54.32	23.21	9.78
Liquid assets to (Deposits + short term liabilities)	40	8.14	66.52	27.92	11.87

Sensitivity to Market Risk

In the three ratios that measure the sensitivity to the market risk, we should keep them at minimum. The first ratio indicates that the sample can cover their market risk weighted

assets by using 22% of the equity. The second ratio represent the proportion of the market risk weighted assets from the total risk weighted assets which is equal to 4.35% in this sample. The third ratio indicates that the sample can cover their market risk weighted assets by using 3.46% of the assets. Overall banks in Qatar are not facing any hard time in managing their market risk. Table 16 provides the overall descriptive statistical summary of the sensitivity to the market risk ratios.

Table 16: Sensitivity to Market Risk ratios descriptive statistical summary.

	N	Minimum	Maximum	Mean	Std. Deviation
Market risk weighted Asset / equity	40	.10	64.44	22.29	19.48
Market risk weighted Asset / total risk weighted asset	40	.02	15.23	4.35	3.96
Market risk weighted Asset/ total assets	40	.01	10.85	3.46	3.17

Bank's scoring

In this part of the analysis we provide a score for each bank based on the CAMELS framework.

Table 17: Each bank score from 2012-2016.

Bank	2012	2013	2014	2015	2016
Ahli	2	2	1	3	1
Alrayan	2	1	2	4	4
CBQ	4	7	7	8	7
Doha	6	8	6	7	6
Khaliji	3	4	5	1	2
QIB	7	6	5	5	5
QIIB	5	3	4	6	6
QNB	1	5	3	2	3

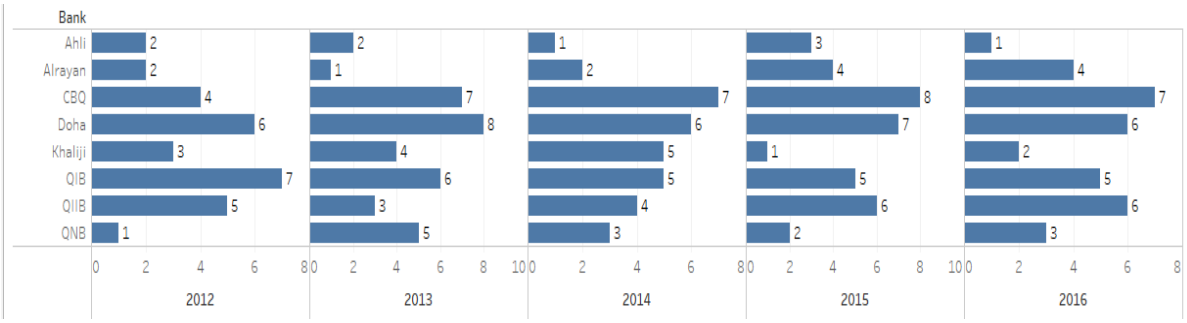

Figure 01: Each bank score from 2012-2016.

From Table 17 and Figure 01 we can see that in 2012 QIB has the highest score but in the period of 2013 -2016 CBQ scored the highest among its competitors. This can show us that CBQ is not in a good position during this period as the higher the score the poorest the performance. And QIB has improved the performance as the score has decreased in 2013.

Table 18: Average score for each bank from 2012-2016.

Bank	Average Score
Ahli	1.8
Al rayan	2.6
CBQ	6.6
Doha	6.6
Khaliji	3
QIB	5.6
QIIB	4.8
QNB	2.8

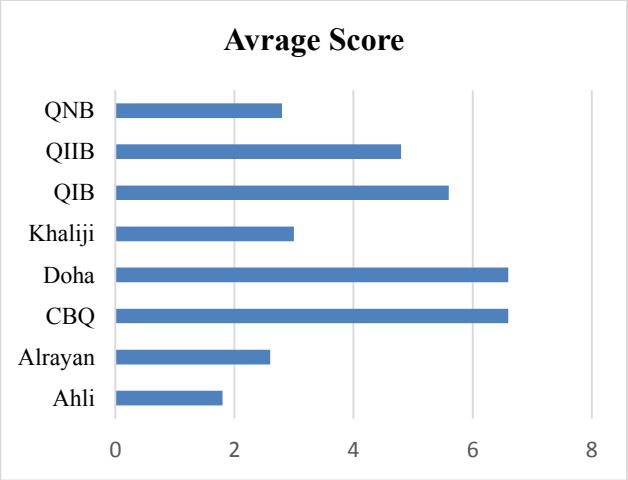

Figure 02: Average score for each bank from2012-2016.

From Table 18 and Figure 02 we can conclude that Al Ahli bank has the best average score compared to the sample. While Doha bank and CBQ have the worst average score. These two banks are conventional banks, from the Islamic banks the bank that got the best score is Masraf Al rayan and QIB got the worst score.

Islamic Vs. conventional Banks

Capital Adequacy

Tier 1 ratio

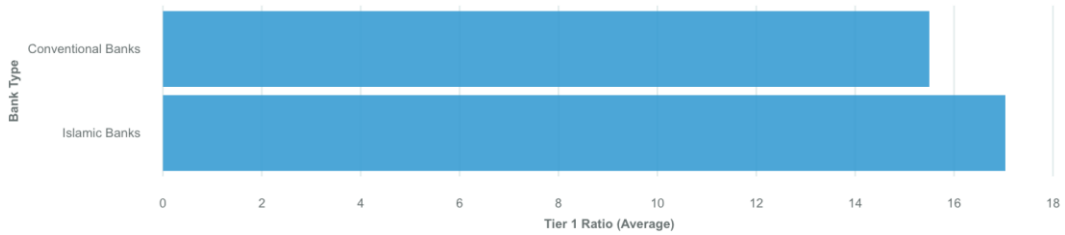

Figure 03: Islamic Vs. conventional banks tier one ratio.

From Figure 03, we can see that comparing Islamic to conventional banks, Islamic has higher Tier one ratio than conventional.

Capital adequacy ratio

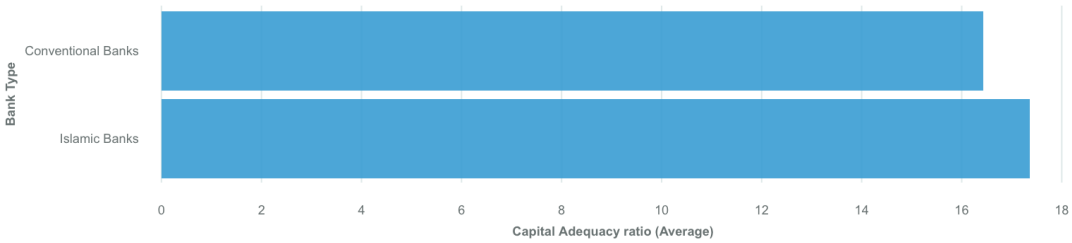

Figure 04: Islamic Vs. conventional banks capital adequacy ratio.

Also as the Figure 03, Figure 04 implies that Islamic banks has higher capital adequacy ratio than conventional banks.

Leverage ratio

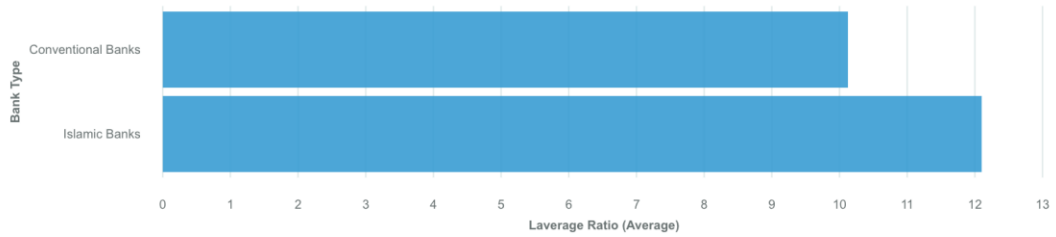

Figure 05: Islamic Vs. conventional banks Leverage ratio.

As the two figures above, Figure 05 Islamic banks has higher leverage ratio than conventional banks. In the capital adequacy indicator, Islamic banks have better ratios than the conventional banks except the leverage ratio but they are still in the acceptable range.

Asset Quality

Non-performing loans (NPLs) / Total loans ratio

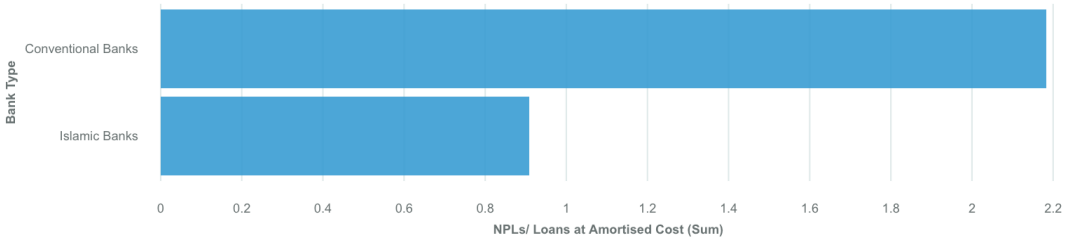

Figure 06: Islamic Vs. conventional banks NPLs / total loans ratio.

In Figure 06, conventional banks have higher Non-performing loans (NPLs) / Total loans ratio than Islamic banks.

NPLs / Risk-weighted assets ratio

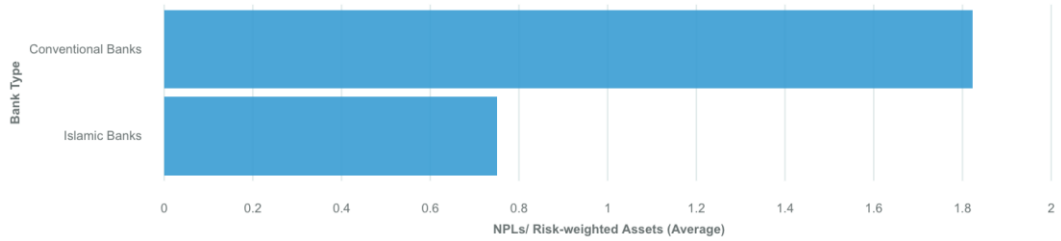

Figure 07: Islamic Vs. conventional banks NPLs / Risk-weighted assets ratio.

Also in Figure 07, conventional banks have higher NPLs / Risk-weighted assets ratio than Islamic banks.

Reserves / NPLs ratio

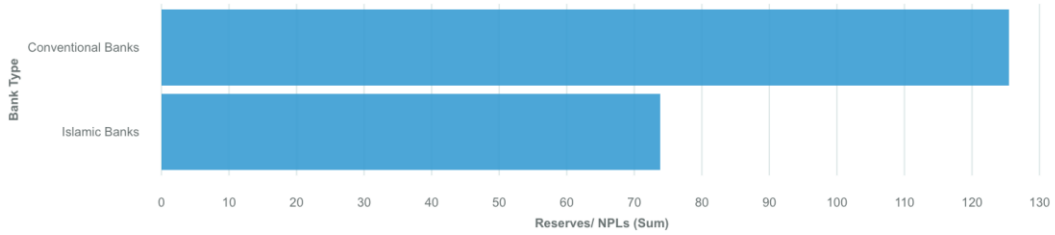

Figure 08: Islamic Vs. conventional banks Reserves / NPLs ratio.

As the previous two figures, Figure 08 implies that conventional banks have higher Reserves / NPLs ratio than Islamic banks. In the assets quality indicator, conventional banks appear to have high NPLs and at the same time it has high reserve to cover those NPLs.

Management

Assets growth ratio

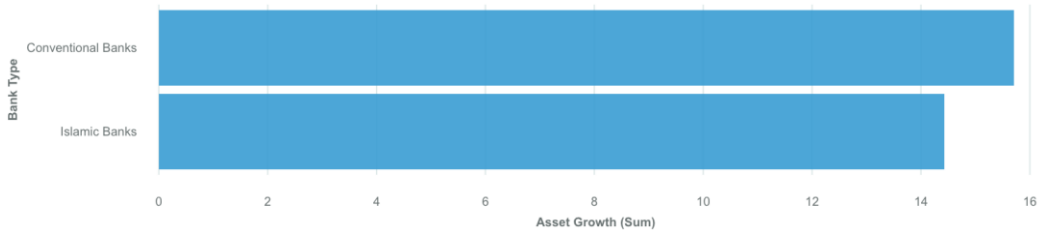

Figure 09: Islamic Vs. conventional banks assets growth ratio.

In the assets growth ratio, conventional banks have higher average than Islamic banks.

Cost to income ratio

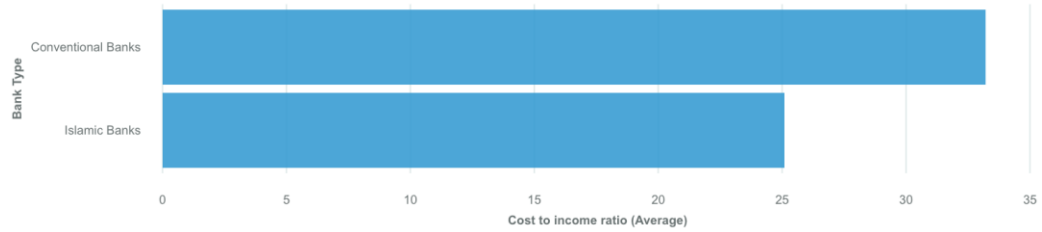

Figure 10: Islamic Vs. conventional banks cost to income ratio.

Also in the cost to income ratio, conventional banks have higher average than Islamic banks.

Operating expense / total asset ratio

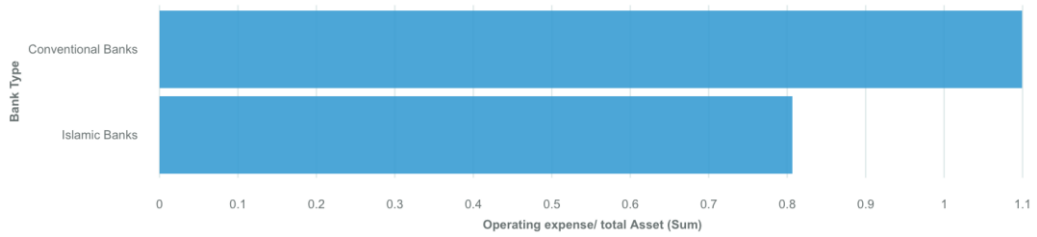

Figure 11: Islamic Vs. conventional banks operating expense / total asset ratio.

As the previous two ratios, in the operating expense to total asset ratio conventional banks have higher ratio than Islamic banks. In the efficiency of the management indicator Islamic banks seems to control their expenses better than conventional banks but in the asset growth conventional banks seems to do better than Islamic banks.

Earnings

Return on average assets (ROAA) ratio

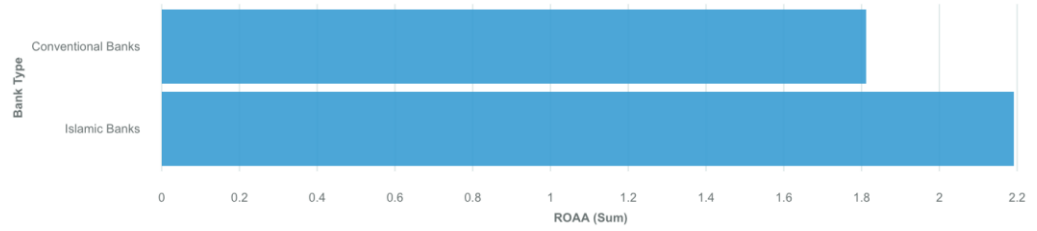

Figure 12: Islamic Vs. conventional banks ROAA ratio.

In the ROAA ratio, Islamic banks have higher Average than conventional banks.

Return on average equity (ROAE) ratio

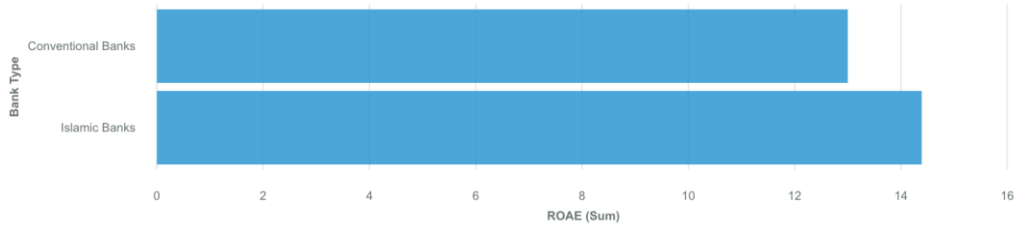

Figure 13: Islamic Vs. conventional banks ROAE ratio.

Also in the ROAE ratio, Islamic banks have higher average than conventional banks.

Net interest margin ratio

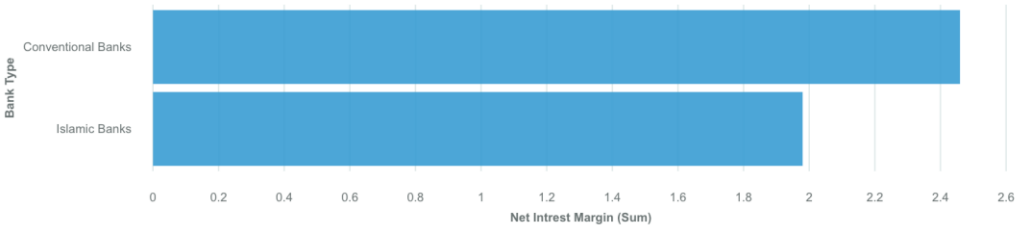

Figure 14: Islamic Vs. conventional banks net interest margin ratio.

Unlike the previous two ratios, in this ratio conventional banks have higher net interest margin ratio than Islamic banks. Overall Islamic banks have better profitability ratios so conventional banks need to work in improving their profitability ratios.

Liquidity

Loans to deposits ratio

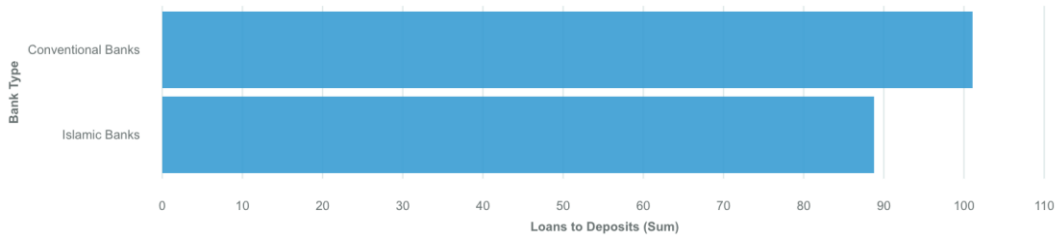

Figure 15: Islamic Vs. conventional banks loans to deposits ratio.

In the loans to deposit ratio, conventional banks have higher average than Islamic banks.

Liquid asset to total assets ratio

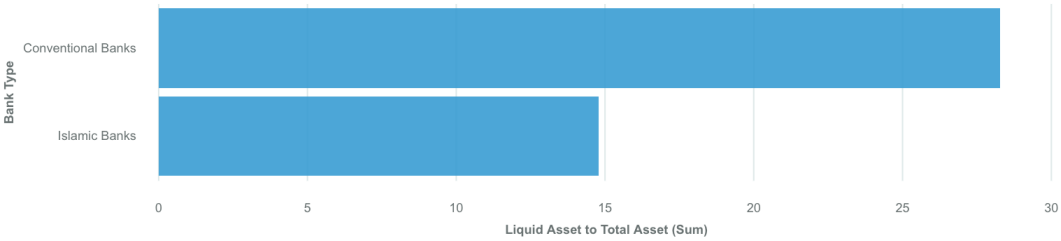

Figure 16: Islamic Vs. conventional banks liquid assets to total assets ratio.

Also in the liquid asset to total assets ratio, conventional banks have higher ratio than Islamic banks.

Liquid asset to (deposits + short term liabilities) ratio

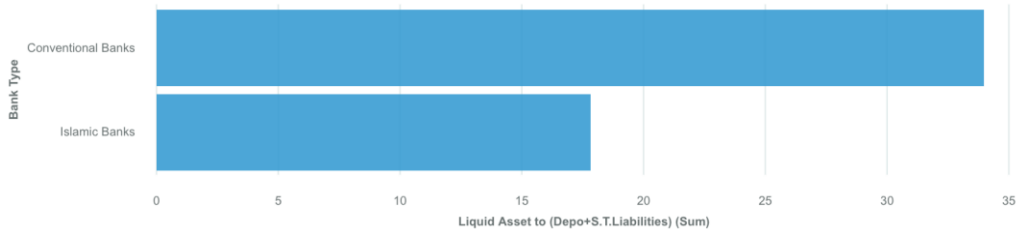

Figure 17: Islamic Vs. conventional banks Liquid asset to (deposits + short term liabilities) ratio.

As the previous two ratios, in the Liquid asset to (deposits + short term liabilities) ratio, conventional banks have higher ratio than Islamic banks. Thus, we can conclude that conventional banks have better liquidity ratios than Islamic banks and this may have a negative impact on the Islamic banks in the future.

Sensitivity to Market Risk

Market risk weighted assets / equity ratio

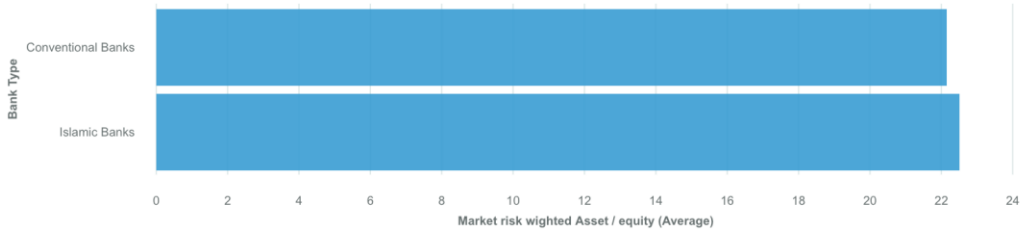

Figure 18: Islamic Vs. conventional banks MRWA/ equity ratio.

In Figure 18, Islamic banks have higher market risk weighted asset / equity ratio than conventional banks.

Market risk weighted assets / total risk weighted assets ratio

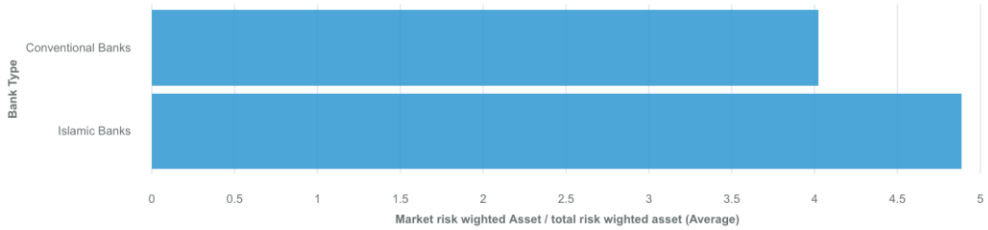

Figure 19: Islamic Vs. conventional banks MRWA / RWA ratio.

Also in the market risk weighted assets to total risk weighted asset ratio, Islamic banks have higher average than conventional banks.

Market risk weighted assets/ total assets ratio

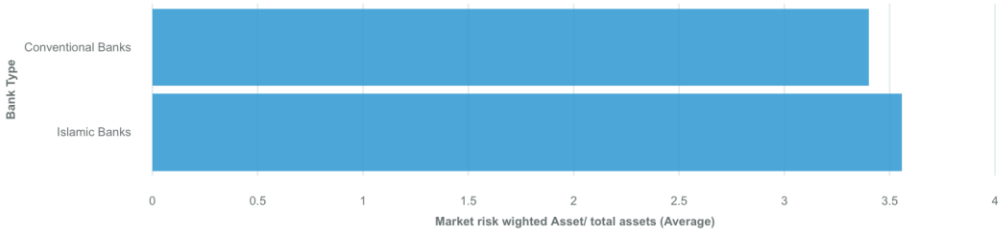

Figure 20: Islamic Vs. conventional banks MRWA/ Assets ratio.

As the previous two ratios, in the market risk weighted assets to total assets ratio Islamic banks have higher ratio than conventional banks. So, in the sensitivity to market risk indicator, we can conclude that conventional banks are less exposed to market risk than Islamic banks. To summarize, Islamic banks achieved better ratio in the first four indicators of the CAMELS framework, while conventional banks outperform Islamic banks only in the last two indicators which are: Liquidity and sensitivity to the market risk.

Comparative Analysis

In order to see which bank is performing better than the other, the second part of the analysis will compare banks soundness in each ratio separately, by using Watson analytics.

Capital Adequacy

Tier 1 Ratio

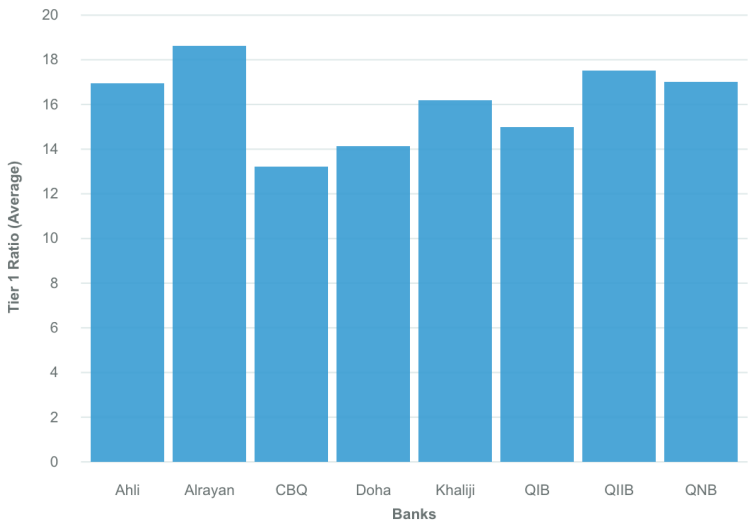

Figure 21: Tier one ratio for each bank.

As we can see in Figure 21, masraf al rayan scored the highest and CBQ has the lowest Average Tier one ratio.

Capital Adequacy ratio

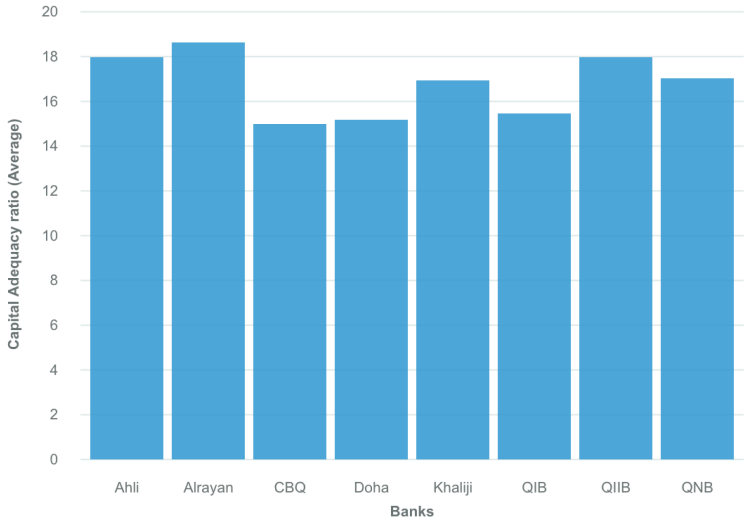

Figure 22: Capital adequacy ratio for each bank.

In the Capital Adequacy Ratio, masraf al rayan has the highest and CBQ has the lowest average capital adequacy ratio.

Leverage Ratio

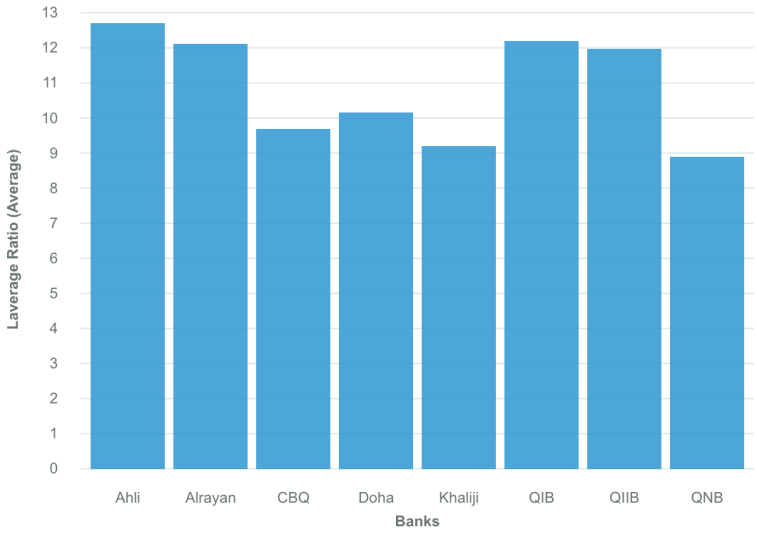

Figure 23: Leverage ratio for each bank.

In the Leverage Ratio Al Ahli bank has the highest and QNB has the lowest. So we can conclude that compared to the others, masraf al rayan is the best capitalized bank in the sample. CBQ is the lowest in capital adequacy ratio, and this explains the low score that CBQ received earlier in the study. Consequently, the higher management of CBQ should consider improving these ratios.

Asset Quality

NPLs/ Loans

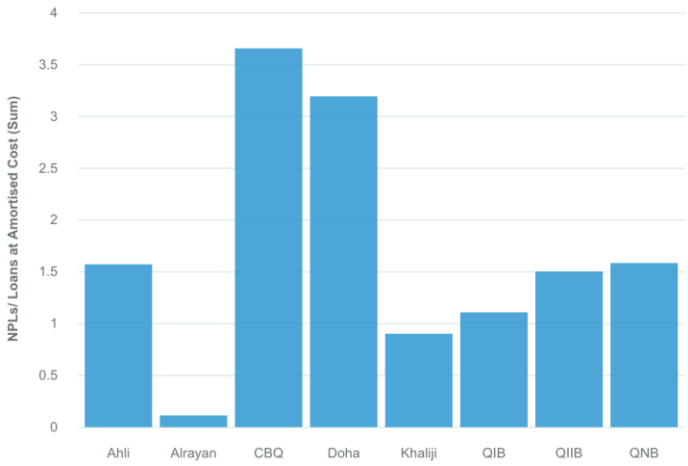

Figure 24: NPLs / total loans ratio for each bank.

Masraf al rayan has the lowest NPLs/Loans, while CBQ has the highest Average NPLs/ Loans ratio.

NPLs/ Risk-weighted Assets

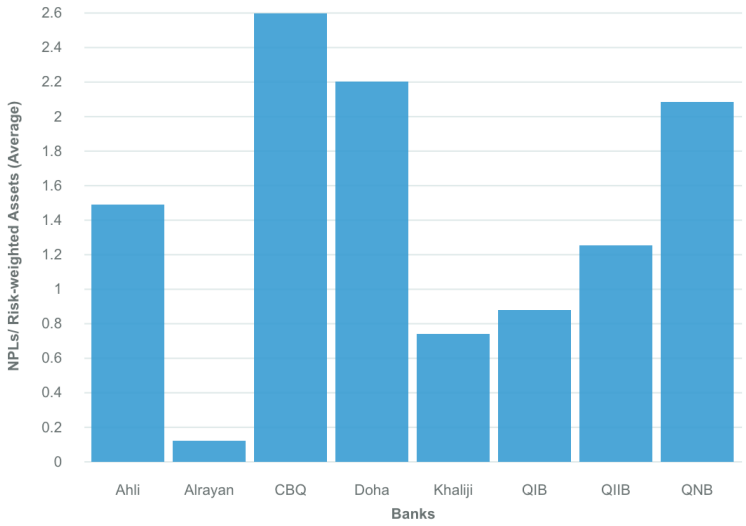

Figure 25: NPLs / RWA ratio for each bank.

Masraf al rayan has the lowest NPLs/risk weighted assets, while CBQ has the highest Average NPLs/ risk weighted assets ratio.

Reserves/ NPLs

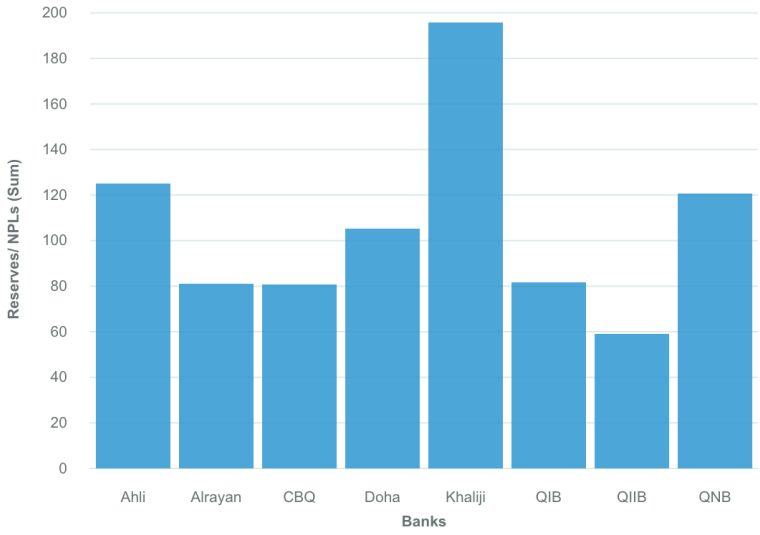

Figure 26: Reserve/ NPLs ratio for each bank.

In the reserve over NPLs part, Khaliji bank has the highest while QIIB has the lowest reserve over NPLs average. Also in the Asset quality indicator Masraf Al Rayan has the best scores but they need to increase the reserve as they are not the best bank in the Reserve over NPLs ratio. CBQ has high NPLs so they might face an issue with this in the future.

Management Efficiency

Asset Growth

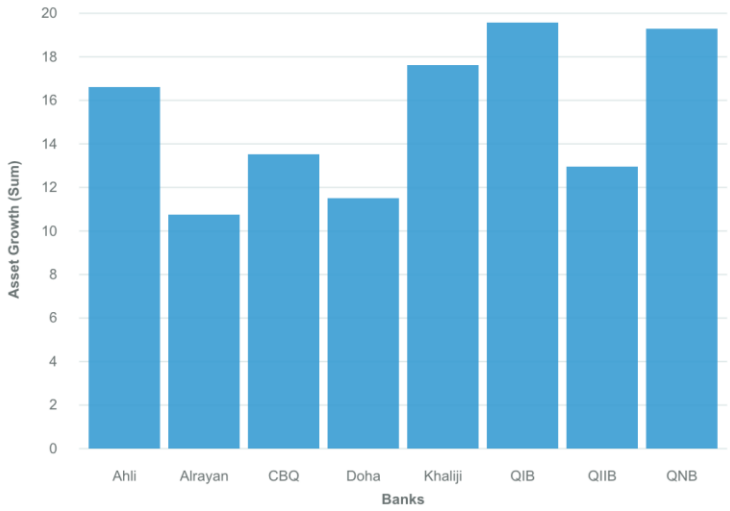

Figure 27: Assets growth ratio for each bank.

QIB has the highest while Masraf Al rayan has the lowest average assets growth.

Cost to income ratio

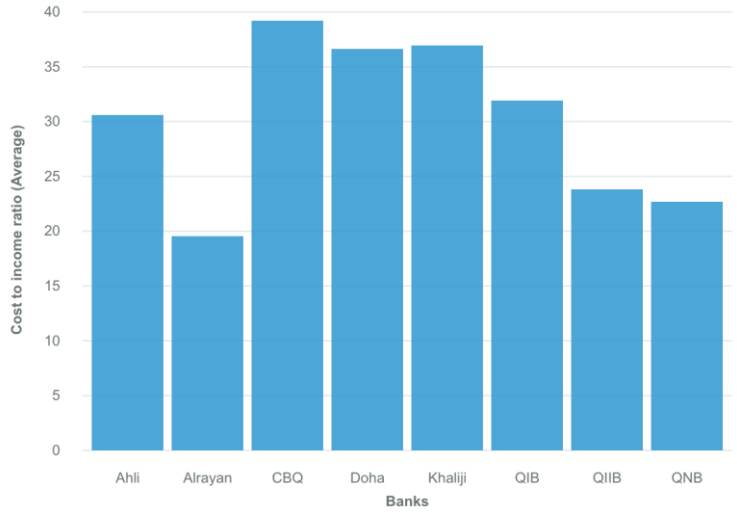

Figure 28: Cost to income ratio for each bank.

Masraf Al rayan has the lowest average cost to income ratio while CBQ has the highest.

Operating expense/ total Asset

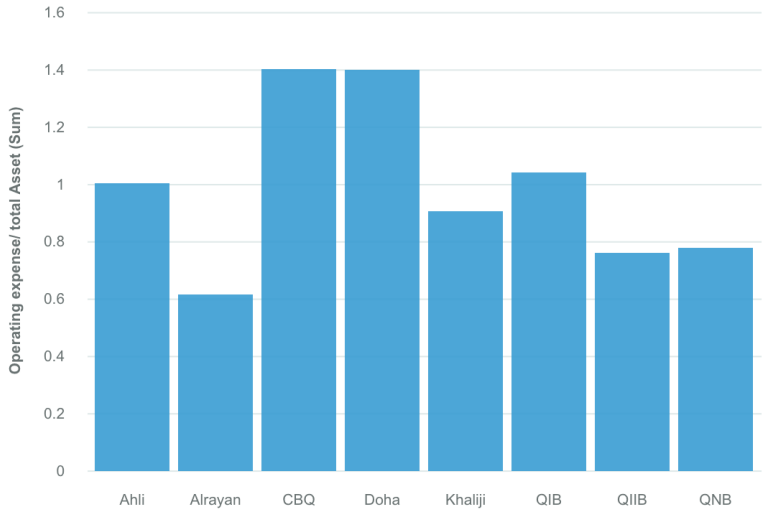

Figure 29: Operating expenses / assets ratio for each bank.

Masraf Al rayan has the lowest average operating expense over total assets ratio while CBQ and Doha bank have the highest. Generally, Masref Al rayan is the most efficient management in controlling their expenses compared to their income and assets. The only part that need to be improved by Masraf Al Rayan is the asset growth. In the other hand, CBQ is the worst in controlling their expenses compared to their income and assets.

Earnings and Profitability

ROAA

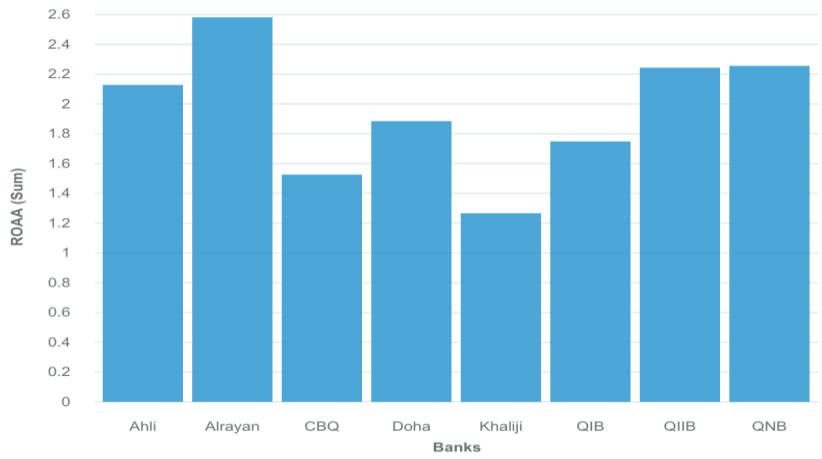

Figure 30: ROAA ratio for each bank.

From the above graph Masraf Al rayan has the highest average ROAA ratio while Al-Khaliji bank has the lowest.

ROAE

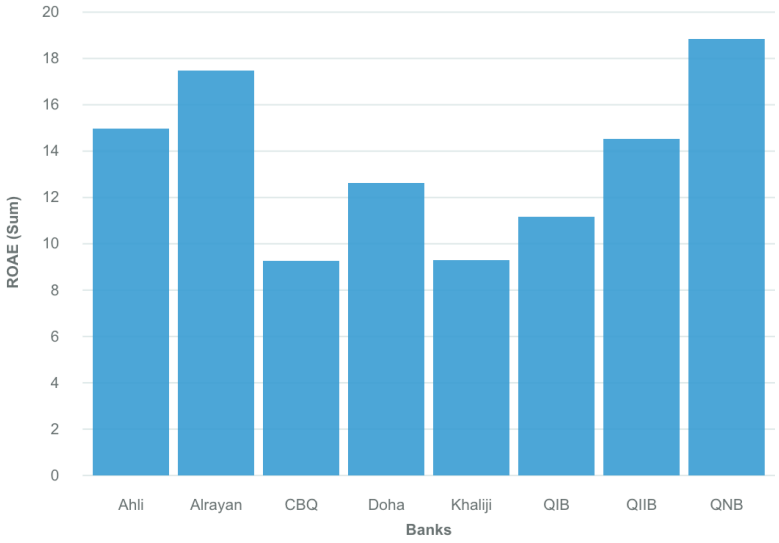

Figure 31: ROAE ratio for each bank.

QNB has the highest average ROAE while CBQ and Al-Khaliji bank have the lowest.

Net Interest Margin

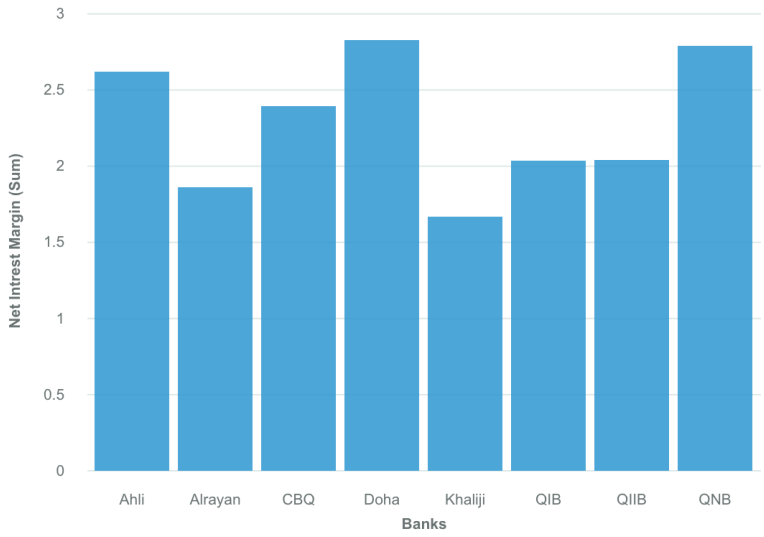

Figure 32: Net interest margin ratio for each bank.

In the net interest margin, al-khaliji bank has the lowest while Doha bank and QNB have the highest. In the earnings and profitability indicators QNB has the best ratios while Al khaliji scored the lowest. As a result, al khaliji bank needs to improve their profit to compete with other banks.

Liquidity

Loans to Deposits

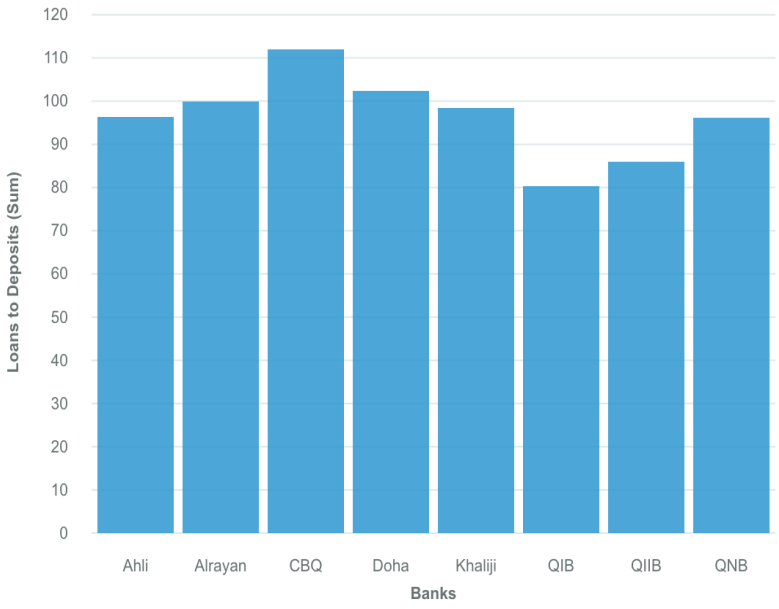

Figure 33: Loans to deposits ratio for each bank.

CBQ has the highest Average loans to deposits ratio, while QIB has the lowest.

Liquid Asset to Total Asset

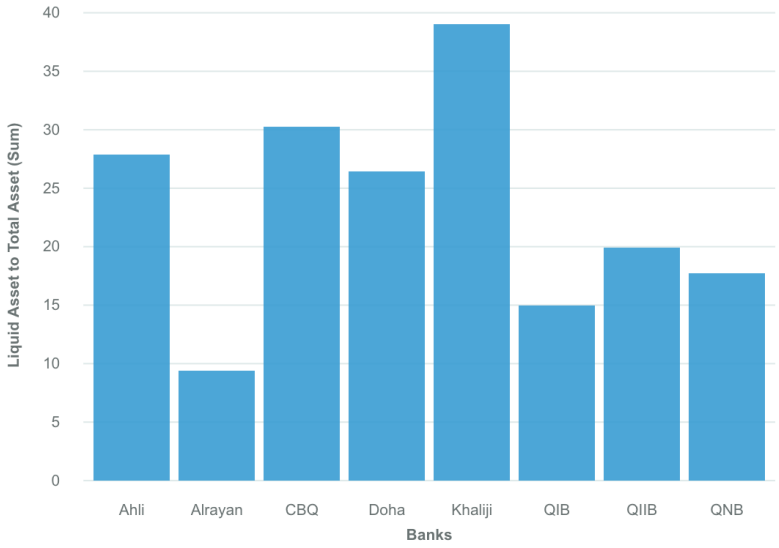

Figure 34: Liquid assets to total assets ratio for each bank.

In the liquid assets to total assets ratio, Masraf Al rayan has the lowest while Al Khaliji bank scored the highest.

Liquid Asset to (Deposits +Short Term Liabilities)

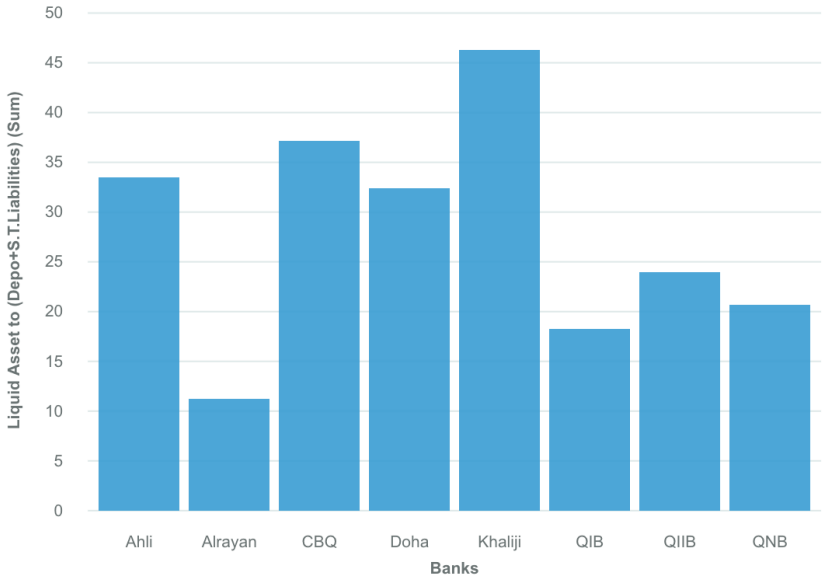

Figure 35: liquid assets to (deposits +short term liabilities) for each bank.

Also in the liquid assets to (Deposit+ Short term Liabilities) ratio, Masraf Al rayan has the lowest while Al Khaliji bank scored the highest. In this indicator, Al khaliji Bank scored the highest as this explains the lowest profit-having the high liquid asset explains the low profit-. In contrast Masraf Al rayan has to increase their liquid assets to avoid liquidity risk in the future.

Sensitivity to Market Risk

Market risk weighted Asset / equity

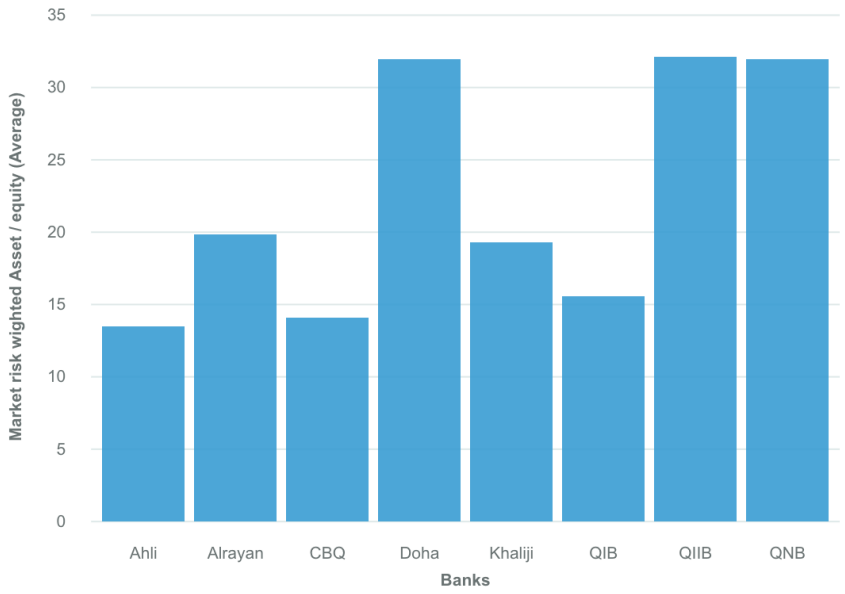

Figure 36: MRWA/ equity ratio for each bank.

In the percentage of market risk weighted assets from the total equity, Al Ahli bank has the lowest percentage while QIIB has the highest.

Market risk weighted Asset / total risk weighted asset

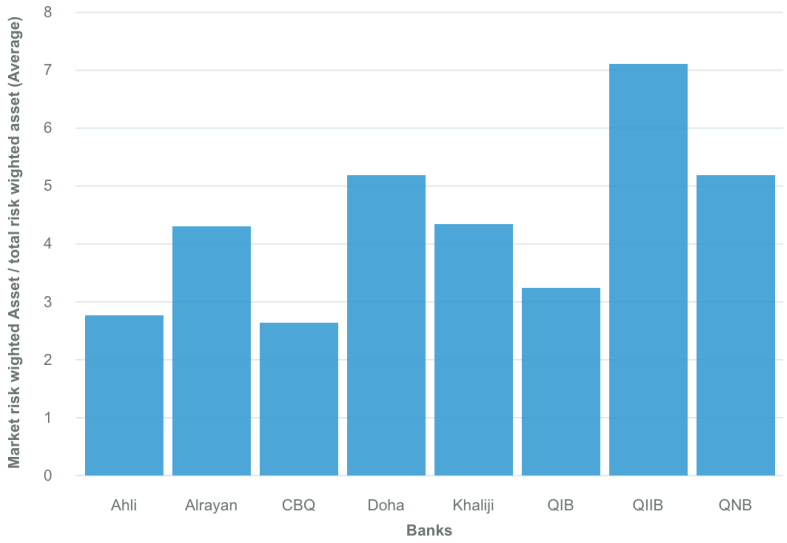

Figure 37: MRWA/ RWA ratio for each bank.

Also, QIIB has the highest percentage of market risk weighted assets from the total risk weighted assets while CBQ has the lowest.

Market risk weighted Asset/ total assets

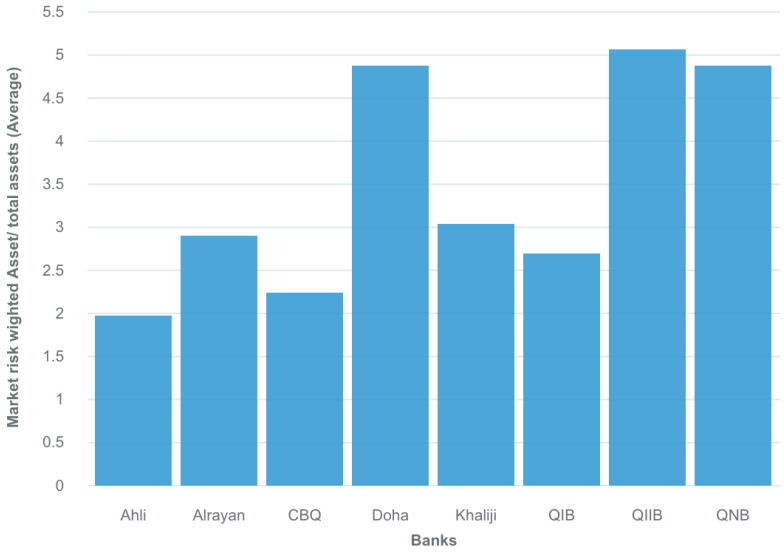

Figure 38: MRWA/ assets ratio for each bank.

Even in this ratio QIIB scared the highest while Al Ahli scored the lowest, this indicates that QIIB has high exposer to market risk compared to the others and needs to reduce this risk to avoid any problems in the future as the current market situation is uncertain.

To summarize, CBQ needs to improve the first three indicator in the CAMELS framework which are: capital adequacy, assets quality and management efficiency. In the capital adequacy ratio CBQ can improve their stress testing and their risk management to improve the capital adequacy ratio. While in the asset quality ratio a reduction is needed to their non-performing loans. In the management efficiency CBQ should control their operating expense. Al khaliji bank needs to improve their Earnings ratios by taking some risk and exposing to high profit investments. Masraf Al rayan needs to improve their liquidity ratios by following some liquidity management techniques to better manage their investment

maturities. QIIB need to improve their sensitivity to the market risk ratios by reducing their exposer to the market risk.

Regression Analysis

In the third part of the analysis, the relationship between the market price and each indicator in the CAMELS framework will be tested individually. Then, comprehensive model will be created to test all the indicators with the market price. The following hypothesis will be tasted:

H1: Capital adequacy impacts the market price.

H2: Assets quality impacts the market price.

H3: Management efficiency impacts the market price.

H4: Earnings and profitability impacts the market price.

H5: Liquidity impacts the market price.

H6: Sensitivity to the market risk impacts the market price.

Capital Adequacy

In testing the relationship between the capital adequacy indicators and the market price we found that the significance is 0.051 so the relationship is barely significant. The R square is 0.225 which is very low indicating a weak relationship between capital adequacy indicators and bank stock market price.

Table 19: Capital adequacy model summery.

Model Summary				
Model	**R**	**R Square**	**Adjusted R Square**	**Std. Error of the Estimate**
1	.475a	.225	.148	8.893999716

a. Predictors: (Constant), Leverage Ratio, Tier 1 Ratio, Capital Adequacy ratio

Table 20: Capital adequacy ANOVA.

ANOVA						
Model		**Sum of Squares**	**Df**	**Mean Square**	**F**	**Sig.**
1	**Regression**	690.515	3	230.172	2.910	.051b
	Residual	2373.097	30	79.103		
	Total	3063.612	33			

a. Dependent Variable: Stock price

b. Predictors: (Constant), Leverage Ratio, Tier 1 Ratio, Capital Adequacy ratio

By looking to each ratio individually, we found out that the only ratio that is significant in this relationship is the leverage ratio as its significance is 0.028.

Table 21: Capital adequacy coefficients.

Coefficients						
Model		**Unstandardized Coefficients**		**Standardized Coefficients**	**T**	**Sig.**
		B	**Std. Error**	**Beta**		
1	**(Constant)**	37.456	13.693		2.735	.010
	Tier 1 Ratio	2.916	1.871	.693	1.559	.130
	Capital Adequacy ratio	-2.412	2.222	-.503	-1.086	.286
	Leverage Ratio	-2.449	1.062	-.438	-2.306	.028

a. Dependent Variable: Stock price

So, we accept H1: Capital adequacy impacts the market price, as it barely passes the significance test but we conclude that it's a weak relationship.

Asset Quality

In testing the relationship between the assets quality indicator and the market price we found that the significance is 0.000 so there is a significant relationship between this indicator and the market price. The R square is 0.473 which consider to be low so this relationship is weak.

Table 22: Assets quality model summery.

Model Summary				
Model	**R**	**R Square**	**Adjusted R Square**	**Std. Error of the Estimate**
1	.688a	.473	.429	7.074734327

a. Predictors: (Constant), Reserves/ NPLs , NPLs/ Risk-weighted Assets , NPLs/ Loans at Amortized Cost

Table 23: Assets quality ANOVA.

ANOVA						
Model		**Sum of Squares**	**Df**	**Mean Square**	**F**	**Sig.**
1	**Regression**	1616.741	3	538.914	10.767	.000b
	Residual	1801.867	36	50.052		
	Total	3418.608	39			

a. Dependent Variable: Stock price

b. Predictors: (Constant), Reserves/ NPLs , NPLs/ Risk-weighted Assets , NPLs/ Loans at Amortized Cost

By looking to each ratio individually, we found out that from the three ratios that only the NPLs/ Loans at Amortized Cost ratio and the NPLs/ Risk-weighted Assets ratios are significant in this relationship, at a p-value of 0.000.

Table 24: Assets quality coefficients.

Coefficients						
Model		**Unstandardized Coefficients**		**Standardized Coefficients**	**T**	**Sig.**
		B	**Std. Error**	**Beta**		
1	**(Constant)**	14.782	3.046		4.853	.000
	NPLs/ Loans at Amortized Cost	-13.733	2.483	-1.876	-5.531	.000
	NPLs/ Risk-weighted Assets	18.844	3.360	1.898	5.609	.000
	Reserves/ NPLs	-.007	.018	-.053	-.424	.674

a. Dependent Variable: Stock price

So, we accept H2: Assets quality impacts the market price, as it passes the significance test but we conclude that it's a weak relationship.

Management Efficiency

In testing the relationship between the management efficiency indicators and the market price we found that the significance is 0.084 so there is no significant relationship between this indicator and the market price.

Table 25: Management efficiency model summery.

Model Summary				
Model	**R**	**R Square**	**Adjusted R Square**	**Std. Error of the Estimate**
1	.408a	.166	.097	8.897338117

a. Predictors: (Constant), Operating expense/ total Asset, Asset Growth, Cost to income ratio

Table 26: Management efficiency ANOVA.

ANOVA						
Model		**Sum of Squares**	**Df**	**Mean Square**	**F**	**Sig.**
1	**Regression**	568.753	3	189.584	2.395	.084b
	Residual	2849.855	36	79.163		
	Total	3418.608	39			

a. Dependent Variable: Stock price

b. Predictors: (Constant), Operating expense/ total Asset, Asset Growth, Cost to income ratio

Table 27: Management efficiency coefficients.

Coefficients						
Model		**Unstandardized Coefficients**		**Standardized Coefficients**	**t**	**Sig.**
		B	**Std. Error**	**Beta**		
1	**(Constant)**	24.473	6.053		4.043	.000
	Asset Growth	.269	.153	.270	1.760	.087
	Cost to income ratio	-.531	.313	-.435	-1.696	.099
	Operating expense/ total Asset	4.848	7.874	.159	.616	.542

a. Dependent Variable: Stock price

So, we reject H3: Management efficiency impacts the market price, as it fails to pass the significance test.

Earnings and Profitability

In testing the relationship between the earnings indicators and the market price we found that the significance is 0.001 so there is a statistically significant relationship between this indicator and the market price. But the R square is 0.346 which considered to be low so we conclude that the relationship is weak.

Table 28: Earnings model summery.

Model Summary				
Model	**R**	**R Square**	**Adjusted R Square**	**Std. Error of the Estimate**
1	.588a	.346	.292	7.880481986

a. Predictors: (Constant), Net Interest Margin, ROAA, ROAE

Table 29: Earnings ANOVA.

ANOVA						
Model		**Sum of Squares**	**Df**	**Mean Square**	**F**	**Sig.**
1	**Regression**	1182.936	3	394.312	6.349	.001b
	Residual	2235.672	36	62.102		
	Total	3418.608	39			

a. Dependent Variable: Stock price

b. Predictors: (Constant), Net Interest Margin, ROAA, ROAE

By looking to each ratio individually, we found out that from the three ratios only two ratios (ROAA and ROAE) are significant in this relationship as their significance is 0.007 and 0.001, respectively.

Table 30: Earnings coefficients.

Coefficients						
Model		**Unstandardized Coefficients**		**Standardized Coefficients**	**t**	**Sig.**
		B	**Std. Error**	**Beta**		
1	**(Constant)**	1.802	6.862		.263	.794
	ROAA	-13.158	4.644	-.762	-2.833	.007
	ROAE	2.370	.647	.998	3.662	.001
	Net Interest Margin	4.039	2.921	.200	1.383	.175

a. Dependent Variable: Stock price

So, we accept H4: Earnings and profitability impacts the market price, as it passes the significance test but we conclude that it's a weak relationship at R square of 0.346.

Liquidity:

In testing the relationship between the liquidity indicators and the market price we found that the significance is 0.075 so there is no statistically significant relationship between this indicator and the market price.

Table 31: Liquidity model summery.

Model Summary				
Model	**R**	**R Square**	**Adjusted R Square**	**Std. Error of the Estimate**
1	.415a	.172	.103	8.866576309

a. Predictors: (Constant), Liquid Asset to (Depo+S.T.Liabilities), Loans to Deposits, Liquid Asset to Total Asset

Table 32: Liquidity ANOVA.

ANOVA						
Model		**Sum of Squares**	**Df**	**Mean Square**	**F**	**Sig.**
1	**Regression**	588.426	3	196.142	2.495	.075b
	Residual	2830.182	36	78.616		
	Total	3418.608	39			

a. Dependent Variable: Stock price

b. Predictors: (Constant), Liquid Asset to (Depo+S.T.Liabilities), Loans to Deposits, Liquid Asset to Total Asset

Table 33: Liquidity coefficients.

Coefficients						
Model		**Unstandardized Coefficients**		**Standardized Coefficients**	**t**	**Sig.**
		B	**Std. Error**	**Beta**		
1	**(Constant)**	32.288	9.056		3.565	.001
	Loans to Deposits	-.086	.087	-.152	-.992	.328
	Liquid Asset to Total Asset	3.154	2.354	3.294	1.340	.189
	Liquid Asset to (Depo+S.T.Liabilities)	-2.859	1.938	-3.625	-1.475	.149

a. Dependent Variable: Stock price

So, we reject H5: Liquidity impacts the market price, as it fails to pass the significance test.

Sensitivity to Market Risk

In testing the relationship between the sensitivity to market risk indicators and the market price we found that the significance is 0.178 so there is no statistically significant relationship between this indicator and the market price.

Table 34: Sensitivity to market risk model summery.

Model Summary				
Model	**R**	**R Square**	**Adjusted R Square**	**Std. Error of the Estimate**
1	.355a	.126	.053	9.109155728

a. Predictors: (Constant), Market risk weighted Asset/ total assets, Market risk weighted Asset / total risk weighted asset, Market risk weighted Asset / equity

Table 35: Sensitivity to market risk ANOVA.

ANOVA						
Model		**Sum of Squares**	**Df**	**Mean Square**	**F**	**Sig.**
1	**Regression**	431.446	3	143.815	1.733	.178b
	Residual	2987.162	36	82.977		
	Total	3418.608	39			

a. Dependent Variable: Stock price

b. Predictors: (Constant), Market risk weighted Asset/ total assets, Market risk weighted Asset / total risk weighted asset, Market risk weighted Asset / equity

Table 36: Sensitivity to market risk coefficients.

Coefficients						
Model		**Unstandardized Coefficients**		**Standardized Coefficients**	**t**	**Sig.**
		B	**Std. Error**	**Beta**		
1	**(Constant)**	17.029	2.246		7.581	.000
	Market risk weighted Asset / equity	-.008	.508	-.016	-.016	.988
	Market risk weighted Asset / total risk weighted asset	-4.070	1.833	-1.723	-2.221	.033
	Market risk weighted Asset/ total assets	5.260	3.738	1.782	1.407	.168

a. Dependent Variable: Stock price

So, we reject H6: Sensitivity to the market risk impacts the market price, as it fails to pass the significance test.

Overall:

In this part, a model was built to test the relationship between all indicators in the CAMELS framework and the Market Price. The model indicates that there is a strong relationship between the overall CAMELS framework and the market price. The significance of the model is 0.001 and the R square is 0.876.

Table 37: Overall model summery.

Model Summary				
Model	**R**	**R Square**	**Adjusted R Square**	**Std. Error of the Estimate**
1	.936a	.876	.727	5.031344075

a. Predictors: (Constant), Market risk weighted Asset/ total assets, NPLs/ Loans at Amortized Cost , Reserves/ NPLs , Asset Growth, Capital Adequacy ratio, Loans to Deposits, Leverage Ratio, Liquid Asset to Total Asset, ROAE, Operating expense/ total Asset, ROAA, Net Interest Margin, NPLs/ Risk-weighted Assets , Tier 1 Ratio , Cost to income ratio, Market risk weighted Asset / total risk weighted asset, Market risk weighted Asset / equity, Liquid Asset to (Depo+S.T.Liabilities)

Table 38: Overall ANOVA.

ANOVA						
Model		**Sum of Squares**	**Df**	**Mean Square**	**F**	**Sig.**
1	**Regression**	2683.895	18	149.105	5.890	.001b
	Residual	379.716	15	25.314		
	Total	3063.612	33			

a. Dependent Variable: Stock price

b. Predictors: (Constant), Market risk weighted Asset/ total assets, NPLs/ Loans at Amortized Cost , Reserves/ NPLs , Asset Growth, Capital Adequacy ratio, Loans to Deposits, Leverage Ratio, Liquid Asset to Total Asset, ROAE, Operating expense/ total Asset, ROAA, Net Interest Margin, NPLs/ Risk-weighted Assets , Tier 1 Ratio , Cost to income ratio, Market risk weighted Asset / total risk weighted asset, Market risk weighted Asset / equity, Liquid Asset to (Depo+S.T.Liabilities)

When looking at each ratios individually we found out that the following five ratios have a significant impact on the market price as their significance is 0.05 or below:

- Leverage ratio: 0.032
- NPLs / Loans at amortized cost: 0.002
- NPLs / Risk-weighted assets: 0.011
- Liquid assets to Total assets: 0.018
- Liquid assets to (Deposits +short term liabilities): 0.020

Table 39: Overall coefficients.

Coefficients						
Model		**Unstandardized Coefficients**		**Standardized Coefficients**	**t**	**Sig.**
		B	**Std. Error**	**Beta**		
1	**(Constant)**	125.902	31.159		4.041	.001
	Tier 1 Ratio	2.117	3.020	.503	.701	.494
	Capital Adequacy ratio	-5.911	3.167	-1.233	-1.867	.082
	Leverage Ratio	-2.938	1.246	-.526	-2.358	.032
	NPLs/ Loans at Amortized Cost	-20.190	5.426	-2.781	-3.721	.002
	NPLs/ Risk-weighted Assets	19.632	6.810	1.957	2.883	.011
	Reserves/ NPLs	-.142	.080	-.412	-1.767	.098
	Asset Growth	-.029	.144	-.028	-.202	.843
	Cost to income ratio	-.232	.968	-.185	-.240	.814
	Operating expense/ total Asset	-13.105	23.795	-.442	-.551	.590
	ROAA	-5.267	10.586	-.307	-.498	.626
	ROAE	.285	1.466	.121	.194	.848
	Net Interest Margin	20.493	14.189	.945	1.444	.169
	Loans to Deposits	-.142	.088	-.257	-1.617	.127

	Liquid Asset to Total Asset	-14.792	5.556	-12.153	-2.662	.018
	Liquid Asset to (Depo+S.T.Liabilities)	12.410	4.769	12.415	2.602	.020
	Market risk weighted Asset / equity	.236	.553	.463	.427	.675
	Market risk weighted Asset / total risk weighted asset	3.768	2.165	1.435	1.741	.102
	Market risk weighted Asset/ total assets	-7.033	4.145	-2.228	-1.697	.110

a. Dependent Variable: Stock price

CONCLUSION

To sum up, after analyzing the six indicators that are in the CAMELS framework, the only ratios that have a direct impact on the market price are: Leverage ratio, NPLs / loans at amortized cost, NPLs / risk-weighted assets, liquid assets to total assets and Liquid assets to (Deposits +short term liabilities). If a bank is concerned about improving their market price so it can compete in the market and outperform their competitors they should improve these ratios. Additionally, improving the market price will result in improvement to the bank's market capitalization which is the total dollar market value of the bank's outstanding shares.

Since liquidity ratios have a significant impact on the market price and Qatari banks don't have optimal financial figure in their liquidity part of the CAMELS framework, and even though government support reduces the impact of the liquidity risk, an improvement is highly needed to achieve the optimal range in the liquidity part to avoid any liquidity risk in the future. The improvement can be done through several ways:

- Reduce the maturities of the bank's assets.
- Enhance the assets average liquidity.
- Increase the maturities lengthen of the liability.
- Increase the issuance of equity
- Decrease contingent commitments
- Gain liquidity protection

These improvements can be achieved when managers use the following best practice methodologies in bank's liquidity management:

- Enhancing cash forecasting to manage the liquidity.

- Implement advanced liquidity management techniques.
- In supporting the liquidity optimization, real-time liquidity information should be provided.
- Stress testing and other techniques should be improved to reduce the liquidity risk.

Even though CAMELS framework is comprehensive, it excludes the impact of credit risk, country risk, governance and banks history such as adverse news and the year of establishment. Future study should create a module that considers these attributes in evaluating the banks.

Additionally, future study should focus on the ratios that have an impact on the market price and examine other ratios for the rest of the indicators. Also linking the CAMELS framework to different independent variable such as book value is a possible option for future study.

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APPENDIXES

Appendixes A: Qatar National Bank

Table 40: CAMELS Indicators for QNB for the Years 2012-2016

	Indicator		**Capital Adequacy**	
Bank Name	Year	Tier 1 Ratio	Capital Adequacy ratio	Leverage Ratio
QNB	2012	21.04	21.04	9.96
	2013	15.63	15.63	8.17
	2014	16.14	16.15	9.15
	2015	16.3	16.31	9.74
	2016	15.94	15.96	7.41
	Avg.	17.01	17.018	8.886
	Indicator		Asset Quality	
Bank Name	Year	NPLs/ Loans	NPLs/ RWA	Reserves/ NPLs
QNB	2012	1.35	1.95	114.78
	2013	1.68	2.27	123.15
	2014	1.65	2.05	124.16
	2015	1.43	1.75	127.36
	2016	1.82	2.4	113.94
	Avg.	1.586	2.084	120.678
	Indicator		Management	

Bank Name	Year	Asset Growth	Cost to income ratio	Operating expense/ total Assets
QNB	2012	21.49	16.82	0.58
	2013	20.89	21.34	0.77
	2014	9.67	21.57	0.73
	2015	10.74	22.46	0.71
	2016	33.62	31.17	1.11
	Avg.	19.282	22.672	0.78
	Indicator		Earnings	
Bank Name	Year	ROAA	ROAE	Net Interest Margin
QNB	2012	2.52	18.59	2.81
	2013	2.35	18.75	2.95
	2014	2.26	19.38	2.74
	2015	2.22	19.52	2.59
	2016	1.92	17.98	2.87
	Avg.	2.254	18.844	2.792
	Indicator		Liquidity	
Bank Name	Year	Loans to Deposits	Liquid Asset to Total Asset	Liquid Asset to (Depo+S.T.Liabilities)
QNB	2012	92.56	19.72	23.21
	2013	92.6	13.99	16.27
	2014	94.58	19.41	22.81

	2015	98.25	17.49	20.31
	2016	102.7	17.9	20.74
	Avg.	96.138	17.702	20.668
	Indicator		Sensitivity to Market Risk	
Bank Name	Year	MRWA/ Equity	MRWA /RWA	MRWA/Assets
QNB	2012	53.35	7.76	7.3
	2013	55.94	9.83	9.41
	2014	15.14	2.5	2.26
	2015	18.31	3.01	2.9
	2016	17.01	2.86	2.52
	Avg.	31.95	5.192	4.878

*source SNL.

Appendixes B: Qatar International Islamic Bank

Table 41: CAMELS Indicators for QIIB for the Years 2012-2016

Indicator		**Capital Adequacy**		
Bank Name	Year	Tier 1 Ratio	Capital Adequacy ratio	Leverage Ratio
QIIB	2012	18.27	18.62	13.69
	2013	17.82	18.86	11.89
	2014	15.31	16.27	10.61
	2015	16.71	16.71	11.72
	2016	19.47	19.47	

	Avg.	17.516	17.986	11.9775
	Indicator		Asset Quality	
Bank Name	Year	NPLs/ Loans	NPLs/ RWA	Reserves/ NPLs
QIIB	2012	1.67	1.15	46.91
	2013	1.15	0.97	56.07
	2014	1.04	0.86	65.42
	2015	1.81	1.61	54.63
	2016	1.85	1.68	71.55
	Avg.	1.504	1.254	58.916
	Indicator		Management	
Bank Name	Year	Asset Growth	Cost to income ratio	Operating expense/ total Assets
QIIB	2012	22.27	21.2	0.73
	2013	19.19	22.53	0.76
	2014	12.8	24.67	0.79
	2015	5.58	25.39	0.8
	2016	4.96	25.29	0.73
	Avg.	12.96	23.816	0.762
	Indicator		Earnings	
Bank Name	Year	ROAA	ROAE	Net Interest Margin
QIIB	2012	2.62	13.68	2.22

	2013	2.4	14.75	2.09
	2014	2.29	15.88	1.93
	2015	2.04	14.9	2.08
	2016	1.87	13.51	1.88
	Avg.	2.244	14.544	2.04
	Indicator		Liquidity	
Bank Name	Year	Loans to Deposits	Liquid Asset to Total Asset	Liquid Asset to (Depo+S.T.Liabilities)
QIIB	2012	74.08	24.68	30.42
	2013	77.68	19.94	23.88
	2014	81.98	24.49	28.91
	2015	93.68	16.56	19.63
	2016	102.23	14.07	17
	Avg.	85.93	19.948	23.968
	Indicator		Sensitivity to Market Risk	
Bank Name	Year	MRWA/ Equity	MRWA /RWA	MRWA/Assets
QIIB	2012	59.23	13.94	10.44
	2013	37.47	8.47	5.66
	2014	30.29	6.11	4.23
	2015	14.41	2.8	1.96
	2016	19.31	4.24	3.03
	Avg.	32.142	7.112	5.064

*source SNL.

Appendixes C: Qatar Islamic Bank

Table 42: CAMELS Indicators for QIB for the Years 2012-2016

Indicator		**Capital Adequacy**		
Bank Name	Year	Tier 1 Ratio	Capital Adequacy ratio	Leverage Ratio
QIB	2012	14.71	15.41	12.72
	2013	15.67	16.51	11.97
	2014	14.57	14.61	11.89
	2015	13.71	14.07	
	2016	16.23	16.72	
	Avg.	14.978	15.464	12.19333333
Indicator		Asset Quality		
Bank Name	Year	NPLs/ Loans	NPLs/ RWA	Reserves/ NPLs
QIB	2012	1.84	1.27	57.34
	2013	1.04	0.84	86.06
	2014	0.95	0.74	89.63
	2015	0.68	0.57	96.41
	2016	1.03	0.97	78.76
	Avg.	1.108	0.878	81.64
Indicator		Management		

Bank Name	Year	Asset Growth	Cost to income ratio	Operating expense/ total Assets
QIB	2012	25.6	33.51	1.29
	2013	5.69	33.63	1.13
	2014	24.24	31.77	1.04
	2015	32.48	30.76	0.93
	2016	9.83	29.82	0.82
	Avg.	19.568	31.898	1.042
	Indicator		Earnings	
Bank Name	Year	ROAA	ROAE	Net Interest Margin
QIB	2012	1.71	8.69	2.43
	2013	1.76	9.92	1.97
	2014	1.89	12.39	2.1
	2015	1.81	13.1	1.97
	2016	1.58	11.73	1.72
	Avg.	1.75	11.166	2.038
	Indicator		Liquidity	
Bank Name	Year	Loans to Deposits	Liquid Asset to Total Asset	Liquid Asset to (Depo+S.T.Liabilities)
QIB	2012	19.98	19.86	24.67
	2013	93.6	14.39	17.87
	2014	89.61	15.8	18.95

	2015	95.62	12.67	14.91
	2016	102.91	12.26	14.8
	Avg.	80.344	14.996	18.24
	Indicator	Sensitivity to Market Risk		
Bank Name	Year	MRWA/ Equity	MRWA /RWA	MRWA/Assets
QIB	2012	53.87	11.14	9.6
	2013	15.01	3.49	2.65
	2014	1.72	0.31	0.25
	2015	3.41	0.56	0.46
	2016	3.74	0.71	0.54
	Avg.	15.55	3.242	2.7

*source SNL.

Appendixes D: Commercial Bank of Qatar

Table 43: CAMELS Indicators for Commercial Bank for the Years 2012-2016

	Indicator	**Capital Adequacy**		
Bank Name	Year	Tier 1 Ratio	Capital Adequacy ratio	Leverage Ratio
CBQ	2012	15.42	17.03	12.98
	2013	12.56	14.06	8.9
	2014	13.06	15.22	9.54
	2015	11.83	13.51	8.56

	2016	13.14	15.19	8.48
	Avg.	13.202	15.002	9.692
	indicator		Asset Quality	
Bank Name	Year	NPLs/ Loans	NPLs/ RWA	Reserves/ NPLs
CBQ	2012	1.11	0.8	116.32
	2013	3.73	2.62	62.98
	2014	3.9	2.86	74.27
	2015	4.33	3.13	71.25
	2016	5.22	3.57	78.91
	Avg.	3.658	2.596	80.746
	indicator		Management	
Bank Name	Year	Asset Growth	Cost to income ratio	Operating expense/ total Assets
CBQ	2012	11.73	31.72	1.36
	2013	41.32	38.23	1.49
	2014	2.25	37.83	1.42
	2015	6.72	41.66	1.43
	2016	5.64	46.57	1.32
	Avg.	13.532	39.202	1.404
	indicator		Earnings	
Bank Name	Year	ROAA	ROAE	Net Interest Margin

	2012	2.65	13.8	2.69
	2013	1.66	10.19	2.46
CBQ	2014	1.71	11.33	2.46
	2015	1.21	8.31	2.32
	2016	0.4	2.68	2.03
	Avg.	1.526	9.262	2.392
	indicator		Liquidity	
Bank Name	Year	Loans to Deposits	Liquid Asset to Total Asset	Liquid Asset to (Depo+S.T.Liabilities)
	2012	117.42	26.81	33.83
	2013	105.43	32.93	40
CBQ	2014	117.84	29.64	36.25
	2015	109.76	30.19	36.26
	2016	109.69	31.7	39.34
	Avg.	112.028	30.254	37.136
	indicator		Sensitivity to Market Risk	
Bank Name	Year	MRWA/ Equity	MRWA /RWA	MRWA/Assets
	2012	20.85	4.64	3.89
	2013	26.68	4.64	3.9
CBQ	2014	8.34	1.49	1.28
	2015	5.86	0.96	0.82
	2016	8.75	1.48	1.3

	Avg.	14.096	2.642	2.238

*source SNL.

Appendixes E: Al-Ahli Bank

Table 44: CAMELS Indicators for Al-Ahli Bank for the Years 2012-2016

	indicator		**Capital Adequacy**	
Bank Name	Year	Tier 1 Ratio	Capital Adequacy ratio	Leverage Ratio
AHLI	2012	18.44	20.78	13.44
	2013	17.24	19.15	12.05
	2014	17.6	18.14	12.52
	2015	15.93	16.25	13.23
	2016	15.46	15.62	12.25
	Avg.	16.934	17.988	12.698
	indicator		Asset Quality	
Bank Name	Year	NPLs/ Loans	NPLs/ RWA	Reserves/ NPLs
AHLI	2012	3.18	3.05	86.72
	2013	1.43	1.38	125.31
	2014	1.2	1.16	136.93
	2015	1.24	1.13	125.98
	2016	0.82	0.74	150.55
	Avg.	1.574	1.492	125.098

	indicator		Management	
Bank Name	Year	Asset Growth	Cost to income ratio	Operating expense/ total Assets
AHLI	2012	14.97	30.97	1.11
	2013	27.04	32.3	1.17
	2014	19.88	30	0.97
	2015	2.93	29.02	0.92
	2016	18.16	30.69	0.86
	Avg.	16.596	30.596	1.006
	indicator		Earnings	
Bank Name	Year	ROAA	ROAE	Net Interest Margin
AHLI	2012	2.41	15.62	2.83
	2013	2.25	15.01	2.98
	2014	2.08	15.49	2.65
	2015	2.06	15.12	2.47
	2016	1.84	13.67	2.18
	Avg.	2.128	14.982	2.622
	indicator		Liquidity	
Bank Name	Year	Loans to Deposits	Liquid Asset to Total Asset	Liquid Asset to (Depo+S.T.Liabilities)
AHLI	2012	90.93	30.38	37.55
	2013	86.74	32.03	38.25

	2014	95.61	30.26	35.87
	2015	109.62	22.37	26.95
	2016	98.58	24.38	28.71
	Avg.	96.296	27.884	33.466
	indicator		Sensitivity to Market Risk	
Bank Name	Year	MRWA/ Equity	MRWA /RWA	MRWA/Assets
AHLI	2012	23.64	5.42	3.95
	2013	38.46	7.49	5.23
	2014	1.72	0.32	0.23
	2015	1.85	0.31	0.26
	2016	1.66	0.27	0.21
	Avg.	13.466	2.762	1.976

*source SNL.

Appendixes F: Doha Bank

Table 45: CAMELS Indicators for Doha Bank for the Years 2012-2016

	indicator		**Capital Adequacy**	
Bank Name	Year	Tier 1 Ratio	Capital Adequacy ratio	Leverage Ratio
DOHA	2012	10.9	13.59	10.26
	2013	14.32	15.9	10.74
	2014	14.68	15.03	10.67

	2015	15.38	15.73	10
	2016	15.41	15.57	9.13
	Avg.	14.138	15.164	10.16
	indicator		Asset Quality	
Bank Name	Year	NPLs/ Loans	NPLs/ RWA	Reserves/ NPLs
DOHA	2012	2.88	1.87	86.76
	2013	3.1	1.98	96.65
	2014	3.21	2.28	113.82
	2015	3.38	2.35	110.05
	2016	3.4	2.53	119.73
	Avg.	3.194	2.202	105.402
	indicator		Management	
Bank Name	Year	Asset Growth	Cost to income ratio	Operating expense/ total Assets
DOHA	2012	4.68	34.8	1.55
	2013	21.29	35.67	1.46
	2014	12.76	36.02	1.44
	2015	10.29	37.12	1.29
	2016	8.5	39.62	1.26
	Avg.	11.504	36.646	1.4
	indicator		Earnings	

Bank Name	Year	ROAA	ROAE	Net Interest Margin
DOHA	2012	2.42	17.84	3.19
	2013	2.15	13.95	3.06
	2014	1.92	12.32	2.8
	2015	1.7	10.99	2.62
	2016	1.23	8.02	2.46
	Avg.	1.884	12.624	2.826
	indicator		Liquidity	
Bank Name	Year	Loans to Deposits	Liquid Asset to Total Asset	Liquid Asset to (Depo+S.T.Liabilities)
DOHA	2012	98.18	27.07	32.71
	2013	96.68	27.26	34.27
	2014	105.68	27.68	33.69
	2015	105.36	24.55	30.25
	2016	106.2	25.6	30.92
	Avg.	102.42	26.432	32.368
	indicator		Sensitivity to Market Risk	
Bank Name	Year	MRWA/ Equity	MRWA /RWA	MRWA/Assets
DOHA	2012	53.35	7.76	7.3
	2013	55.94	9.83	9.41
	2014	15.14	2.5	2.26

	2015	18.31	3.01	2.9
	2016	17.01	2.86	2.52
	Avg.	31.95	5.192	4.878

*source SNL.

Appendixes G: Khaliji Bank

Table 46: CAMELS Indicators for Khaliji Bank for the Years 2012-2016

indicator		**Capital Adequacy**		
Bank Name	Year	Tier 1 Ratio	Capital Adequacy ratio	Leverage Ratio
KHALIJI	2012	19.38	21.38	
	2013	16.72	18.43	
	2014	15.28	15.28	
	2015	13.81	13.81	9.28
	2016	15.83	15.83	9.14
	Avg.	16.204	16.946	9.21
	indicator		Asset Quality	
Bank Name	Year	NPLs/ Loans	NPLs/ RWA	Reserves/ NPLs
KHALIJI	2012	0.45	0.25	407.52
	2013	0.34	0.25	322.89
	2014	1.35	1.11	48.76
	2015	0.86	0.76	89.4

	2016	1.52	1.33	109.91
	Avg.	0.904	0.74	195.696
	indicator		Management	
Bank Name	Year	Asset Growth	Cost to income ratio	Operating expense/ total Assets
KHALIJI	2012	23.8	38.53	1.23
	2013	22.53	40.62	1.1
	2014	24.2	42	0.91
	2015	10.52	34.21	0.72
	2016	7	29.4	0.58
	Avg.	17.61	36.952	0.908
	indicator		Earnings	
Bank Name	Year	ROAA	ROAE	Net Interest Margin
KHALIJI	2012	1.68	9.25	1.72
	2013	1.58	10.14	1.73
	2014	1.21	10.02	1.63
	2015	1.14	10.81	1.71
	2016	0.72	6.27	1.56
	Avg.	1.266	9.298	1.67
	indicator		Liquidity	
Bank Name	Year	Loans to Deposits	Liquid Asset to Total Asset	Liquid Asset to (Depo+S.T.Liabilities)

KHALIJI	2012	75.13	54.32	66.52
	2013	103.91	37.59	44.69
	2014	97.94	35.44	40.95
	2015	108.12	33.1	37.97
	2016	106.5	34.85	41.23
	Avg.	98.32	39.06	46.272
	indicator		Sensitivity to Market Risk	
Bank Name	Year	MRWA/ Equity	MRWA /RWA	MRWA/Assets
KHALIJI	2012	64.44	15.23	10.85
	2013	31.42	6.35	4.29
	2014	0.41	0.07	0.05
	2015	0.1	0.02	0.01
	2016	0.12	0.02	0.01
	Avg.	19.298	4.338	3.042

*source SNL.

Appendixes H: Masraf Al-Rayan

Table 47: CAMELS Indicators for Masraf Al-Rayan for the Years 2012-2016

	indicator		**Capital Adequacy**	
Bank Name	Year	Tier 1 Ratio	Capital Adequacy ratio	Leverage Ratio
ALRAYAN	2012	16.88	16.88	11.65

	2013	20.55	20.55	11.33
	2014	18.35	18.36	12.46
	2015	18.54	18.54	12.81
	2016	18.81	18.85	12.37
	Avg.	18.626	18.636	12.124
	indicator		Asset Quality	
Bank Name	Year	NPLs/ Loans	NPLs/ RWA	Reserves/ NPLs
ALRAYAN	2012	0.1	0.09	113.64
	2013	0.1	0.12	80.01
	2014	0.1	0.11	85.06
	2015	0.1	0.1	83.54
	2016	0.17	0.19	43.05
	Avg.	0.114	0.122	81.06
	indicator		Management	
Bank Name	Year	Asset Growth	Cost to income ratio	Operating expense/ total Assets
ALRAYAN	2012	11.5	18.98	0.6
	2013	7.98	18.78	0.62
	2014	20.36	20.6	0.65
	2015	4.04	21.24	0.68
	2016	9.84	18.23	0.53
	Avg.	10.744	19.566	0.616

	indicator		Earnings	
Bank Name	Year	ROAA	ROAE	Net Interest Margin
ALRAYAN	2012	2.6	16.67	1.65
	2013	2.71	17.02	1.92
	2014	2.74	18.83	2.13
	2015	2.48	17.53	1.98
	2016	2.37	17.32	1.62
	Avg.	2.58	17.474	1.86
	indicator		Liquidity	
Bank Name	Year	Loans to Deposits	Liquid Asset to Total Asset	Liquid Asset to (Depo+S.T.Liabilities)
ALRAYAN	2012	92.69	8.51	10.2
	2013	85.74	12.43	15.01
	2014	92.55	9.48	11.31
	2015	112.48	6.74	8.14
	2016	116.56	9.8	11.62
	Avg.	100.004	9.392	11.256
	Indicator		Sensitivity to Market Risk	
Bank Name	Year	MRWA/ Equity	MRWA /RWA	MRWA/Assets
ALRAYAN	2012	4.18	0.96	0.66
	2013	2.29	0.67	0.37

2014	35.5	7.65	5.2
2015	31.14	6.69	4.62
2016	26.15	5.58	3.68
Avg.	19.852	4.31	2.906

*source SNL.

Appendixes I: Market Price

Table 48: End of Year Stock Prices for the Years 2012-2016

Bank Name	**Year**	**Stock Market price (End of Year)**
QNB	2012	27.23
	2013	35.78
	2014	44.29
	2015	36.4
	2016	40.67
	Avg.	36.874
Bank Name	Year	Stock End of Year Market price
QIIB	2012	14.28
	2013	16.7
	2014	22.44
	2015	17.65

	2016	17.25
	Avg.	17.664
Bank Name	Year	Stock End of Year Market price
QIB	2012	20.6
	2013	19.03
	2014	28.06
	2015	29.3
	2016	28.53
	Avg.	25.104
Bank Name	Year	Stock End of Year Market price
CBQ	2012	17.85
	2013	13.45
	2014	17.24
	2015	11.55
	2016	8.5
	Avg.	13.718
Bank Name	Year	Stock End of Year Market price
AHLI	2012	11.1
	2013	12.68
	2014	12.36

	2015	11.47
	2016	10.2
	Avg.	11.562
Bank Name	Year	Stock End of Year Market price
DOHA	2012	12.08
	2013	15.3
	2014	15.11
	2015	11.8
	2016	9.25
	Avg.	12.708
Bank Name	Year	Stock End of Year Market price
KHALIJI	2012	11.1
	2013	12.68
	2014	12.36
	2015	11.47
	2016	10.2
	Avg.	11.562
Bank Name	Year	Stock End of Year Market price
ALRAYAN	2012	6.81
	2013	8.61

2014	12.14
2015	10.32
2016	10.33
Avg.	9.642

*source SNL.