

DETERMINANTS OF CAPITAL ADEQUACY RATIO IN KUWAITI BANKS

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Abstract

The aim of this study is to identify the effects of seven internal factors of five conventional Kuwaiti banks on capital adequacy ratio (CAR). The five factors are: Loans to Assets, Loans to Deposits, Non-Performing Loans to Total Loans, Return on Assets, Return on Equity, Dividend Payout and Total Liability to Total Assets. The study covers the period from 2005 to 2013. The study shows that under fixed effect model, variables DIVIDEND, LAR, LDR, NPLLR, and ROE do not have any impact on capital adequacy ratio. However, SIZE has a significant and negative relationship with capital adequacy ratio. Also, ROA shows a significant and negative relationship with capital adequacy ratio. Under random effect model, results indicate that CAR is adversely affected by bank's SIZE (total liability to assets), and ROA has a significant and negative relationship with capital adequacy ratio. However, Loan to Deposit Ratio (LDR) showed a significant and positive relationship with capital adequacy ratio. On the other hand, dividend payout, loans to assets, Non-Performing Loans to Total Loans and Return on equity do not have significant effect on CAR under random effect model.

Key Words: Capital Adequacy Ratio, Kuwait, Banks

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Introduction

Safety of depositors' funds remains the major concern of bank regulators worldwide. It is in this respect the capital adequacy becomes relevant and important. Capital adequacy refers to the amount of equity capital and other securities which a bank holds as reserves against risky assets as a hedge against the probability of bank failure. In a bid to ensure capital adequacy of banks that operate internationally, the Bank of International Settlements (BIS) established a framework necessary for measuring bank capital adequacy for banks in the Group of Ten industrialized countries at a meeting in the city of Basle in Switzerland. This has come to be referred to as the Basle Capital Accord, on Capital Adequacy Standards.

The Basle accord provided for a minimum bank capital adequacy ratio of 8% of risk-weighted assets for banks that operate internationally. Under the accord, bank capital was divided into two categories – namely Tier I core capital, consisting of shareholders' equity, and retained earnings and Tier II supplemental capital, consisting of internationally recognized non-equity items such as preferred stock and subordinated bonds. The accord, allows supplemental capital to count for no more than 50 percent of total bank capital or no more than 4 percent of risk-weighted assets. In determining risk-weighted assets, four categories of risky assets are each weighted differently, with riskier assets receiving a higher weight. Government securities are weighted zero

percent, short-term interbank assets are weighted 20 percent, residential mortgages weighted at 50 percent while other assets are weighted 100 percent.

Although operationally effective since 1998, the risk-based, Basle Capital accord was generally criticized by practitioners and scholars for the "arbitrary" nature of its provisions. This and other such criticisms led to the adoption of an amended Basle II accord which addressed most of the areas of concern. The capital adequacy standards under the Basle Accord have been widely adopted throughout the world by bank regulators.

Within the Central Bank of Kuwait's endeavors to upgrade the regulatory methods and instruments so as to cope with the latest developments in the global banking industry, the Central Bank of Kuwait Board of Directors approved at its meeting of 11/12/2005 the application of the revised capital adequacy ratio to local conventional banks, including foreign banks branches operating in Kuwait, with effect from 31/12/2005, by implementing the standardized approach in measuring credit risk and operational risk.

Central Bank of Kuwait urged banks senior managements to develop strategies for measuring capital adequacy to be approved by their boards of directors, as well as appropriate policies and procedures designed for identifying and measuring risks and the process of evaluating capital adequacy versus those risks. The instructions also require the banks to develop the systems and regulatory reports on these risk exposures and their effects on the

capital, in addition to enhancing internal control systems, and other relevant requirements under those instructions.

The Central Bank of Kuwait hopes that the implementation of the revised ratio will motivate banks to enhance risk management and control, and maintain adequate capital, in accordance with these regulations, against their risks as capital provides banks with a cushion to absorb losses, without endangering customer deposits, as well as to develop an appropriate method for this purpose, in preparation for implementing more advanced standards in the future, as mentioned in the proposal of Basel Committee on Banking Supervision.

The main objective of this paper is to identify the effects of seven Kuwaiti bank's internal factors (Loans to Assets, Loans to Deposits, Non-Performing Loans to Total Loans, ROA, ROE, Dividend Payout and Total Liability to Total Assets) on the bank Capital Adequacy ratio. In this study we have considered five Kuwaiti conventional banks; National Bank of Kuwait, Burgan Bank, Gulf Bank, Commercial Bank of Kuwait, and Ahli Bank of Kuwait. We have excluded Islamic banks due to the profound difference in their capital structure from the conventional banks for both Assets and Liabilities. The study covers the period from 2005 to 2013. Capital Adequacy Ratio became officially required by Kuwait Central Bank in 2005 and onward, thus data for CAR is not available prior to 2005. The study is conducted in five Sections. The introduction in section I, followed by literature review in Section II, Section III discusses the Research Methodology and Result Analysis; while Section IV provides the Conclusion.

Literature Review

Empirical and theoretical studies and research on capital structure and capital adequacy have become more and more important especially in the last two decades, which can be attributed to the emergence of the information age and globalization of the financial markets and the stronger correlations between the world financial markets. The recent financial crises are a clear example of the stronger bonds of those financial markets and international banking system.

All authors analyzing financial markets and the banking sector are unanimous in their opinion that banks are the institutions that are specifically important for every country and its economy (Aleksandra). Banks, as financial service providers give a special importance on the level and structure of capital they have and the level and the structure of capital held by banks are also significant for macroeconomic indicators of the countries and for applications of monetary policies (Ali, 2014). Banks importance and vital role in the financial system and in the economy in general, increased the attention of the regulatory supervisors on the banks management

and operations, especially on the Capital Adequacy of banks. The connection of bank capital and financial system increased the attention on the capital adequacy of banks to enhance the stability of the financial system (Ali, 2014). One of essential requirements for banks and financial institutions is adequate and sufficient capital and every banks and financial organizations must keep balance between capital and available risk in its assets in order to guarantee its stability (Leila, 2014).

The recent international financial crisis revealed the weakness of the financial sector and the inadequacy of the current supervisory regulations in the international financial institutions and banks, especially at this time of strong correlation between international markets. These events forced regulatory authorities to stress more control procedures and to improve new criteria and methods to avoid bank's insolvency (Al-Sabbagh, 2004). The connection of bank capital and financial system increased the attention on the capital adequacy of banks to enhance the stability of the financial system. That is why the Basel accord, the rules on minimal risk-based capital required for banks is introduced in 1988 by Bank for International Settlement (BIS) (Ali, 2014). Therefore, in 2011, the Basel Committee on Banking Supervision (BCBS) and the European Commission approved a set of reform measures, Basel III, based on the 60 Fourth capital adequacy directives CRD IV (Aleksandra).

The concept of the Capital Adequacy ration appeared in the middle of the 1970's because of the expansion of lending activities in banks without any parallel increase in its capital, since capital ratio was measured by total capital divided by total assets (Al-Sabbagh, 2004). Capital adequacy requirements that were originally set to capture different types of risks faced by conventional banks. Capital adequacy has become the keystone for safety that reflects supervisory concerns. CAR test whether firms have sufficient capital to cover the risks that they confront. Therefore regulatory authorities used capital adequacy ratio as a significant indicator of "safety and stability" for banks and depository institutions because they view capital as a guard or cushion for absorbing losses (Abdel-Karim, 1964). Basel II identified three types of risk exposures for conventional banks: credit risk, market risk and operational risk.

The capital adequacy ratio (CAR) determines the ratio of a bank's core capital to the assets and off-balance liabilities weighted by the risk (Małgorzata, 2010). Minimum capital adequacy ratios have been recommended by Basel Accord to ensure banks can absorb a reasonable level of losses before becoming insolvent, which will protect depositors and promote the stability and efficiency of the financial system.

Two types capital are measured when calculating Capital adequacy ratio:

1. Tier one: core capital which can absorb losses without a bank being required to cease trading, e.g. paid-in capital, all kinds of reserves and retained earnings.

2. Tier two: supplementary capital which can absorb losses in the event of a winding-up and so provides a lesser degree of protection to depositors, e.g. undisclosed reserves, asset revaluation reserves, subordinated debt, loan-loss provisions.

Ali Polat and Hassan Al-khalaf (2014) found that banks usually maintain a level of capital that is more the required by regulatory bodies as they operate cautiously to survive operation and financial shocks. Ali Polat and Hassan Al-khalaf, in their attempt to empirically investigate some internal factors and their relation with capital adequacy ratio, used fixed effect, robust estimation and least squared dummy regression (LSDR) in analyzing their collected data in Saudi banks and the results shows that loans to assets ratio has negative significant effect on capital requirement ratio while leverage and the size of the banks have positive significant effect in determining that ratio and in generalized linear regression (GLS) estimation they found that, in addition to the mentioned results, the loan to deposit ratio has negative significance and the return on assets has positive significance on capital ratio.

Dickson Pastory & Marobhe Mutaju (2013) found that the banks increase in capital ratios had led to increase in asset quality and an increase in non-performing loans has a tendency to worsen capital ratio. Asset quality, in terms of large exposure to core capital, and Capital Adequacy are inversely related, while Non-performing loans increases the capital adequacy.

Abdelkader Boudriga, Neila Boulila Taktak and Sana Jellouli (2009), in their empirical analysis about the cross-countries determinants of nonperforming loans (NPLs), the potential impact of supervisory devices, and institutional environment on credit risk exposure, used banks specific variables aggregated data on a panel of 59 countries over the period 2002-2006 and other econometric techniques and found that higher CARs and higher provisions ratios are negatively related to the level of bad loans.

Leila Bateni, Hamidreza Vakilifard & Farshid Asghari (2014) have investigated empirically the determinants of CAR in Iranian banks and its effect on the bank financial position, using banks internal factors (SIZE, LAR, RAR, DAR, ROA, ROE, EQR) as independent variables CAR as the dependent variable. They have aggregated data from the annual report for the period from 2006 to 2012. They have concluded that CAR is adversely affected by bank's SIZE, this means that large Iranian banks have low supervisory control on their capital adequacy ratio (CAR), and large banks attain a high risk assets portfolio, represented in a positive relationship between RAR and SIZE, while EQR, ROA, ROE and LAR positively influence CAR, While, RAR and

DAR do not have any significant relationship with CAR.

Noor Mohammad Alsabbagh in his thesis (Determinants of Capital Adequacy Ratio) applied in 17 Jordanian banks during the period 1985 to 1994 (before applying Basel committee standard for CAR) and during the period 1995 to 2001 (after applying Basel committee standard for CAR) used correlation coefficient and regression analysis to determine the effect of the banks internal factors (like log SIZE, RAR, LAR, ROE, ROA, DAR, EQR, DR and LPR) on the bank CAR. He found that CAR is adversely affected by banks' size (log SIZE) in the second period, which means that large banks have low supervisory control on their CAR while maintaining low risky assets in their portfolio, as indicated by the negative relationship between RAR and log SIZE. CAR is positively affected by ROA in the first period and positively affected by LAR and EQR in the second period, which explains the decreased shareholder's equity in large banks, which have a significant negative relationship with log SIZE. CAR was positively affected by RAR in the first period and negatively affected by RAR in the second period and that can be attributed to the use Capital to Risk-Weighted Asset ratio in the second period instead of the traditional method of Capital to total asset Ratio used before applying Basel committee standard for CAR. CAR was negatively affected by DAR in the first period and positively affected by DAR in the second period. Finally, CAR was negatively affected by LPR in the second period and banks decreasing CAR in the second period could be attributed to banks increased loan loss reserve.

Jaber et al (2014), investigated the impact of internal and external factors on commercial banks profitability in Jordan. The banks internal factors taken in the study were capital adequacy, the cost to income ratio, liquidity calculated as loans to customers and the accounting value of the bank's total assets. They found out, after using multivariate analysis that the internal factors have a significant impact but not capital adequacy and liquidity ratio for the transformed model, while the size is insignificant for the transformed and untransformed model.

Vatansever et al (2015), analyzed the relationship between non-performing loans and several macroeconomic factors and bank specific factors, such as capital adequacy ratio, in Turkey by using ordinary by using ordinary least square estimation approach with integration analysis and the time series from January 2007 to April 2013. They found out that capital adequacy ratio has a positive effect on non-performing loans ratio. Furthermore; the findings of the positive effect are such a long term not spurious, which have several implications on the banking and credit markets in terms of policy and regulation.

Jasevičienė et al (2014), studied six factors (return on assets, loans over total assets, assets growth,

assets assessed according to risk over total assets, impact of bank management and size of the bank) affecting capital adequacy ratio in commercial banks of Lithuania. The author analyzed data from banks for six years from 2008 -2013 on a quarterly basis. Multiple regression analysis shows that return on assets has a statistically significant negative impact on banks' capital adequacy changes.

Al Omar et al (2008) assessed the impact of bank specific determinants of profitability on Kuwaiti commercial banks from 1993 to 2005 by using unrelated regression technique. Their results indicated that equity ratio, loan- assets ratio, operating expenses ratio, non-interest assets ratio, and total assets explain about 67% of the variation in ROA. The results stressed the importance of improving capital adequacy and reducing non-interest assets to improve profitability. The positive impact of the size variable (total assets) reflects scale efficiency, indicating a potential for higher profits as the size of these banks increases.

Balance sheet structure required by Basel Capital Accord did not account for Islamic banks and was designed for the conventional banks, which profoundly differ in structure from Islamic banks structure for both assets and liabilities. However, Accounting and Auditing Organization for Islamic Financial Institutions (AAOIFI) and the Islamic Financial Services Board (IFSB) is trying to model Capital Adequacy framework suitable for Islamic banks risk profiles.

Islamic banks depositors require less protection than those of conventional banks, because unlike conventional bank that bear all risks associated with investing depositors funds, Islamic banks depositors are not neutral providers of funds and they participate in the bank investment activities through risk-sharing schemes.

Rima and Yolla (2007) Islamic banks are exposed to different types of risks that result from the use of funds than conventional banks. Islamic banks are exposed to new market risk dimension that is

applicable to their banking book rather than only in their trading book as in the case of conventional banks. This market risk is emerging from the fact that Islamic financing activities are generally backed by real assets, resulting in a substantial commodity price risk, which will lead to overall higher market risk exposure and consequently risk- weighted assets of Islamic banks are likely to be higher than their peers.

Research Methodology & Result Analysis

The purpose of this paper is to study the Banks's Capital Adequacy Ratio determinants. Because Basel Capital Accord required balance sheet structure was designed based on the conventional bank's financial structure, we have considered Kuwait 5 conventional banks; (National Bank of Kuwait, Burgan Bank, Gulf Bank, Commercial Bank of Kuwait, and Ahli Bank of Kuwait) and excluded Islamic banks due to the profound difference in their capital and financial structure from the conventional banks for both Assets and Liabilities.

In this study we have hypothesized seven specific factors (see table 1) that influence bank's CAR. We have collected bank's CAR and specific variables from the bank's annual reports for 9 years from the period 2005 to 2013. CAR became official requirement by Kuwait Central Bank on 2005 onward, thus we couldn't find data for CAR prior to 2005.

We have employed panel data methodology using STATA software to analyze the relationships among the bank's specific variables (Loans to Assets, Loans to Deposits, Non-performing loans to Loans, ROA, ROE, Dividend Payout, and Total Liabilities to Assets) and their influence on the bank's Capital Adequacy Ratio. We have used Basel Capital Accord standard formula to calculate the banks CAR.

The following table presents our dependent variable (CAR) and our independent variables hypothesis.

<i>Variable</i>	<i>Hypothesis</i>
Capital Adequacy Ratio (CAR)	
Loans to Assets (L/A)	H1: (L/A) significantly affect CAR
Loans to Deposits (L/D)	H2: (L/D) significantly affect CAR
Non-performing loans to Loans (NPL/L)	H3: (NPL/L) significantly affect CAR
ROA	H4: ROA significantly affect CAR
ROE	H5: ROE significantly affect CAR
Dividend Payout (DIV PAY)	H6: (DIV PAY) significantly affect CAR
Total Liabilities to Assets (L/A)	H7: (L/A) significantly affect CAR

Table 1. Descriptive Statistics

	LAR	LDR	NPLL	ROA	ROE	DIVIDEND	Size	CAR
N	45	45	45	45	45	45	45	45
Mean	60.634	72.272	5.937	1.803	12.924	39.614	87.527	17.933
Median	60.040	72.270	4.390	1.800	11.850	47.070	87.500	17.890
Maximum	70.460	84.650	35.070	7.270	26.590	87.930	99.230	27.650
Minimum	49.480	59.690	0.600	0.000	0.000	0.000	82.620	0.600
Std. Deviation	6.481	6.947	6.313	1.313	8.051	27.710	3.167	4.101
Skewness	0.051	-0.055	2.727	1.557	0.141	-0.282	0.953	-1.024
Kurtosis	-1.221	-1.155	9.725	5.401	-1.124	-1.036	2.727	7.196
Jarque-Bera	2.810	2.549	189.059	58.195	2.547	2.646	16.309	81.554
Probability	0.245	0.280	0.000	0.000	0.280	0.266	0.000	0.000

Table 1 includes the descriptive statistics of the under-studying data for using in Regression. According to this fact the statistical data and information were extracted from the data of 5 private banks during 2005 to 2013, so each of the variables can have 45 observations. The observed calculated descriptive statistics consist of minimum, maximum, mean, median, Standard Deviation, skewness, kurtosis as well as the Jarque-Bera statistics and probabilities (p-values). As it can be seen from Table 1, all the variables are asymmetrical. Especially

skewness is positive for five series, while LDR, DIVIDEND, and CAR have a negative skewness. Kurtosis value of all variables also indicates that five series are nearly normally distributed, while NPLL, ROA, and CAR are not normally distributed as their kurtosis values are deviated from 3. The measure of Jarque-Bera statistics and corresponding p-values are used to test for the normality assumption. Based on the Jarque-Bera statistics and p-value, this assumption is rejected for four series, while LAR, LDR, ROE, DIVIDEND follows normal distribution.

Table 2. The pairwise- correlation matrix for dependent variable (CAR) and explanatory variables

	LAR	LDR	NPLL	ROA	ROE	DIVIDEND	Size	CAR
LAR	1							
LDR	0.9315	1						
NPLL	0.4055	0.2995	1					
ROA	-0.0999	-0.1321	-0.2025	1				
ROE	-0.3115	-0.2395	-0.4127	0.5505	1			
DIVIDEND	-0.3597	-0.2027	-0.5093	0.5145	0.7883	1		
Size	0.2595	-0.0184	0.4425	0.1864	-0.1208	-0.4511	1	
CAR	0.0255	0.2852	-0.1781	-0.4438	0.0097	0.1836	-0.7336	1

The dependent and independent variables are examined for multicollinearity based on a simple correlation matrix. As shown in Table 2, all of them are have no colinearity problem. Having concluded

that none of the bank specific variables are highly correlated and no multicollinearity among these variables exists.

Table 3. Panel regression results (dependent variable CAR) Fixed effect model

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	141.1386	22.4321	6.2918	0
DIVIDEND	-0.013852	0.0248	-0.5584	0.5803
LAR	0.087546	0.2621	0.3340	0.7405
LDR	-0.041143	0.2098	-0.1961	0.8457
NPLL	0.004175	0.0571	0.0732	0.9421
ROA	-0.74553	0.3333	-2.2365	0.0322
ROE	0.092431	0.0752	1.2290	0.2278
SIZE	-1.426603	0.2499	-5.7083	0

Variable	Coefficient	Std. Error	t-Statistic	Prob.
R2	0.858178			
Adj. R2	0.810904			
F-stat.	18.15329			0
Durbin- Watson	0.724086			

The effect of bank specific bank variables on the capital adequacy ratio is examined by the Panel data estimation. The regression results of fixed effect regression are reported in Table 3 mentioned above. The dependent variable (CAR) is the Capital Adequacy Ratio. Model corresponds to cross-section fixed effects. The model is estimated using a panel of 45 observations for the period 2005 to 2013 derived from 5 private banks. The estimated coefficients are also assigned for the banks with the aim of capturing the influence of specific characteristics of each individual bank. As shown in Table 3 Adj. R-squared value (0.8109) suggests that model serves its purpose in determining the impact of specific variables on Capital Adequacy Ratio. In other words, 81.09% variability of the capital adequacy ratio can be explained by the DIVIDEND, LAR, LDR, NPLLR, ROA, ROE, and SIZE. Before analyzing the coefficients, one should look at the diagnostics of regression. In this manner, Durbin-Watson (DW) statistic can show us the serial correlation of residuals. As a rule of thumb, if the DW statistic is less than 2, there is evidence of positive serial

correlation. The DW statistic in our output is 0.7241 and this result confirms that residuals are serially correlated. With computed F-value of 18.1533 ($p < 0.000$) for the panel data regression, we reject the null that all coefficients are simultaneously zero and accept that the regression is significant overall. Further, coefficients estimate in Table 3 shows that-variables DIVIDEND, LAR, LDR, NPLLR, and ROE do not have any impact on capital adequacy ratio. SIZE has a significant and negative relationship with capital adequacy ratio. This result represents that large banks have lower regulations than small size banks. ROA has a significant and negative relationship with capital adequacy ratio. The coefficient of ROA indicates that a unit increases in profitability decreases the banks' capital by (-0.7455) units and coefficient of Size indicates that a unit increase in bank's Size decreases CAR by -1.4266. To sum up our regression results, SIZE and ROA seem to affect capital adequacy ratio. On the other hand DIVIDEND, LAR, LDR, NPLLR, ROE do not appear to have significant effects on capital adequacy ratio.

Table 4. Hausman test for correlated random effects

Correlated Random Effects - Hausman Test				
Test Summary		Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Period random		2.603195	7	0.9191

Now, in order to conform whether there exist any random effect in the dataset, we performed a test to choose better model between; fixed effect or random effects model. One common method for testing this assumption is to use a Hausman (1978) test to compare the fixed and random effects estimates of coefficients. Null hypothesis of Hausman's test states that- random effect model is appropriate, and alternate states that fixed effect

model is appropriate. The purpose is to find out whether there is significant correlation between the unobserved individual specific random effects (α_i) and the regressors. The result of Hausman test is indicated in Table 4. Results indicate that the corresponding effect is statistically insignificant; hence the null hypothesis is accepted by our data and random effects model is preferred.

Table 5. Panel regression results (dependent variable CAR) Random effect model

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	59.8484	18.8187	3.1803	0.0030
DIVIDEND	-0.0091	0.0272	-0.3342	0.7401
LAR	-0.4559	0.2285	-1.9950	0.0534
LDR	0.5491	0.2044	2.6869	0.0107
NPLLR	0.0162	0.0686	0.2356	0.8151
ROA	-1.2322	0.3614	-3.4099	0.0016
ROE	0.1158	0.0771	1.5026	0.1414

Variable	Coefficient	Std. Error	t-Statistic	Prob.
SIZE	-0.6052	0.2042	-2.9632	0.0053
R2	0.751195			
Adj. R2	0.704124			
F-stat.	15.95872			0
Durbin- Watson	0.690088			

The regression results of random effect regression are reported in Table 5 mentioned above. The dependent variable (CAR) is the Capital Adequacy Ratio. As shown in Table 5 Adj. R-squared value (0.7041) suggests that model serves its purpose in determining the impact of specific variables on Capital Adequacy Ratio. In other words, 70.41% variability of the capital adequacy ratio can be explained by the DIVIDEND, LAR, LDR, NPLLR, ROA, ROE, and SIZE. The DW statistic in our output of random effect model is 0.6901 and this result confirms that residuals are serially correlated. With computed F-value of 15.9587 ($p < 0.000$) for the panel data regression, we reject the null that all coefficients are simultaneously zero and accept that the regression is significant overall.

Coefficients estimate in Table 6 shows that variables DIVIDEND, LAR, NPLLR, and ROE do not have any impact on capital adequacy ratio. Liability/assets (SIZE) has a significant and negative relationship with capital adequacy ratio. This result represents that large banks have lower regulations than small size banks. ROA has a significant and negative relationship with capital adequacy ratio, and LDR has a significant and positive relationship with capital adequacy ratio. The coefficient of ROA indicates that a unit increase in profitability decreases the banks' capital by (-1.2322) units, coefficient of LDR indicates that a unit increase in LDR increases the banks' capital by (0.5491) units and coefficient of Size indicates that a unit increase in bank's Size decreases CAR by -0.6052. To sum up our regression results, SIZE, LDR, and ROA seem to affect capital adequacy ratio. On the other hand DIVIDEND, LAR, NPLLR, ROE do not appear to have significant effects on capital adequacy ratio.

Conclusion

The main objective of this paper is to investigate empirically the determinants of CAR in five conventional Kuwaiti banks. This study used secondary data from annual reports of the sample banks. Time study period was nine years, from 2005 to 2013, due to the fact that CAR became officially required by Kuwait Central Bank in 2005 and onward. Panel data regression is used in this study and analyzes relationships between bank specific variables: (Loans to Assets, Loans to Deposits, Non-Performing Loans to Total Loans, ROA, ROE, Dividend Payout and Total Liability to Total Assets) and a dependent variable which is CAR.

The study shows that under fixed effect model, variables DIVIDEND, LAR, LDR, NPLLR, and ROE do not have any impact on capital adequacy ratio. However, SIZE has a significant and negative relationship with capital adequacy ratio. This result represents that large banks have lower regulations than small size banks. Also, ROA shows a significant and negative relationship with capital adequacy ratio.

Moreover the results under random effect model indicates that CAR is to be adversely affected by bank's SIZE (total liability to assets), which means that large banks have low supervisory control on their capital adequacy ratio (CAR). Also, ROA has a significant and negative relationship with capital adequacy ratio, which suggests that the higher the profits of local banks the lower the need for more capital to absorb losses. However, LDR showed a significant and positive relationship with capital adequacy ratio, which suggests the cautionary move of local banks towards lending by maintaining more capital to overcome sudden losses.

Finally, we can argue that findings of our study reflect the actual status of commercial banks in Kuwait under study; also they suggest the urgent need and high importance of conducting more research in the future to observe and determine the exact effect of these ratios after allowing a long period of time of reporting capital adequacy ratios in Kuwaiti banks since the implementation of capital adequacy ratio is considered a new requirement by Central Bank of Kuwait. Furthermore future studies should include other variables not included in this study as financial leverage multiplier, and return on deposits ratio, as well as working on measuring capital to deposits ratio or capital to debts ratio along with variables of the current study. Lastly, final report of financial statements and data should include rules and basis on which capital adequacy measurement is based, which will lead to raising banking and finance awareness that will enhance banks competitive positions with regional and international banks.

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