Journal of Applied Finance & Banking, vol. 5, no. 3, 2015, 159-173
ISSN: 1792-6580 (print version), 1792-6599 (online)
Scienpress Ltd, 2015

Investigating Liquidity-Profitability Relationship: Evidence from Companies Listed in Saudi Stock Exchange (Tadawul)

Mohammed Ziaur Rehman[1] Muhammad Nauman Khan[2] and Imran Khokhar[3]

Abstract

The growth and survival of business houses hinges on the liquidity and profitability. The dexterity to lever between the two domains is of paramount significance for the financial managers. The current study makes an earnest endeavor to investigate the relationship between liquidity and profitability of companies listed in Saudi Stock Exchange (Tadawul). The study encompasses 99 listed companies in Tadawul. The data are culled and collated from audited annual financial statements of listed companies for a period of five years from 2008 to 2012. The profitability facets of the companies are represented by the variables, namely, Return on Assets (ROA) and Return on Equity (ROE). The liquidity of the companies is gauged by current ratio, quick ratio and the absolute liquid ratio. The overall results revealed that there is only one positive significant relationship between Return on Assets (ROA) and Current Ratio (CR) of the companies in Saudi Arabia. Further, it is revealed that there is negative but insignificant relationship between the Return on Assets (ROA) and Quick Ratio (QR) & Cash Ratio (CHR) of the companies in Saudi Arabia. Likewise in the case of Return on Equity (ROE), there is insignificant relationship with the three selected independent variables, namely, Current Ratio (CR), Quick Ratio (QR) and Cash Ratio (CHR).

JEL classification numbers: B26, C12, C58, G10
Keywords: Profitability, liquidity, working capital management.

[1]Corresponding Author, Assistant Professor, Finance Department, King Saud University, Riyadh, Saudi Arabia.
[2]Lecturer, Finance Department, King Saud University, Riyadh, Saudi Arabia & PhD Research Fellow, Institute of Islamic Banking and Finance, International Islamic University, Malaysia.
[3]Researcher, Economics Department, King Saud University, Riyadh, Saudi Arabia.

Article Info: *Received :* January 11, 2015. *Revised :* February 9, 2015.
Published online : May 1, 2015

1 Introduction

Optimal financial structures on the landscape of corporates houses are made for two length of time: short time span and long-time span.The financial optimal level for the short time span is carved through the working capital management. Of late, working capital management has gained currency in the backdrop of global financial crisis. Working management aims at managing current assets & current liabilities and putting forward the optimal level of every element of current assets and current liabilities in the firms. Working capital management is central for enhancing the value of the corporates houses (Smith 1980). Efficient usage of working capital management entails judicious deliberation (Jose et al. 1996). Working capital management has a cardinal influence on the profitability and the liquidity of the corporate firms (Shin and Soenen, 1998). The optimum level of the working management leads to proper equilibrium of liquidity & profitability thereby enhances the value of the firms. Optimizing the balance of working capital indicate at minimizing the requirements of working capital and achieving maximal likely earning(Ganesan 2007).

Working capital management aims to strike a trade- off between liquidity and profitability in the corporate decision making. Corporate managers make an endeavor to devise successful strategies in order to have optimal liquidity in tandem with profit maximization. The theoretical framework of working management brings forth strategies that are principally classified into three forms, namely, aggressive, moderately and conservative. The aggressive working capital strategies focuses on low level of liquidity and high level of profitability accompanied with higher level of risk. The moderately working capital strategies aim at average level of liquidity and average level of profitability along with average level of risk. The conservative working capital strategies aim on high level of liquidity and low level of profitability along with low level of risk. The financial managers have to evince their dexterities within these three spectrums. In a nutshell, a firm is required to retain a fine balance between liquidity and profitability while executing its daily operations.

Liquidity management is corner stone of working capital management. Proper planning of liquidity management is important for all types of firms .The significance of company liquidity can be gauged from different point of view. The foremost group who is concern for the corporate liquidity management is the short term creditors. So from their perspectives, the level of liquidity in company should be high .Further, the quantum of cash is required to make instant payments. It assist the firms to avail the discount opportunities. Receivables are another component of the liquidity shall assist in sale enhancement. Additionally the account payables are a prime component of the short term finance that needs to be paid in due time. The emphasis on the liquidity management also comes to fore on account on multiple studies revealing companies reliance on current liabilities due to failure to obtain long term funding (Petersen and Rajan, 1997).

Liquidity management pertains to the payment of current business obligations. The current business obligations subsume dues to be paid within short span of time. Proper liquidity management ensures that the organizations do not face the paucity or lead to the splurge of liquidity. Optimal level of liquidity is *sine qua non* for all the business houses. Failure to maintain appropriate level of liquidity leads to two situations: surplus liquidity and deficit in liquidity. Corporates normally do not anticipate about enhancing liquidity management before reaching crisis situations (Nicholas 1991). The liquidity position of

the company is gauged through the respective ratios, namely, current ratio, quick ratio, cash ratio.

Profitability is another side of the working capital management that requires holistic strategy. Profitability exhibits the evidence about the company's ability to generate earnings. An escalation in profitability in the organization drives the stock price upwards, thereby providing capital gains. Corporate Finance considers profitability as a prime yardstick of efficiency. Profitability reveals the snapshot measure of corporate success and thus serves as a prime metric of economic performance. Profitability ratios manifest an enterprise's ability to generate earnings relative to sales, assets and equity. These ratios gauge the ability of an enterprise to yield earnings, profits and cash flows relative to some indicators, namely, the capital invested. Profitability is outcome of multiple correct policies and timely decisions. On the whole, the profitability ratios evince the blended outcome of liquidity, asset management and debt on the efficiency of the organization. The common examples of profitability ratios include return on sales, return on assets, return on investment, return on equity, return on capital employed, gross profit margin, net profit margin. Numerous studies revealed that the accounting ratios are instrumental in contributing the relevant information for decision making approach. (Lewellen, 2004)

2 Extant Review of Literature

Literature review cogently reveals multiple research papers on the working capital, liquidity and profitability. Numerous studies have concentrated on the linkage between liquidity and profitability of the corporate firms. Studies have been conducted for a wide ambit of countries, employing various selected variables for the investigation on the purported theme.

Kaur, H. V., & Singh, S. (2013) highlights the importance of optimal working capital in the capital goods sector. The study focuses on efficiency aspect of working capital management practices of 14 companies from the year 2000–2001 to 2009–2010. The study states that appropriate level of working capital leads to attainment of proper liquidity and profitability. The examination of working capital management practices is made through formulating Performance Index, Utilization Index and Efficiency Index. The study proffers a set of strategies to enhance the Profitability of Indian business houses. Sharma, A. K., & Kumar, S. (2011) investigated the role of working capital on the profitability domain of Indian companies. The study select 263 non-financial BSE 500 firms listed on the Bombay Stock (BSE) for the period 2000 to 2008.The study outcome differs considerably from the galore studies conducted on the purported theme. The analysis manifests positive correlation between the working capital management and profitability on the landscape of Indian companies. Vishnani, S., & Shah, B. K. (2007) focuses on the tradeoff between liquidity and profitability in the Indian Consumer Electronics Industry. The study covers a period of 10 years starting from 1994–95 to 2004–05.The study throw light on holding the optimal level of working management so as to enhance the corporate value.

Uyar, Ali (2009) explored the relationship between time span of cash conversion cycle and the profitability of selected Turkish companies. The study exhibits a considerable negative correlation between the cash conversion cycle and the profitability of the selected merchandising and manufacturing companies of the Istanbul Stock Exchange. Eljelly, A. (2004) studied the linkage between profitability and liquidity through the

employment of current ratio and cash gap (cash conversion cycle) on selected joint stock companies in Saudi Arabia. The study covers three fundamental Saudi sectors over the time span of four years (1996-2000). Through the employment of correlation and regression analysis, the study revealed considerable negative association between the liquidity and profitability for the purported companies. Ajanthan, A. (2013) examined the association between liquidity and profitability using a sample of eight listed trading companies in Srilanka. The paper spread over a time span of five years from 2008 to 2012. Through the utilization of correlation& regression analysis, the study exhibit a significant relationship exists between liquidity and profitability among the purported companies in Sri Lanka stock exchange. Pedro Juan Garcia-Teruel and Pedro Martinez-Solano(2007) manifest the influence of working capital management on the profitability facet of selected Spanish firms. The study covers 8,872 SMEs encapsulating a period of 7 years starting from 1996-2002.The study evince value creation in the firms by lessening the inventories and days account outstanding .Further curtailing the cash conversion cycle also enhances the firms' profitability. Filbeck, G., & Krueger, T. M. (2005) demonstrate that firms can masterly decrease the cost of financing by pruning the funds invested in current assets. The study unfolds that, across the time, there are considerable variance prevailing between the purported industries in working capital range. David M. Mathuva (2010) investigated the effect of working capital ingredients on the companies' profitability using a sample of 30 firms registered on Nairobi Stock Exchange for the period 1993 to 2008. The study reports that profitable firms exhibit noteworthy attributes in managing the working capital .These firms are able to collect cash with shortest period of time, uphold adequate level of inventory and prolong the payment period to the creditors. Akinlo, O. O. (2012) investigated the relationship between working capital management and profitability in companies listed on Nigerian Stock Exchange (NSE).The study is limited to 66 Nigerian non-financial firms for the period 1997 to 2007. The study reports that the firms' profitability is dented by the extension of the number of day's accounts receivable, number of days of inventory and number of days accounts payable. Raheman, A., *et al* . (2010) draws attention to the role of working capital management in enhancing the performance of the manufacturing firms in Pakistan. The study cover 204 manufacturing firms listed on Karachi Stock Exchange for the period 1998 to 2007. The study reports that optimal management and financing of working capital can enhance the operating profitability of manufacturing firms. Lazaridis, I., & Tryfonidis, D. (2006) examined the relationship of corporate profitability and working capital management through a sample of 131 companies listed in the Athens Stock Exchange (ASE) using the data from 2001 to 2004.The study report statistical significance between profitability, measured through gross operating profit, and the cash conversion cycle. Shin and Soenen (1998) investigated the linkage between profitability and liquidity employing a substantial sample of companies listed in American market .The study explored the linkage between net trade cycle and its influence on the profitability of the firm .The study report a substantial negative relationship between the net trade cycle and the selected indicators of profitability.

Danuleţiu (2010) examined the linkage between the efficiency of the working capital management and profitability encompassing a sample of 20 annual financial statements of companies from Alba County covering a time frame from the year 2004 to 2008. The paper reported that there is a weak negative linear correlation between working capital management indicators and profitability rates. Saleem and Rehman (2011) investigated the relationship between liquidity and profitability of oil and gas companies of Pakistan.

The study revealed that there is a significant influence of only liquid ratio on ROA while there is insignificant effect on ROE and ROI; thus, the study manifest that liquidity and profitability are closely related because as one increases the other decreases. Bagchi and Khamrui (2012) explored the linkage between working capital management and firm profitability to gauge the variables that affect profitability the most. The paper encompasses a sample of 10 FMCG (Fast Moving Consumer Goods) companies covering a period of 10 years from 2000–01 to 2009–10.The study reported that there is a strong negative relationship between variables of the working capital management and profitability of the firm. Raheman, A., & Nasr, M. (2007) investigated the effect of working capital management liquidity and profitability of 94 Pakistani listed companies for the time period of 6 years (1999-2004).Through the employment of regression analysis, the study reports considerable negative relationship between variables of the working capital management and profitability of the firm. The study further reports negative relationship between liquidity and profitability. Shubita, M. F. (2013) examined the association between working capital management and profitability of Industrial Jordanian companies listed in Amman Stock Exchange. The research envelops 39 companies for the time span of eight years period from 2004-2011.Using the tools of correlations and multiple regression, the study reports considerable negative relationship between working capital indicators with company profitability.Bagchi, B., & Chakrabarti, J. (2014) examined the effect of liquidity on the profitability arena of India's fast-moving consumer goods sector applying a sample size of 18 firms .The study encapsulate a period of 10 years commencing from 2001 to 2011.Through the employment of multiple statistical tools, the study demonstrates strong negative relationship between the liquidity indicators and the firms' profitability.

In sum, it is cogently revealed that the research literature is inundated with studies pertaining to working capital, liquidity and profitability .Further it is manifested that studies are rendered in different time span and pertain to various companies and industries of different countries. There is paucity of studies on working capital, liquidity and profitability in the Kingdom of Saudi Arabia that motivate the current study to embark upon the purported theme.

3 Selection of Saudi Stock Market (TASI)

The extant review of literature manifest that numerous studies have been carried out on the landscape of liquidity management .The previous studies encompasses on liquidity management through the standpoint of various industries and multiple countries. In the very vein, it is felt that similar study is entailed for the Saudi Arabia. In Saudi Arabia, there is paucity of studies in the area of liquidity management, which provides the motivation to kick- off on the current topic so as to lessen the deficit of empirical studies on the purported arena. Thus the current paper makes a holistic effort to study the linkage between the liquidity and profitability of companies listed in Saudi Stock market (Tadawul). This paper aims to examine the linkage between the liquidity and the profitability of companies listed on the Saudi stock market .The research paper hinges upon the secondary data for the investigation. The data covered in the paper is culled and computed from the financial statements of the selected companies listed on Saudi stock market. Out of 163 companies listed on Saudi stock market, ninety nine companies are selected. Table one provide the details of the companies selected. The study makes an

attempt to make a holistic study and thereby encompasses 99 companies covering 12 sectors out of total 15 sectors. The remaining companies are left out on account of incomplete data and due to peculiar nature of financial statement.

Table 1: Selection of Firms

Sample Selection Procedure	**No of Companies**
Firms listed in the Saudi Stock Market	163
Less: financial companies	46
Remaining non-financial firms	117
Less: firms with incomplete data	18
Firms included in the Study	**99**

Source: Computed from Tadawul All Share Index (TASI)

Table two throws light in term of the sectors selected for the study .There are fifteen sectors in the Saudi stock market. Twelve sectors are considered for the current study .Three sectors are excluded on account of incomplete data related issue and due to unique attribute of financial services industries. The excluded sectors are Banks & Financial Services, Insurance and Multi-Investment. From the table, it is revealed Agriculture & Food Industries and Building & Construction cover 15 companies, thereby are the leading sectors in table, whereas the Hotel & Tourism covers only two companies.

Table 2: Sectors Selected

	List of Sectors Selected	**No of Companies**
1.	Petrochemical Industries	10
2.	Cement	13
3.	Retail	12
4.	Energy & Utilities	2
5.	Agriculture & Food Industries	15
6.	Telecommunication & Information Technology	3
7.	Industrial Investment	13
8.	Building & Construction	15
9.	Real Estate Development	7
10	Transport	4
11.	Media and Publishing	3
12	Hotel & Tourism	2
	Total	**99**

Source: Computed from Tadawul All Share Index (TASI)

4 Research Methodology

4.1 Selected Variables

Table 3 manifests the variables selected for the study. The dependent variables are Return on Equity (ROE) and Return on Assets (ROA). The profitability of the firms is measured by Return on Equity (ROE) and Return on Assets (ROA). Return on Equity (ROE) gauge the capacity of the companies to yield profits from its owner's investments. This ratio is considered from the investor's perspectives. Higher is the Return on Equity, the higher efficiency of management in optimizing the equity is revealed. Return on Assets (ROA) manifest the efficiency of the companies in transforming the money utilized to purchase assets into net income. Therefore the higher Return on Assets show the firms are more profitable. The independent variables taken for the study includes, namely, Current Ratio (CR), Quick Ratio (QR) and the Cash Ratio (CHR).These ratios are known as liquidity ratios. Liquidity ratios gauge the capacity of the firms to meet the short term debt commitments. In financial parlance, liquidity ratios greater than one manifest that the firms to be in good financial position. Current ratio is the main liquidity ratio that manifests the quantum of current assets to its current liabilities. This ratio indicates the strength of company to refund the debt over the 12 months' time period. Quick Ratio (QR) is another liquidity ratio that calculates the capacity of the firm to refund the current liabilities when payable with exclusively quick assets. Cash Ratio reveals the capacity of the firms to refund the current financial obligations with cash and cash equivalents exclusively.

Table 3: Selected Variables

Dependent Variable	Independent Variables
Return on Assets (ROA) Return on Equity (ROE)	Current Ratio (CR) Quick Ratio (QR) Cash Ratio (CHR)

Table 4 manifest the computation of selected variables for the study .In sum, there are five variables for the study.

Table 4: Computation of Selected Variables

	Variables	Method of Computation
	Return on Assets (ROA)	Net Income / Total Assets
	Return on Equity (ROE)	Net Income / Total Equity
	Current Ratio (CR)	Current Assets / Current Liabilities
	Quick Ratio (QR)	(Current Assets – Inventory) / Current Liabilities
	Cash Ratio (CHR)	Cash / Current Liabilities

4.2 Statement of Hypotheses

For better appreciation of the influence of the selected ratios on the Return on Assets (ROA) and on Return on Equity (ROE), the following hypotheses are designed.
Hypothesis 1 (Ho): There is no significant relationship between Return on Assets (ROA) and Current Ratio (CR) of the companies in Saudi Arabia.

Hypothesis 2 (Ho): There is no significant relationship between Return on Assets (ROA) and Quick Ratio (QR) of the companies in Saudi Arabia.
Hypothesis 3 (Ho): There is no significant relationship between Return on Assets (ROA) and Cash Ratio (CHR) of the companies in Saudi Arabia.
Hypothesis 4 (Ho): There is no significant relationship between Return on Equity (ROE) and Current Ratio (CR) of the companies in Saudi Arabia.
Hypothesis 5 (Ho): There is no significant relationship between Return on Equity (ROE) and Quick Ratio (QR) of the companies in Saudi Arabia.
Hypothesis 6 (Ho): There is no significant relationship between Return on Equity (ROE) and Cash Ratio (CHR) of the companies in Saudi Arabia.
The basic model estimated is as follows:
(ROA) $y = b0 + b1\ (CR) + b2\ (QR) + b3\ (CHR) + Є$
(ROE) $y = b0 + b1\ (CR) + b2\ (QR) + b3\ (CHR) + Є$
In order to specify the analysis model, the study use the following variables as dependent variables, namely, Return on Assets (ROA) and Return on Equity (ROE).The independent variables are Current Ratio (CR) , Quick Ratio (QR) and Cash Ratio (CHR) .
Table five pertains to the information about the average mean of the selected ratios, by sector. Through the table, it is revealed that the cement sector with an average ROA of 12.76 has the highest Return on Assets (ROA) among all the selected sectors during the five year time duration. In term of Return on Equity (ROE), retail sector has occupied the highest average of 18.18. In term of liquidity, hotel & tourism sector has registered the highest average mean with 3.21 and 3.16 in Current Ratio (CR) and Quick Ratio (QR). Petrochemical Industries sector has the highest average mean of Cash Ratio (CHR).

Table 5: Sector Wise (Average Mean)

List of Industries	No of Companies	ROA	ROE	CR	QR	CHR
Petrochemical Industries Sector	10	6.74	11.82	2.74	2.33	1.57
Cement Sector	13	12.76	15.78	3.03	2.25	1.28
Retail Sector	12	10.37	18.18	2.21	1.39	0.51
Energy & Utilities Sector	2	3.35	5.85	1.30	0.71	0.13
Agriculture & Food Industries Sector	15	4.68	6.98	2.62	1.87	0.72
Telecom. & In. Tech. Sector	3	4.03	5.13	0.61	0.60	0.15
Industrial Investment Sector	13	7.98	13.31	2.90	2.13	0.72
Building & Construction Sector	15	6.76	6.53	2.44	1.44	0.39
Real Estate Development Sector	7	4.00	5.08	2.38	2.38	1.36
Transport Sector	4	1.41	4.65	1.25	1.13	0.39
Media and Publishing Sector	3	5.29	8.54	1.95	1.27	0.22
Hotel & Tourism Sector	2	5.78	6.75	3.21	3.16	1.48

Source: Data computed on the basis of the companies' annual financial statements

5 Analysis and Discussions

5.1 Descriptive Statistics

Table 6 reveals the descriptive statistics of the selected dependent and independent variables of ninety nine companies in Saudi stock exchange over the five year period. Information about the ranges of the variables is contained in the Minimum and Maximum. The standard deviation measures the amount of variability in the distribution of a variable. The calculation for the values of maximum, minimum, mean and standard deviation have been done from the ratios. The study covers a total of 495 firm-year observations. The descriptive statistics reveals that under the study period, the selected financial ratios as measured by Return on Assets (ROA), Return on Equity (ROE), Current Ratio (CR), Quick Ratio (QR) and Cash Ratio (CHR) have a positive mean value which ranges from 10.480 for Return on Equity (ROE) to 0.8072 in Current Ratio (CHR).This indicates that the observations in the data set are widely dispersed from the mean. The highest standard deviation is revealed by ROE and the least by Cash Ratio.

Table 6: Descriptive Statistics

	Mean	**Median**	**Maximum**	**Minimum**	**Standard Deviation**	**Observations**
ROA	7.2016	6.3000	43.980	-67.81	10.107	495
ROE	10.480	11.360	68.920	-453.691	26.534	495
CR	2.4787	1.7100	22.180	0.0900	2.4078	495
QR	1.8303	1.2400	22.180	0.0900	2.0430	495
CHR	0.8072	0.2564	22.1494	0.00193	1.6207	495

Source: Data computed on the basis of the companies' annual financial statements. Researchers' EVIEWS Analysis

5.2 Correlation Analysis

Table 7 reveals the result of correlation computation. The correlation between dependent variables which are Return on Assets (ROA) & Return on Equity (ROE) and independent variables, namely, Current Ratio, Quick Ratio and Cash Ratio are observed. The results of correlation analysis between return on assets (ROA) and Current Ratio reveals a positive correlation between them having a value of .219. This correlation reveals that these two variables have a positive relationship with each other i.e. if there will be an increase in current ratio then the dependent variable ,return on assets, will also increase and vice versa. The P-value for this correlation is 0.000 which shows the significance of this relationship. Likewise the independent variables, namely, quick ratio and cash ratio have positive relationship with return on assets. The table shows that the independent variables, namely, quick ratio and cash ratio have the positive value of .171 and .104 with the return on assets (ROA). The P-value for both the correlations are 0.000 and .021 which shows the significance of this relationship. Further the table reveals correlation analysis between Return on Equity (ROE) and independent variables, namely, Current Ratio, Quick Ratio and Cash Ratio. It is revealed that there is positive relationship between the independent variable and the three dependent variables. But the p value reveals that the relationship between the dependent and the independent variables are insignificant.

Table 7: Correlations for all the Variables Tested for Select Companies over the 5 Year Period

		Return on Asset	Return on Equity	Current Ratio	Quick Ratio	Cash Ratio
Return on Asset	Pearson Correlation	1	.700**	.219**	.171**	.104*
	Sig. (2-tailed)		.000	.000	.000	.021
	N	495	495	495	495	495
Return on Equity	Pearson Correlation	.700**	1	.082	.054	.029
	Sig. (2-tailed)	.000		.069	.233	.514
	N	495	495	495	495	495
Current Ratio	Pearson Correlation	.219**	.082	1	.934**	.772**
	Sig. (2-tailed)	.000	.069		.000	.000
	N	495	495	495	495	495
Quick Ratio	Pearson Correlation	.171**	.054	.934**	1	.860**
	Sig. (2-tailed)	.000	.233	.000		.000
	N	495	495	495	495	495
Cash Ratio	Pearson Correlation	.104*	.029	.772**	.860**	1
	Sig. (2-tailed)	.021	.514	.000	.000	
	N	495	495	495	495	495

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

Source: Data computed on the basis of the companies' annual financial statements. Researchers' EVIEWS Analysis

5.3 Testing of Hypotheses (Regression statistics)

In Table 8(Model Results), the coefficient column for variable CR stands at + 1.853079.This reveals that there is a positive relation between CR and ROA; it means that an increase in CR will also lead to an increase in the ROA. At the significance level of 0.0004< 0.05, it is statistically significant. The weight of evidence, therefore suggests rejecting the null hypothesis and confirming that there is a significant relation between CR and ROA of companies in Saudi Arabia. As shown in the table, the coefficient column for variable QR stands at -0.718632.This reveals a negative relation between QR and ROA, it means that a decrease in QR will also lead to an increase in the ROA. At the significance level of 0.3500< 0.05, it is statistically insignificant. The weight of evidence, therefore suggests accepting the null hypothesis. This implies that change in QR does not have influence on the ROA of companies in Saudi Arabia. As shown in the table, the coefficient column for variable CHR stands at -0.699019.This indicates that CHR has negative relationship with ROA. It means that a decrease in CHR will also lead to an increase in the ROA. At the significance level of 0.1987< 0.05, it is statistically insignificant. The weight of evidence, therefore suggests accepting the null hypothesis. The R^2, the coefficient of multiple determinations indicate the extent to which the independent variables influence the dependent variable. The (model snapshot) demonstrates that coefficient of multiple determinations (R^2) is 0.060275. Thus 6 % of the variations in the dependent variable are explained by the independent variables of the

model. It also shows that the selected independent variables are not the major determinants factor of return on assets (ROA) of the companies listed in Saudi Arabia. F-test provided in Table 8, manifests that F = 10.49767 at a significance level of 0.000. So, the test outputs described below reveals the emerging multiple regression equation as

ROA = 4.488026 + 1.853079 (CR) -0.718632 (QR) -0.699019 (CHR) + Ɛi

Table 8: Model Results

Variable	**Coefficient**	**Std. Error**	**t-Statistic**	**Prob.**
C	4.488026	0.669552	6.70303	0
CR	1.853079	0.523414	3.540368	0.0004
QR	-0.718632	0.768266	-0.935395	0.35
CHR	-0.699019	0.543187	-1.286884	0.1987
R-squared	0.060275	Mean dependent var		7.201677
Adjusted R-squared	0.054533	S.D. dependent var		10.10704
S.E. of regression	9.827591	Akaike info criterion		7.416313
Sum squared resid	47421.53	Schwarz criterion		7.450289
Log likelihood	-1831.537	Hannan-Quinn criter.		7.429651
F-statistic	10.49767	Durbin-Watson stat		0.857009
Prob(F-statistic)	0.000001			

Source: Authors' EVIEWS Analysis

In Table 9 (Model Results), the coefficient column for variable CR stands at + 2.653514. This reveals that there is a positive relation between CR and ROE; it means that an increase in CR will also lead to an increase in the ROE. At the significance level of 0.0604< 0.05, it is statistically insignificant. The weight of evidence, therefore suggests accepting the null hypothesis and confirming that there is an insignificant relation between CR and ROE of companies in Saudi Arabia. As shown in the table, the coefficient column for variable QR stands at -1.827050.This reveals a negative relation between QR and ROE; it means that a decrease in QR will also lead to an increase in the ROE. At the significance level of 0.3776< 0.05, it is statistically insignificant. The weight of evidence, therefore suggests accepting the null hypothesis. This implies that change in QR does not have influence on the ROE of companies in Saudi Arabia. As shown in the table, the coefficient column for variable CHR stands at -0.583111.This indicates that CHR has negative relationship with ROE. It means that a decrease in CHR will also lead to an increase in the ROE. At the significance level of 0.6904< 0.05, it is statistically insignificant. The weight of evidence, therefore suggests accepting the null hypothesis. The R^2, the coefficient of multiple determinations indicate the extent to which the independent variables influence the dependent variable. The (model snapshot) demonstrates that coefficient of multiple determinations (R^2) is 0.011105. Thus 1 % of the variations in the dependent variable are explained by the independent variables of the model. It also shows that the selected independent variables are not the major determinants factor of Return on Equity (ROE) of the companies listed in Saudi Arabia.

F-test provided in Table 9, manifests that F = 1.837967 at a significance level of 0.000. So, the test outputs described below reveals the emerging multiple regression equation as ROE = 7.718363+ 2.653514 (CR) -1.827050 (QR) -0.583111 (CHR) + Ɛi

Table 9: Model Results

Variable	**Coefficient**	**Std. Error**	**t-Statistic**	**Prob.**
C	7.718363	1.803196	4.28038	0
CR	2.653514	1.409627	1.882423	0.0604
QR	-1.82705	2.069045	-0.88304	0.3776
CHR	-0.583111	1.462878	-0.398606	0.6904
R-squared	0.011105	Mean dependent var		10.48083
Adjusted R-squared	0.005063	S.D. dependent var		26.53432
S.E. of regression	26.46706	Akaike info criterion		9.397727
Sum squared resid	343948.1	Schwarz criterion		9.431703
Log likelihood	-2321.937	Hannan-Quinn criter.		9.411065
F-statistic	1.837967	Durbin-Watson stat		1.179858
Prob(F-statistic)	0.139313			

Source: Authors' EVIEWS Analysis

6 Conclusion

The paper investigated the influence of liquidity ratios on the profitability for the companies listed in the Saudi stock market. The study covered ninety nine companies out of one sixty three companies listed in the Saudi stock market over the period 2008 to 2012. The study covered six hypotheses. Out of the six hypotheses shown in table 10, it is revealed there is only one significant relationship between Return on Assets (ROA) and Current Ratio (CR) of the companies in Saudi Arabia.

Table 10

No.	Hypothesis	Result
Hypothesis1 (Ho):	There is no significant relationship between Return on Assets (ROA) and Current Ratio (CR) of the companies in Saudi Arabia.	Rejected
Hypothesis 2 (Ho):	There is no significant relationship between Return on Assets (ROA) and Quick Ratio (QR) of the companies in Saudi Arabia.	Accepted
Hypothesis 3 (Ho):	There is no significant relationship between Return on Assets (ROA) and Cash Ratio (CHR) of the companies in Saudi Arabia.	Accepted
Hypothesis 4 (Ho):	There is no significant relationship between Return on Equity (ROE) and Current Ratio (CR) of the companies in Saudi Arabia.	Accepted
Hypothesis 5 (Ho):	There is no significant relationship between Return on Equity (ROE) and Quick Ratio (QR) of the companies in Saudi Arabia.	Accepted
Hypothesis 6 (Ho):	There is no significant relationship between Return on Equity (ROE) and Cash Ratio (CHR) of the companies in Saudi Arabia.	Accepted

The overall results revealed that there is only one positive significant relationship between Return on Assets (ROA) and Current Ratio (CR) of the companies in Saudi Arabia. Further, it is revealed that there is negative but insignificant relationship between the Return on Assets (ROA) and Quick Ratio (QR) & Cash Ratio (CHR) of the companies in Saudi Arabia. Likewise in the case of Return on Equity (ROE), there is insignificant relationship with the three selected independent variables; namely, Current Ratio (CR), Quick Ratio (QR) and Cash Ratio (CHR).Thus two out of the three liquidity ratios have negative relationship with the profitability.

The study outcome to an extent reinforce the finding of Eljelly, A. (2004), which exhibits a significant and negative relation between profitability and liquidity measures among the Saudi companies. It is also recommended that further research be directed on the similar topic with specific sectors and unfolding more years in the study.

ACKNOWLEDGEMENTS: The researchers would like to thank the Deanship of Scientific Research at King Saud University represented by the Research Centre at CBA for supporting this research.

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