

# Exploring Liquidity-Profitability Nexus: A Reference of Modaraba Companies

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## Abstract

Optimal tradeoff between liquidity and profitability is an imperative phenomenon that demands pragmatic managerial focus in almost every organization. The study emphasizes to measure and analyzes the empirical relationship between liquidity and profitability of 26 Modaraba companies operating in Pakistan. Secondary data for 2006-2012 have been analyzed using descriptive statistics, Pearson correlation, multiple regression and SPSS (version 20) used for data analysis. Empirical findings reveal that profitability of Modaraba companies operating in Pakistan has not been significantly influenced by liquidity indicators, only CATCL has a significant control over ROA and LTITTA has strong positive and significant impact on ROE. It is suggested that more evidences required from financial and non-financial sector in testifying the theoretical association of liquidity and profitability. Either liquidity of Modaraba companies has an impact upon solvency, leverage or efficiency that is a separate prospective horizon.

**Keywords:** Liquidity, Profitability, Modaraba companies

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## 1. Introduction

The financial sector, one of the chief components of the country's economy, shares around 5 percent in the Gross Domestic Product of Pakistan principally requires a rigorous, steady and robust financial system for economic wellbeing of the country and its populace. Pakistan's financial sector signifies a strapping integration of institutions of a diversified nature among which Modaraba Companies contributes remarkably. Modaraba Companies have witnessed marvelous performance during last few years. Total assets increased from Rs. 23.3 billion in FY10 to Rs 29.5 billion in FY12 showing an annual increase of 12.1 percent. This growth rate was 5.8 and 7.6 percent at the end of FY10 and FY11 respectively. Total equity observed an increase of 4.0 percent in FY12 over FY11. Profit before and after taxation increased by 16.3 percent & 16.2 percent respectively in FY12 over FY11. Gross revenue amplified to Rs 6.8 billion in FY12 with a rise of 14.7 percent; operating expenses 29.7 percent; 10.5 percent in operating profit; 16.3 percent in profit before taxation; 16.2 percent after tax profit; ROA 4.43 percent and ROE increased 10.23 percent in FY12.3

Optimal tradeoff between liquidity and profitability has been an imperative phenomenon that demands pragmatic managerial focus in almost every organization. Profitability and liquidity are separate but interconnected debates demand management's focus as per the nature of economic unit. A corrective and optimal level of liquidity of is desirable as it is inversely proportional to profitably. Liquidity hikes tough safeguard the default risk but trussing valuable funds in unproductive segment directly injures the profitability. Low level of liquidity although ensures surplus funds to be invested in lucrative projects but at other front it leads towards the failure as the metaphor "short term survival is essential for long run" has widespread acceptability in financial literature. According to Saluja and Kumar (2012) Liquidity and profitability tradeoff have become a critical concern, the management of current assets and current liabilities in a fashion so that profitability will be optimal, as a company wishes to keep high level of current assets and possible minimum current liabilities to ensure solvency. Such proposition leads to an adverse impact upon profitability of that organization.

### *1.1 Objectives of the study*

The chief objectives of the study are:

- To empirically test the relationship between liquidity and profitability;
- To measure and analyze the extent controlling variables stimulate the return on assets (ROA); and
- To measure and analyze the extent controlling variables influence the return on assets (ROE)

## 2. Literature Review

In economic literature the notion "liquidity" refers to the ability of conversion of economic possessions into cash without destruction of fair value. Liquidity is a flow concept and the ability to comprehend such flows; inability leads towards illiquid operations and ultimate

<sup>3</sup> State Bank of Pakistan (2013)

harm to profitability. Liquidity policy for financial institutions has an implication of monetary policy as well (Nikolaou, 2009). Chamberlain (2009) investigated the role of liquidity variables in determining the investment behavior of large corporations using long term survival model comparative to profitability interpretation as base for investment. The study uses both historical and replacement cost data to gauge the underlying relationship and summarized that long term survival model to patronize investment behavior reflects the same compatibility as other approaches do, however liquidity flows in the model appear most effective measure.

Funding liquidity is “*the ability to settle obligations with immediacy*”, if the financial institution fails to settle down these obligation it is declared as illiquid and defaulter, consequently shareholders, depositors and other stakeholders loss their stakes. Possibility of occurrence of such loss originates the default risk horizon for financial institutions and their earning ability suffers. Funding liquidity has two components; inflows and outflows of funds in future and prices would realize it in future. Financial institutions are inclined to realize higher prices in money market that is governed by higher funding liquidity (Drehmann & Nikolaou, 2012). Every enterprise wants to sustain adequate liquidity as liquidity impressively affects profits of firm out of which some portion is divided among shareholders. Liquidity and profitability are closely linked with each other, since one upturns the other declines (Saleem & Rehman, 2011).

Lamberg and Valming (2009) have probed the relationship between liquidity strategies and firm’s profitability during finance distress and significance of the core liquidity ratios. The findings demonstrate that there is not a significant impact of liquidity adaption strategies on profitably. In the era of financial crisis short term financing and accelerated use of liquidity prediction have constructive influence on return on assets. It is further argued that the significance of liquidity ratio remained unchanged during study period and most frequently used liquidity measure was working capital ratio among others.

According to Bordeleau and Graham (2010) the effect of liquid asset possessions on bank profitability for U.S. and Canadian banks fluctuates depending on a bank’s business model and the state of the economy. Results propose that profitability enhanced for banks that hold certain liquid assets, however, there is a stage at which holding further liquid assets lessens a banks’ profitability. More frequent monitoring and forecasting on liquidity levels and making more short-term investments can provide gains in profitability. Based on the findings, the adjustment of liquidity practices is beneficial for the companies, even though benefits are not always directly measurable as profitability. Furthermore, companies are recommended to maintain their focus on liquidity and working capital management in an economic downturn (Lamberg & Valming, 2009).

Saleem and Rehman (2011) applied linear regression model to examine the relationship between liquidity and profitability. The empirical results confirm that there is a significant control of liquid ratio on return on assets (ROA) whereas insignificant effect on return on equity (ROE) and return on investment (ROI); the results reveal that ROE is not significantly affected by current ratio (CR), quick ratio(QR) and liquid ratio(LR) while ROI is prominently affected by three ratio. It is also claimed that liquidity is vital concern of suppliers, creditors,

lenders, employees and shareholders as each one has relative decisions dependent upon satisfactory liquidity position.

Shahchera (2012) studied the impact of liquid asset holdings on bank profitability of Iranian banks and found statistically significant impact of liquidity asset on profitability. The profit of financial institution is greatly affected by business cycle and negatively affected by regulations. It is suggested that waiving regulatory constraints will promote profitability. Bhunia et al (2012) used multiple regression and Pearson correlations to explore the liquidity on profitability of the FMCG companies in India and results indicate that there are significant positive relationships exist between liquidity variables and profitability of the firm.

Mathuva (2009) used Pearson correlations and regression model to examine the effect of WCM components on business profitability by using a sample of 30 firms listed on the Nairobi Stock Exchange (NSE) for the periods 1993 to 2008 and major findings demonstrate that there exists a highly significant negative relationship between average collection period and profitability while highly significant positive relationship between inventory conversion period and average payment period and profitability.

Lartey et al (2013) explored the relationship between liquidity and profitability of seven Ghana Stock Exchange listed banks using correlation and regression, found declining trends in profitability and liquidity while it is also observed that there was a feeble positive connection between the liquidity and the profitability. Holz (2002) used regression model to probe the impact of liquidity upon profitability and claimed that once endogenous factors are controlled for, the liquidity (liability-asset ratio) has positive impact upon profitability. According to Aminu (2012) stable growth and survival of a firm is linked with maintenance of appropriate balance between liquidity and profitability in compliance with firm's strategies and core objectives. Saluja and Kumar (2012) claimed that there is a negative relationship between profitability and liquidity, there is a need to uphold equilibrium between these dimensions as if firm tries to maximize the profitability its ability to meet obligations declines.

Summing up the scholarly contribution in the area of liquidity-profitably connection, it is concluded that literature is inconclusive and there is a need to provide more evidence on this pivotal issue in financial management. The emphasis is to enrich the existing literature with impact of liquidity of Modaraba companies' operating in Pakistan on their profitability.

### **3. Methodology**

#### *3.1 Model Description*

Following research models have been used to measure the relationship among prevailing variables:

$$\text{Model-I: } ROA = \beta_0 + \beta_1 \text{ CATCL} + \beta_2 \text{ TLTTA} + \beta_3 \text{ LTITTA} + \varepsilon$$

$$\text{Model-II: } ROE = \beta_0 + \beta_1 \text{ CATCL} + \beta_2 \text{ TLTTA} + \beta_3 \text{ LTITTA} + \varepsilon$$

Where,

ROA = Return on Assets; ROE = Return on Equity; CATCL = Current Assets to Current

Liabilities; TLTTA = Total Liabilities to Total Assets and LTITTA = Long Term Investment to Total Assets. ROA and ROE are explained variables serving as common proxies of profitability while as CATCL, TLTTA and LTITTA are explanatory variables in the model.

### 3.2 Population and Sample Selection

The population for the study was 26 Mudaraba companies currently operating in Pakistan.

#### 3.2 What is Modaraba?

*“Modaraba means the business in which some persons participate with their capital and the managers or Modarab with their managerial skill. The profit are distributed among both parties according to the agreed ratio. In case of loss it is distributed among the financiers according to their invested capital”<sup>4</sup>*

##### 3.2.1 Features of Modaraba

- It is an agreement, in which one party provides managerial skill and other party provides capital funds to carry on the business.
- Profit is shared according the agreed ratio.
- It may be for "Multiple Purpose" or for special purpose.
- This business must be governed by the "Modaraba Companies Modaraba Rules, 1981.
- According to the Modaraba rules at least 10% shares are compulsory for the party who provides managerial skill.
- A company which is registered as a Modaraba. Company can float a Modaraba.
- For the floating of Modaraba. Company must obtain the permission from the registrar and controller
- A clearance certificate is also obtained from the Religious Board that business is not against the Islamic Laws.
- Each Modaraba company has to appoint the chartered accountant, as auditor who will certify the accounts and objectives of Musharika.

The sample comprised upon *Modaraba Al-Mali, First Al-Noor Modaraba, B.F. Modaraba, B.R.R. Guardian Modaraba, Constellation Modaraba, Crescent Standard Modaraba, First Elite Capital Modaraba, First Equity Modaraba, First Fidelity Leasing Modaraba, First Imrooz Modaraba, First Habib Bank Modaraba, First Habib Modaraba, First IBL Modaraba, KASB Modaraba, First National Bank Modaraba, First Pak Modaraba, First Paramount Modaraba, First Prudential Modaraba, First Punjab Modaraba, Standard Chartered Modaraba, First Tri-Star Modaraba, Trust Modaraba and First UDL Modaraba* whereas three companies have been excluded due to their new entry and scant required data.

### 3.3 Data Source and Statistics

The study compiled secondary data from database maintained by statistical division of State

<sup>4</sup> Retrieved form <http://studypoints.blogspot.com/> on 18-April-2014.

Bank of Pakistan (SBP) for the period of 2006 to 2012 that has been analyzed through descriptive statistics, Pearson correlation, multiple regression, F-test, t-test, ANOVA and IBM SPSS version 20.

## 4. Results and Discussion

### 4.1 Pearson Correlation

Pearson Correlation shows the prevailing relationship among variables that has been portrayed in table 1. There is a positive relationship between ROA and ROE; CATCL and ROA; TLTTA and ROE while at other front TLTTA negatively correlated with CATCL. It is evident that none of the variables have strong (either positive or negative) association with each other.

### 4.2 Regression (Model-I)

Adjusted R Square is .028 in table 2, indicates only three percent overall variability in dependent variable (ROA) is explained by the model-I. The low difference between R Square and Adjusted R Square supports that relevant variables are considered in mode. It signals ROA is not significantly controlled by CATCL, TLTTA and LTITTA. F and P-value in table 3 reveal the fitness of model-I. In final column p-value [0.044<0.05] signifies that model has the predicting power to measure the effect of LTITTA, TLTTA and CATCL on ROA.

Table 4 demonstrates the relationship between LTITTA, TLTTA, CATCL and ROA with respective coefficients. If  $p \leq 0.05000$  the concern variable has significant impact upon dependent variable. Unstandardized coefficient B reports that one unit increase in CATCL brings 0.297 increase in ROA holding TLTTA and CATCL constant and p-value [0.019<.0500] indicates a statistically significant impact driven. TLTTA brings about 1.534 unit positive change in ROA holding CATCL and LTITTA fixed due to its one unit change but corresponding p-value [0.480>.0500], reports this change statistically insignificant. One unit increase in third liquidity variable LTITTA decrease ROA by 0.049 holding CATCL and TLTTA unchanged and corresponding p-value [0.134>.0500] labels this fluctuation insignificant. Beta values reveal that one standard deviation increase in CATCL, model-I predicts that 0.207 standard deviation increases is observed in ROA. One standard deviation increase in TLTTA and LTITTA cause 0.062 and -0.110 standard deviation change in ROA respectively.

### 4.3 Regression (Model-II)

In table 5 Adjusted R Square (.072) reports 7 percent variability in dependent variable (ROE) is explained by model-II. It means LTITTA, TLTTA and CATCL have 7 percent driving influences on return on equity. In last column of ANOVA table 6 p-value is significant, rejects the null hypothesis that model-II does not have the predictive power. The higher F-value witnesses the strength of the model that it has the potential power to measure the relationship among variable of the study.

The empirical relationship between LTITTA, TLTTA, CATCL and ROE is expressed in table 8 with relevant coefficients. If  $p \leq 0.05000$  the concerning variable has significant impact upon explained variable. Unstandardized coefficient of CATCL is 0.453 and one unit increase in it

transports 0.453 units positive change in ROE holding TLTTA and CATCL constant and p-value  $[0.080 > 0.0500]$  designates statistically insignificant bearing. The TLTTA results 17.726 unit positive change in ROE holding CATCL and LTITTA fixed if it rises one unit, p-value  $[0.000 < 0.0500]$  claims strongly significant control upon ROE. One unit upsurge in third variable LTITTA decreases ROE by .061 holding CATCL and TLTTA unchanged and p-value  $[0.365 > 0.0500]$  labels insignificant variability. Beta values reveal that one standard deviation increase in CATCL, model-II predicts that 0.151 standard deviation increases is observed in ROA. A standard deviation increase in TLTTA and LTITTA origins 0.342 and -0.065 respective standard deviations in ROE.

## 5. Conclusions

ROA and ROE; CATCL and ROA; TLTTA and ROE were positively correlated with each other though TLTTA was adversely correlated with CATCL but this association was not significantly intensive. Both models do have the potential to predict the underlying relationship between the variables emphasized in the study. In first model explanatory variables LTITTA, TLTTA and CATCL collectively influenced ROA only 3 percent only the CATCL has a significant control over ROA and other two have insignificant bearing. Repressors' LTITTA, TLTTA and CATCL have 7 percent overall driving powers over return on equity (ROE). TLTTA and CATCL have insignificant impact on ROE whereas LTITTA has put strong significant and positive impact on explained variable ROE. Overall results are consistent with the findings of Lamberg and Valming (2009) that liquidity variables do not have an impact on profitability and Saleem and Rehman (2011) that liquid ratio has insignificant effect on return on equity (ROE), however findings of the study are contradicting the claims of Shahchera (2012); Bhunia et al (2012); Mathuva (2009); Lartey et al (2013) and Saluja and Kumar (2012).

We conclude that profitability of Modaraba companies operating in Pakistan has not been significantly influenced by liquidity indicators, only CATCL has a significant control over ROA and LTITTA has strong positive and significant impact on ROE. It is suggested that more evidences required from financial and non-financial sector in testifying the theoretical association of liquidity and profitability. Either liquidity of Modaraba companies has an impact upon solvency, leverage or efficiency that is a separate prospective horizon.

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**Appendices**
**Table 1: Correlations**

		ROE	ROA	CATCL	TLTTA	LTITTA
	Pearson Correlation	1	.563**	-.037	.259**	-.064
ROE	Sig. (2-tailed)		.000	.623	.000	.389
	N	182	182	182	182	182
	Pearson Correlation	.563**	1	.172*	-.051	-.109
ROA	Sig. (2-tailed)	.000		.020	.494	.143
	N	182	182	182	182	182
	Pearson Correlation	-.037	.172*	1	-.547**	.006
CATCL	Sig. (2-tailed)	.623	.020		.000	.932
	N	182	182	182	182	182
	Pearson Correlation	.259**	-.051	-.547**	1	-.001
TLTTA	Sig. (2-tailed)	.000	.494	.000		.994
	N	182	182	182	182	182
	Pearson Correlation	-.064	-.109	.006	-.001	1
LTITTA	Sig. (2-tailed)	.389	.143	.932	.994	
	N	182	182	182	182	182

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

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

*Source: Developed by researchers.*

**Table 2: Model Summary**

Model	R	R Square	Adjusted Square	RStd. Error of the Estimate
1	.211 <sup>a</sup>	.044	.028	6.41607

a. Predictors: (Constant), LTITTA, TLTTA, CATCL

*Source: Developed by researchers*

**Table 3: ANOVA<sup>a</sup>**

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	340.548	3	113.516	2.758	.044 <sup>b</sup>
1 Residual	7327.543	178	41.166		
Total	7668.091	181			

a. Dependent Variable: ROA

b. Predictors: (Constant), LTITTA, TLTTA, CATCL

*Source: Developed by researchers*

**Table 4: Coefficient**

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	1.955	1.262		1.549	.123
1 CATCL	.297	.126	.207	2.360	.019
TLTTA	1.534	2.169	.062	.707	.480
LTITTA	-.049	.033	-.110	-1.507	.134

a. Dependent Variable: ROA

*Source: Developed by researchers*

**Table 5: Model Summary**

Model	R	R Square	Adjusted R Square	RStd. Error of the Estimate
1	.295 <sup>a</sup>	.087	.072	13.12561

a. Predictors: (Constant), LTITTA, TLTTA, CATCL

*Source: Developed by researchers*

**Table 6: ANOVA<sup>a</sup>**

Model		Sum of Squares	df	Mean Square	F	Sig.
	Regression	2931.340	3	977.113	5.672	.001 <sup>b</sup>
1	Residual	30666.125	178	172.282		
	Total	33597.465	181			

a. Dependent Variable: ROE

b. Predictors: (Constant), LTITTA, TLTTA, CATCL

*Source: Developed by researchers*

**Table 7: Coefficient**

Model	Unstandardized	Standardized		t	Sig.
	Coefficients	Coefficients			
	B	Std. Error	Beta		
(Constant)	-1.061	2.583		-.411	.682
1 CATCL	.453	.257	.151	1.760	.080
TLTTA	17.726	4.438	.342	3.994	.000
LTITTA	-.061	.067	-.065	-.908	.365

a. Dependent Variable: ROE

*Source: Developed by researchers*

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