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Liquidity Risk Management of Islamic Banks in Bangladesh

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Abstract
Banking sector is the life blood of the economy. Today most banks conventional or Islamic face many types of risks. One of the risks is Liquidity risk. One of the prime functions of the bank is to collect short term deposit from depositors in order to finance long term loans and advances. Falling to fulfilling the condition creates a situation for banks where the banks face liquidity risk. Liquidity risk as the risk where an organization is unable to meet their obligations to depositors. The liquidity risk arises from management weakness of proper forecasting of needs of funds in future. As Islamic banking is gaining popularity day by day Islamic banks are also facing liquidity risk. The study is done to see the relationship between Size of the bank, Nonperforming loan, Return on asset, Return on equity, Capital adequacy ratio, Investment to deposit ratio with liquidity risk of 6 Islamic Banks from 2012 to 2016. Secondary data is used to do the study. The study found a relationship between Size of the bank, Non- performing loan, Return on asset, Return on equity, Capital adequacy ratio, Investment to deposit ratio with liquidity risk by rejecting null hypothesis .The study also found that Size and NPL have negative relation with liquidity risk and ROA, ROE, CAR and Investment to deposit ratio have a positive relationship with liquidity risk.
Keywords: Liquidity, Liquidity Risk

I. Introduction:

A bank is considered to have liquidity solvency if the bank can collect funds (by expanding liabilities, securitizing, or offering resources) at a minimum cost. The price of liquidity is a function of market conditions and the market's perception of the inherent riskiness of the borrowing institution. The cost of liquidity is an element of market conditions and the market's impression of the intrinsic risk of the borrowing institution. Liquidity risk results from the mismatch between maturities on the two sides of the balance sheet, creating either a surplus of cash that must be invested or a shortage of cash that must be funded.

Since the mid 70s Islamic banking and finance has reached to over 70 countries including the Muslim world; about 57 developing and emerging market countries and 13 other developed countries of the world. Islamic banking started operations in Bangladesh in 1983, and now alongside full-fledged Islamic banks, a good number of conventional banks have been offering Islamic banking services using their branch networks. From the beginning, Islamic banks are performing dominantly over conventional banks by liquidity, profitability, trust of clients. (Alamgir, 2014)

Now the economy of Bangladesh is confronting extraordinary obstacles in liquidity accessibility which is considered by the experts as the best liquidity crisis the country ever faced. Our banks are facing huge challenges for proceeding with their everyday operation as they don't have enough cash in hand for serving customers. Banks are urgently looking for collecting deposits and interest rate of deposit is continuously rising – past the strict control of Bangladesh Bank. Therefore, operational cost for banks expanded with the decrease of spread – the sum which is the basis of banks profit.

Islamic banks faces two types of liquidity risk: lack of liquidity in the market and lack of access to funding. In the first case, illiquid assets make it difficult for the financial institution to meet its liabilities and financial obligations. In the second, the institution is unable to borrow or raise funds at a reasonable cost, when needed. (Greuning & Iqbal, 2008).Now most of the Private commercial banks in Bangladesh have crossed the loan-deposit ratio (LDR) limit & are chasing after deposits to bring down the ratio within 85 percent as they cannot recover loans overnight. 85% Loan to deposit ratio indicates the bank has the ability to give Tk 85 against Tk 100 deposit. Banks offered 5-7 percent interest on fixed deposits for the last two years. But this rate has gone up to 8-9 percent in recent days due to the liquidity crisis (Rahman, February 06, 2018). So it is high time to investigate liquidity crisis faced by the Islamic Banks in Bangladesh to reduce the volatility of banking sector.

II. Literature Review:

Greuning & Iqbal (2008) implied liquidity risk arises from either excess liquidity or shortage of liquidity in cases of difficulty of trading an asset, difficulty in obtaining funding at a reasonable cost, and non-availability of liquid assets to meet liabilities. A higher liquidity will be needed if the major portion of the asset portfolio consists of large long-term loans and the deposit base has a high concentration nature. In addition, a bank will need higher liquidity if there are indications of withdrawal of large corporate deposits or of small deposits, as well as of borrowers using large funds already committed by the bank.

The study done by Iqbal. A, (2012) examined the liquidity risk management through the comparative analysis of the Islamic and the conventional banks of Pakistan from the period 2007-2010 based on secondary data: the size of the bank, non-performing loan ratio (NPL), return on assets (ROA), return on equity (ROE), capital adequacy ratio (CAR). The study drew significant and positive relation of CAR, ROA, ROE and Size of the bank with the liquidity risk in both the models, whereas the negative and significant relation of NPL is observed in both the models.

Zolkifli. N,Hamid. M, and Janor.A, (2015) investigated liquidity risk determinant and performance across two countries banking system affecting liquidity risk in Islamic and conventional bank in Malaysia and Bahrain. The result found that liquidity risk is an important factor for banking in managing risk. The study used a regression and parsimonious model which indicate that there is a significant positive relationship between growth of total asset, loan to deposit, bank size with liquidity risk and negative significant relationship between deposit volatility and bank capitalization.

Akhtar,Ali, & Sadaqat, (2011) took sample of 6 conventional and 6 Islamic Banks of Pakistan from (2006-09).The study was done by doing descriptive, correlation and regression analysis. The independent variables used in the study were Bank size, Net working capital, Return on Equity, Capital Adequacy ratio and Return on assets. The study results indicated that conventional banks prefer long term financing projects. The study also found that return on asset and return on equity was excellent and the Islamic banks had great proficiency in maintaining liquidity risk management.

Islam & Chowdhury, (2007) studied the liquidity position of conventional and Islamic banks in Bangladesh in period 2003 to 2006.The investigation found that both in long and short term Islamic banks are in better position than conventional .The made analysis with the help of regression model.

Ika and Abdullah (2011) made comparison between the Islamic and conventional banks in Indonesia for period 2000-2007.They used ratios to measure liquidity of banks. The ratios they took in their study were current ratio, cash deposit ratio, loan deposit ratio & current asset ratio. They made their analysis by taking 6 conventional banks and 3 Islamic banks. In order to test hypothesis Mann-Whitney model was used. The result of the study revealed that Islamic banks are in great liquidity position compared to conventional banks .

Ahmed, Akhtar, & Usman, (2011) tried to investigate the liquidity risk management practices of Islamic Banks in Pakistan for period 2006 to 2010.The study found a positive relationship among Size of the bank, CAR, asset management with liquidity risk and negative relationship between NPL and liquidity risk.

Sawada (2010) investigated the impact of Liquidity risk and bank portfolio management in the financial system of Japan and found that Size of the bank has a positive relationship with the liquidity risk.

Research Question: The following research questions are considered in the study:

The degree of liquidity risk faced by Islamic banks in Bangladesh over the past five years

Relationship between liquidity risk and financial performance

Objectives of the study:

Based on the research questions the following objectives are set by the study:

1 To assess the liquidity risks faced by Islamic Banks in Bangladesh over the past 5 years

2 To identify the relationship and impact of the Size of the bank, Non-Performing loan, Return on Equity, Return on asset, Capital Adequacy Ratio, Investment to deposit ratio with liquidity risk of 6 Islamic banks in Bangladesh.

Research model:

Econometric Model:

$Y1 = a + \beta 1 X 1 + \beta 2 X2 + \beta 3 X 3 + \beta 4 X4 + \beta 5 X5 + \beta 6 X 6 + €$

Here Y= Liquidity Risk

a = Constant

β 1- β 6= Regression Co efficient of Independent Variables

Variables and their proxies:

Variable	Symbol	Proxies
Liquidity risk	y	Liquid asset / Total asset
Size of the bank	X1	Logarithm of total asset
NPL	X2	Bad debt/Loan and advances
ROA	X3	Net income / Total asset
ROE	X4	Net income/ Total equity
CAR	X5	(Tier 1 capital + Tier 2 capital) / Risk weighted asset
Investment to deposit ratio	X6	Investment/Total deposit
Error term	€	

III. Methodology

In the study Liquidity risk is used as dependent variable. Size of the bank, NPL, ROA,ROE, CAR, Investment to deposit ratio are used as independent variable . Islami bank Bangladesh ltd, Exim bank , Social Islamic bank, First security Islamic bank, Al Arafah Islami Bank and Shahjalal Islami bank are taken to find out the liquidity risks involved .Secondary Data are taken to collect information. Annul report from 2012 to 2016 of Islamic banks are used as a source of secondary data. IBM SPSS is used to do descriptive statistics, Correlation analysis and Regression analysis.

Hypothesis Development

The following null hypotheses (H0) and alternative hypotheses (Ha) had been constructed for this study. They are:

Ho1: There is no relationship between the Size of Bank and Liquidity Risk Management.
Ha1: There is a relationship between the Size of Bank and Liquidity Risk Management.
H02: There is no relationship between Non performing loan and Liquidity Risk Management.
Ha2: There is a relationship between Non performing loan and Liquidity Risk Management.
H03: There is no relationship between Return on Assets and Liquidity Risk Management.
Ha3: There is a relationship between Return on Assets and Liquidity Risk Management.
H04: There is no relationship between Return on equity and Liquidity Risk Management.
Ha4: There is a relationship between Return on equity and Liquidity Risk Management.
H05: There is no relationship between Capital adequacy Ratio and Liquidity Risk Management.
Ha5: There is a relationship between Capital adequacy Ratio and Liquidity Risk Management.
H06: There is no relationship between Investment to deposit ratio and Liquidity Risk Management
Ha6: There is a relationship between Investment to deposit ratio and Liquidity Risk Management

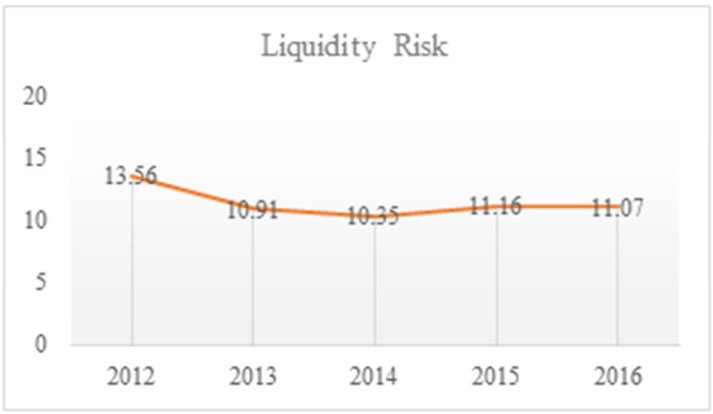
IV. Data analysis

IV.1 Ratio Analysis:

Liquidity Risk:

The liquidity risk of the Islamic banks is measured by using the cash and cash equivalent to total assets. The high figure of the ratio indicates the better liquidity position.

According to the figure, Islamic Banks had the highest cash and cash equivalent asset in 2012. The trend of this ratio was decreasing from 2012-2016.

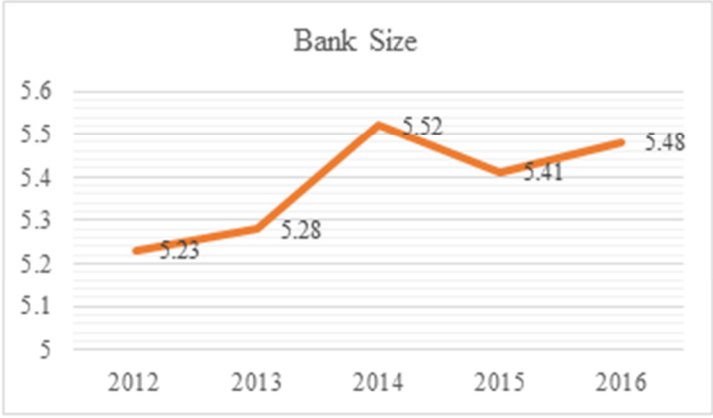


Source: Annual Report for the period 2012 to 2016

Bank Size:

The size of the bank is measured by taking the logarithm of total assets.

The size of Islamic Banks was 5.48% in 2016 and it showed the increasing trend from 2012 to 2016. This indicates the differential values Liquidity Risk Management practices of Islamic Banks.

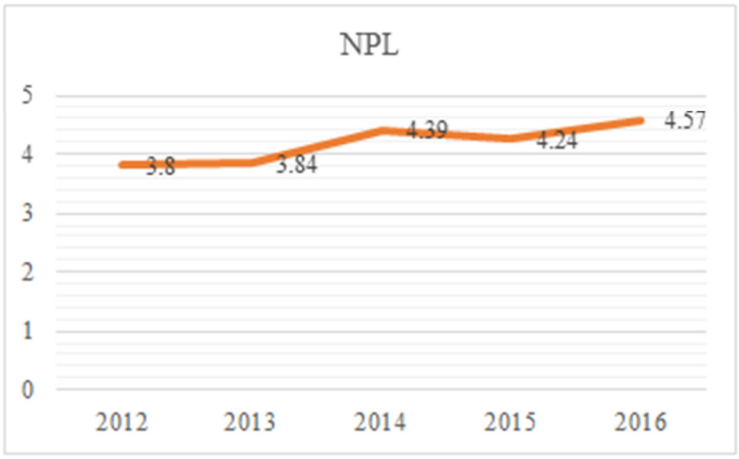


Source: Annual Report for the period 2012 to 2016

Non-Performing Loan Ratio:

The non-performing loan ratio is measured using the non-performing loans to total advances. The higher ratios show the large number of bad debts and ultimately the loss for the banks.

The NPL ratio shows that the Islamic banks had the low ratio of NPL in 2012. The highest figure of the NPL ratio was in 2016.The reason is in Islamic banks there is a prohibition of interest other modes of trading including the profit sharing like Musarakha and Mudarabaha is used



Source: Annual Report for the period 2012 to 2016

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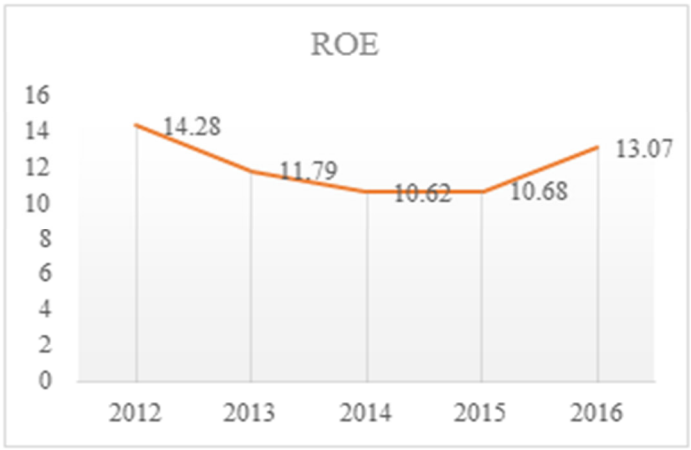
Return on Equity:

The return on equity is measured as the ratio of net income to total equity. The high ratios indicate the better return to the investments of the shareholders.

The ROE Ratio of Islamic bank was 14.28% in 2012 but in 2013, it was 11.79%. It showed declining trend till 2015 and in 2016 it was slightly increasing from 2013.This means that the external source of fund of Islamic Banks requires higher cost and it decreases profitability.

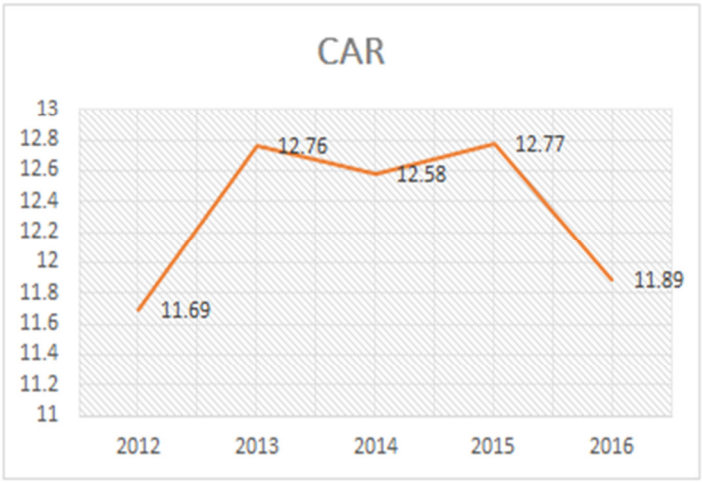


Source: Annual Report for the period 2012 to 2016

Capital Adequacy Ratio:

CAR is the ratio that shows how far the risky bank assets (loans, investments, securities) financed of the bank's own capital funds. It is expressed as a percentage of a bank's risk weighted credit exposures. CAR ensures depositors safety of money as well as financial soundness of banks.

Capital adequacy Ratio of Islamic bank showed increase trends from the year 2012 to 2015 from11.69% to12.77%. But in 2016 it decreased to 11.89% which indicates the slowdown of Islamic banks capital. It means that the capital cannot be used to cover their maturity dates and bank will be in trouble or risky situation



Source: Annual Report for the period 2012 to 2016

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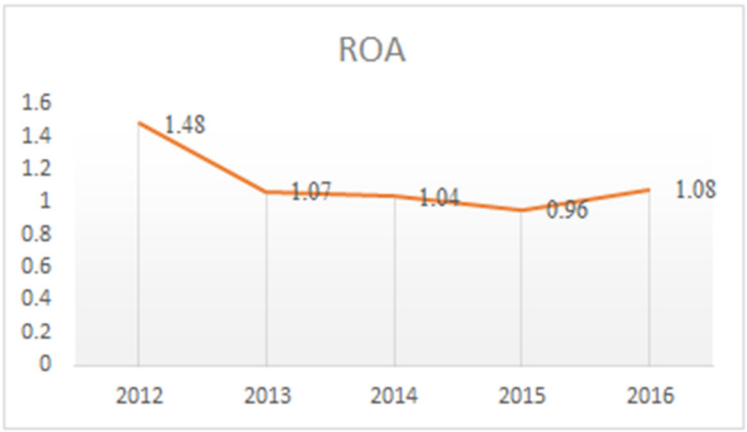
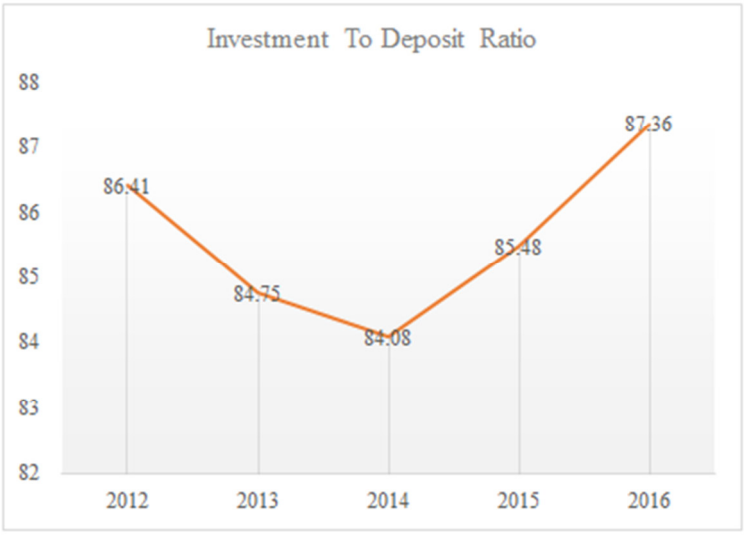
Return on Assets:
The return on assets is calculated as net profit of the banks to total assets. The return on assets ratio indicates how much the banks are generating profit through efficient employment of its return.
The ROA of Islamic banks was 1.48% in 2012 which showed decreasing trend till 2015. In 2016, the ratio was 1.08% which means banks have good revenue that it can be used to cover their short term obligation



Source: Annual Report for the period 2012 to 2016

Investment-to-Deposit Ratio :
The Investment to-deposit ratio (ITD) is found by dividing the bank's total investment by its total deposits. This number is expressed as a percentage. High ratio indicates lack of liquidity for the banks to meet the funds necessity, the low row indicates lack of earning of banks than expected.



Source: Annual Report for the period 2012 to 2016

The trend of this ratio was increasing from 2014 to 2016. But it was in decreasing trend from 2012 to 2014.In 2016 the ratio was 87.36% which means that Islamic Banks don't have enough liquidity to cover unforeseen fund requirements.

IV.2 Descriptive Statistics:

	N	Range	Minimum	Maximum	Mean	Std. Deviation
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic
Liquidity risk	5	3.21	10.35	13.56	11.4100	1.24240
Size	5	.40	5.29	5.69	5.4689	.15897
NPL	5	.77	3.80	4.57	4.1680	.33878
ROA	5	.52	.96	1.48	1.1260	.20342
ROE	5	3.66	10.62	14.28	12.0880	1.58078
CAR	5	1.08	11.69	12.77	12.3380	.51085
Investment to deposit ratio	5	3.28	84.08	87.36	85.6160	1.30381
Valid N	5					

Analysis: In the descriptive statistics section range, minimum, maximum, mean, Standard deviation, Variance are shown. Here liquidity risk is dependent variable and Size of the bank, NPL, ROA, ROE, CAR, Investment to deposit ratio are independent variable. Range shows the difference between largest and smallest observations. Minimum and maximum values are smallest and lowest values. Mean shows the average value of all the observations divided by the number of observations. SD measures the risk involved. It also indicates how much

spread is available in data. A low standard deviation indicates there is less risk involved. In case of all the factors it can be seen that the risk is very low. It is a good indicator that data are very closely related to mean and there is less risk involved. So from the descriptive statistics of 6 Islamic Banks it can be seen that there is less risk involved which is a good indicator.

IV.3 Correlation Analysis:

Correlations

		Liquidity risk	Size	NPL	ROA	ROE	CAR	Investment deposit
Liquidity risk	Pearson Correlation	1	-.735	-.604	.927*	.819	-.715	.495
	Sig. (2-tailed)		.157	.280	.023	.090	.174	.396
	N	5	5	5	5	5	5	5
Size	Pearson Correlation	-.735	1	.845	-.612	-.622	.278	-.319
	Sig. (2-tailed)	.157		.071	.273	.263	.650	.600
	N	5	5	5	5	5	5	5
NPL	Pearson Correlation	-.604	.845	1	-.586	-.346	.007	.194
	Sig. (2-tailed)	.280	.071		.299	.568	.991	.755
	N	5	5	5	5	5	5	5
ROA	Pearson Correlation	.927*	-.612	-.586	1	.861	-.782	.381
	Sig. (2-tailed)	.023	.273	.299		.061	.118	.527
	N	5	5	5	5	5	5	5
ROE	Pearson Correlation	.819	-.622	-.346	.861	1	-.913*	.747
	Sig. (2-tailed)	.090	.263	.568	.061		.030	.147
	N	5	5	5	5	5	5	5
CAR	Pearson Correlation	-.715	.278	.007	-.782	-.913*	1	-.785
	Sig. (2-tailed)	.174	.650	.991	.118	.030		.116
	N	5	5	5	5	5	5	5
Investment to deposit	Pearson Correlation	.495	-.319	.194	.381	.747	-.785	1
	Sig. (2-tailed)	.396	.600	.755	.527	.147	.116	
	N	5	5	5	5	5	5	5

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

Analysis: Correlation shows the relationship between dependent variable and independent variables. It is seen from the table that Dependent variable Liquidity has a negative relationship with Bank Size, Non-performing loan and Capital adequacy ratio. It indicates that increase in Liquidity risk causes decrease in Size of the bank, NPL and CAR and vice versa. On the other hand there exists positive relationship between dependent variable Liquidity risk with ROA, ROE, Investment to deposit ratio. It indicates if dependent variable Liquidity risk increases then ROA, ROE, Investment to deposit ratio increases. On the other hand if dependent variable Liquidity risk decreases then ROA, ROE, Investment to deposit ratio decreases .it can further be stated that there is moderate correlation with liquidity risk and investment to deposit ratio as $.3 < | r | < .5$ and strong correlation with Liquidity risk with ROA and ROE as $.5 < | \boldsymbol{r} |$.

IV.4 Regression analysis:

Model Summary										
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.927[a]	.860	.813	.53708	.860	18.404	1	3	.023	2.828
a. Predictors: (Constant), ROA										
b. Dependent Variable: Liquidity risk										

ANOVA						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	5.309	1	5.309	18.404	.023[b]
	Residual	.865	3	.288		
	Total	6.174	4			
a. Dependent Variable: Liquidity risk						
b. Predictors: (Constant), ROA						

Coefficients								
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B	
		B	Std. Error	Beta			Lower Bound	Upper Bound
1	Constant	5.033	1.506		3.343	.044	.241	9.825
	ROA	5.663	1.320	.927	4.290	.023	1.462	9.865
a. Dependent Variable: Liquidity risk								

Excluded Variables						
Model		Beta In	t	Sig.	Partial Correlation	Collinearity Statistics
						Tolerance
1	Size	-.268[b]	-.973	.433	-.567	.626
	NPL	-.093[b]	-.291	.799	-.201	.657
	ROE	.081[b]	.156	.890	.110	.259
	CAR	.024[b]	.057	.960	.040	.389
	Investment to deposit	.166[b]	.637	.589	.411	.855
a. Dependent Variable: Liquidity risk						
b. Predictors in the Model: (Constant), ROA						

Analysis

R indicates the linear relationship between two variables. The value of R is .927 it means there is near to perfect positive relationship between Dependent variable Liquidity risk and Independent variables Size, NPL,ROA,ROE,CAR and Investment to deposit ratio. R square tells the degree of variation between dependent variables is described by independent variables. From the table the value of R square is .860 i.e.86% of liquidity risk can be explained by Size, NPL,ROA,ROE,CAR and Investment to deposit ratio. Adjusted R square shows how closely data are fitted to the regression line. From the figure.813 gives an indication that 81.3 % of data are closely fitted to regression line . Durbin Watson test is done to find if there is autocorrelation involved in data series. The value ranges from 0 to 4. A value greater than 2 indicates that there is positive correlation in time series data. It indicates there is consistency in time series data.

Relatively higher F value with p value <0.05 indicate that null hypothesis is rejected and alternative hypothesis is accepted that means there is a relationship between liquidity risk and Size of the bank, NPL, ROA, ROE, CAR and Investment to deposit ratio and regression analysis is able to make a prediction about the liquidity risk position of Islamic banks in Bangladesh.

From the regression model it is seen that Size of the bank, NPL has negative relationship with liquidity risk. The results of negative relationship between NPL and Liquidity risk are also found in the study of (Akhtar, Ali, & Sadaqat. 2011), (Sawada, 2010) and (Ahmed, Akhtar, & Usamn)2011),The results of Negative relationship between size of the bank and liquidity risk are also found in the study of (Anam, Hasan, Huda, Uddin &Hossain,2012) . On the other hand ROA, ROE, CAR and Investment to deposit ratio have positive relationship with liquidity risk. The positive relationship among ROA,ROE and CAR are also found in the study

of (Akhtar, Ali, & Sadaqat, 2011)and Rosly & Zaini, 2008).

V. Conclusion and Recommendations :

The study analyzed the relationship between Size of the bank, Nonperforming loan, Return on asset, Return on equity, Capital adequacy ratio, Investment to deposit ratio with liquidity risk by ratio analysis and descriptive statistics, correlation ,regression analysis. It is prevalent from the data analysis that liquidity risk is attached with Islamic banks. Ratio analysis shows the ratio of Size of the bank, NPL ROA, ROE, Investment to deposit ratio have increased in 2016 from 2015.On the other hand ,CAR and Cash to cash equivalent assets are decreasing in 2016 from 2015. Islamic banks should follow techniques to reduce liquidity risks. They are:

Following principles of IFSB: Islamic Banks have to follow the principles given by IFSB.Principle1states that Islamic financial institutions shall have in place a liquidity management framework (including reporting) taking into account separately and on an overall basis their liquidity exposures in respect of each category of current accounts, unrestricted investment accounts, and restricted investment accounts. Principle 2 states that Islamic financial institutions shall undertake liquidity risk commensurate with their ability to have sufficient recourse to Shariah-compliant funds to mitigate such risk.

The introduction of Sukuk (Islamic bonds) is a good alternative that can provide the foundation for the development of secondary markets. The Central Bank of Sudan has followed Shariah compatible securities to provide liquidity in the market.

Establishment of Islamic financial market: To manage liquidity more effectively, it is important to establish International Islamic Financial Market and liquidity management center.

Assistance from Islamic interbank Money market: Islamic Interbank Money Market can help to manage liquidity in long term. The practice was introduced by The Malaysian central bank, Bank Negara Malaysia. The activities of the Islamic Interbank Money Market include the purchase and sale of Islamic financial instruments among market participants (including the central bank), interbank investment activities through the mudarabah interbank investment scheme, and a check clearing and settlement system. financial institutions can buy Shariah-compliant investment issues from the central bank.

Diversification of Funds: Islamic banks should pay attention to diversification of funds so that liquidity sources are created.

Following strategies: In order to reduce liquidity crisis banks should follow some strategies. They are:

Keeping more cash in hand

Invest in short term liquid assets

Take help from Central Bank in case liquidity problem arises.

Careful in Sanctioning Loans: Loans should be provided I those sectors which have potentiality by taking collateral and examine the 6Cs so that there is less chance of loans becoming non performed.

Proper estimation of demand: Banks should estimate the short term demands of their clients based on past experiences so that irregular demand can be met.

References

Alamgir, M. (2014). An Analysis of Islamic Banking Activities in Bangladesh: Issues and Challenges. *Thoughts on Economics*.

Akhtar,M.F.,Ali,K.&Sadaqat,S. (January 2011). Liquidity Risk Management: Study of Conventional and Islamic Banks of Pakistan. *Interdisciplinary Journal of Research in Business*, Vol. 1, Issue. 1,(pp.35-44).

Greuning, H. V. & Iqbal, Z. (2008). *Risk Analysis for Islamic Banks.* Washington, D.C.: International Bank for Reconstruction and Development / The World Bank.

Akhtar, M. F., Ali, K. & Sadaqat, S. (2011). Factors Influencing the Profitability of Islamic banks of Pakistan. Lahore: EuroJournals Publishing Inc.

Rahman, S. (February 06, 2018). *Liquidity Crisis: From banks to many fronts.* The Daily Star.

Zolkifli,N.,Hamid,M.&Janor,H.(2015).Liquidity Risk and Performance: The Case of Bahrain and Malaysian Banks. *Global Economy and Finance Journal*, Vol. 8. No. 2.. Pp. 95 – 111.

Iqbal, A. (2012). Study of the liquidity risk position Pakistani Conventional and Islamic Banks. *Global Journal of Management and Business Research*.

Islam, M., & Chowdhury, H. A. (2007). A comparative Study of Liquidty Management of an islamic and a Global Journal of Management and Business Research Volume XII Issue V Version I

Rosly, S. A., & Zaini, M. A. (2008). "Risk-return analysis of Islamic banks' investment deposits and shareholders' fund'. Managerial Finance , 695-707.

Sawada, M. (2010). "Liquidity risk and bank portfolio management in a financial system without deposit insurance: Empirical evidence from prewar Japan". International Review of Economics and Finance , 392–406.

Anam S, Hasan S.B, Huda H.A.E, Uddin A, Hossain (2012) M.M Liquidity Risk Management. A comparative

study between Conventional and Islamic Banks in Bangladesh Volume 5, 2012
Ismail, A. G. (2010), Money, Islamic Banks and the Real Economy. Singapore: Cengage Learning Asia Pte. Ltd.
Ahmed, N., Akhtar, M. F. & Usamn, M. (2011). Risk Management Practices and Islamic Banks: An Emprical Investigation from Pakistan. Lahore: Interdisiplinary journal of research in business
Awan, A. G. (2009).Islamic and Conventional banks position comparison of Pakistan. Lahore: CBRC
Ika, S. R. & Abdullah, N. (2011). A comparative study of Financial performance of Islamic banks and conventional banks in Indonesia. International Jornal of business and Social sciences.
https://www.islamibankbd.com
https://www.eximbankbd.com
https://www.siblbd.com
https://www.fsiblbd.com
https://www.sjiblbd.com
https://www.al-arafahbank.com

Appendix:
Data of the banks:

	Islamic bank	Exim Bank	First security Islamic bank	Shahjalal Islami Bank	Social security Islamic Bank	Al Arafah Islami bank	Average
Liquidity Risk							
2016	12.46	12.18	10.87	7.17	8.36	15.4	11.07333
2015	10.34	15.6	10.74	7.7	8.14	14.45	11.16167
2014	10.18	13.76	8.24	12.79	7.11	10.02	10.35
2013	10.35	17.38	7.3	10.68	6.9	12.87	10.91333
2012	13.43	21	16.4	10.63	9.84	10.04	13.55667
Size of the bank							
2016	797699.7	291133.9	301669.25	167245	227704.2	272900.04	343058.7
2015	725821.1	265148.4	256604.94	137870	180112.1	229106.66	299110.5
2014	652422	232834	204876.46	126758	1537375	210439.01	494117.4
2013	547229.6	195542.3	162033.22	128554	126616.6	173161.63	222189.5
2012	482536.3	166997.9	129937.81	132823	115166	149320.36	196130.2
NPL							
2016	3.83	5.23	4.92	4.34	4.44	4.64	4.566667
2015	4.25	4.69	4.75	3.24	3.84	4.66	4.238333
2014	4.92	3.74	5.72	2.91	4.56	4.5	4.391667
2013	3.71	3.72	4.43	3.05	5.35	2.77	3.838333
2012	3.81	4.3	5.43	4.29	3.33	1.63	3.798333
ROA							
2016	0.59	1.09	0.51	1.02	2.06	1.23	1.083333
2015	0.48	0.84	0.31	0.98	2.08	1.08	0.961667
2014	0.67	1.15	0.38	0.59	2.36	1.1	1.041667
2013	0.96	1.04	0.42	1	1.67	1.31	1.066667
2012	1.27	1.4	0.69	1.44	2.75	1.3	1.475
ROE							
2016	9.28	11.78	13.11	12.4	16.16	15.67	13.06667
2015	7	8.68	8.81	10.78	16	12.82	10.68167
2014	9	11.34	8.29	6.6	15.68	12.8	10.61833
2013	11	10.18	11.74	12.67	11.01	14.15	11.79167
2012	14	13.43	13.36	17.01	14.05	13.85	14.28333
CAR							
2016	10.82	11.77	10.73	11.54	11.55	14.91	11.88667
2015	11.66	12.04	10.42	13.52	12.33	16.65	12.77
2014	12.83	11.7	11.92	13.61	11.36	14.03	12.575
2013	14.26	13.19	10.33	12.56	11.58	14.66	12.76333
2012	13.49	10.87	10.21	12.31	11.52	11.75	11.69167
Investment to deposit ratio							
2016	86.43	89.38	82.43	85.98	91.41	88.5	87.355
2015	83.59	87.22	81.15	82.77	89.54	88.59	85.47667
2014	79.88	88.84	83.72	80.82	86.64	84.58	84.08
2013	82.35	86.79	82.14	84.32	84.15	88.74	84.74833
2012	85.18	84.22	87.62	89.64	81.23	90.56	86.40833