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THE EFFECT OF MARKET RISK (PRODUCTION), LIQUIDITY RISK, CREDIT RISK ON BANK DEPOSITS (IN SELECTED PUBLIC AND PRIVATE BANKS)

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ABSTRACT

In the finance literature, investors and managers of an enterprise in addition to the return of assets also makes sense to risk of assets. Liquidity risk and credit risk, which must be one of the biggest challenges facing the banking industry that must be managed under various economic conditions. In this regard, this study examines the issue of public and private banks are paid during 2001-2012. All calculations and math research using the software Eviews, Excel will perform. The results show that effects of variables such as liquidity risk and credit risk, on share of bank deposits is negative and significant and shows that the volatility of liquidity as liquidity risk and the amount of outstanding loans as credit risk increases, level of trust in the bank reduced and your bank will be faced with payment problems which ultimately reduces bank deposits to customer dissatisfaction. The results further show that debt ratio (leverage) and the inflation and the exchange rate on share of bank deposits is negative and significant and the Bank has a significant positive effect on share of bank deposits and bank assets would suggest that the increase in bank deposits will increase customer trust.

Keywords: Liquidity Risk, Credit Risk, Market Risk, Panel Data, Bank Deposits

INTRODUCTION

Risk is defined as the phenomenon that enter actual and direct loss by reducing the income and loss capital flow on the institution. A group of economists have proposed more broad definition of the risk phenomenon, they occurrence of any event and incident that is potentially that through the imposition and restrictions on capacity and activities of the organization, which may undermine the achievement of organizational goals; has been defined as Risk. If we accept this definition of risk phenomena, then have to take risks as an integral understanding of the market economy. Thus the definition, recognition and measurement of risk phenomena in the field of financial activity and economic would be inevitable. Obviously in the modern world of banking, lack of attention to concepts of risk and return, diversification of investments, credit risk modeling, quantification of risk and non-use of mathematical and statistical techniques, to obtain optimal decisions may involve risks irreparable damage to banks **(Haji Aghai, 2007)**.

Liquidity risk is one of the biggest challenges facing the banking industry should be managed under various economic conditions. Usually sources of banks have much lower degree of liquidity, because mobilizing sources of from banks, which are usually performed from short-term deposits and wholesale funds, or in long-term assets (facilities) will be invested or If are taking at short-term basis, go back sources of affected by the conditions prevailing in the market as well as non-compliance with the credit laws to slow done. Hence different input and output cash flows, which is called as liquidity gap, resulting maturity mismatch of assets and liabilities of the bank. From another perspective, liquidity risk compared to other major risks relating to the activities of banks is important, in a situation that seems to be the other major risks such as operational risk, credit and market properly at the right level and are controlled, if the bank is exposed to liquidity risk, at the short-term liquidity crisis knocked disbelief acute leads to liquidity gap. Thus, a balance between short-term financial obligations and long-term investments, can reduce the difference between lending and related needs of its successive editions. Although the acute liquidity deficit, will faced banks with the risk of inability to fulfill obligations and subsequently to the Bankruptcy, against maintain excess liquidity, certain kind of inefficient sources of allocation would be lead to reduce profitability and the subsequent loss of the market. In order to identify and estimate the

liquidity needs when the market goes to the critical situation, liquidity risk management need to indicators and ratios to calculated the necessary information about the bank's liquidity position and provide for senior managers of banks **(Mahdavi, 2011)**.

According to the above description the main challenge for the country's banks can be said as lack of repay on time of the facility received (credit risk) and liquidity shortages in critical condition (liquidity risk). In fact, the problem of banks in the country is maximizing the bank deposits with regard to managing liquidity risk and credit risk. The main aim of this study was to investigate factors influencing the volume of bank deposits is the most important factor influencing the volume of bank deposits, is the risks are liquidity risk is one of the most important of them.

In other words, risk exerted on banking system is divided into two categories: internal risk, that liquidity risk is the most important of them, and external risks, such as the risk of production. In this study, the effects of these two types of risk on bank deposits is checked.

Given the contents of the above and considering the facilities that paid in recent years compared to previous years, also banks have higher risk, Therefore, discussed about these risks and the effectiveness of them in relative share of bank deposits in the country. Based on past research and statistics, it's been a concern within other organizations which considered an innovative aspect of this research. On the basis of this study, we sought to answer the following questions:

Which risks have a greatest impact on bank deposits?

RESEARCH LITERATURE

Classification of Risks

Banks and financial institutions due to the nature of its activities from the beginning of their exposure to various risks. But because of the breadth and diversity of banking activities, researchers disagree on banking risks, so that some count credit risk, interest rate and liquidity risks, as a main risks in banking. Therefore, it can affect the risks that the financial institution is divided into three levels as follows:

First level, risks that financial institution has no control on it and its impact not affected them.

Second, risks that financial institutions affect them, but it has little impact and appears more influence.

Third, the risk that the financial institution influence but financial institution by applying methods and tools that can help them under its control and management **(Table 1)**.

Among the risks that threaten the banks and financial institutions, credit risk because of the centrality, operation volume and particularly its sensitivity, is considered as the most important risk, so third level is the only risk that financial institutions by methods and tools for risk management and control can be overcome, so the centrality of the discussion is third level risks that came in **Table 2**.

Risks of financial institutions Influence on each other. Financial institution must also consider actions and reactions of the risks on each other, because it may be a risk with other risks are negatively correlated, and the two will be together cover or vice versa, two risks together have the additional negative effect on whole portfolio of financial institution, so the integrated management of financial risks is obvious.

Background of Research

Bjorn Imbierowicz and Christian Rauch (2014) in a study entitled "The relationship between liquidity risk and credit risk in banks, using data for the period 1998-2010 for the United States of America, have tried to address this issue. The findings suggest that both types of risk are simultaneously connected. However, banks consider both of risks as a default. Interplay between these two types' risks also depends on the overall level of bank risks.

Lei and Song (2013) in a study entitled "The creating liquidity and capital structure of China's bank ", examines the relationship between creating liquidity and capital structure of banks in China. In this study, the hypothesis of "financial fragility due to the effects of foreign crowding" and hypotheses of "risks absorption" in the bank of China will be the test. The main findings of this study is suggest that the negative relationship between bank capital and liquidity creating that financial fragility hypothesis caused by congestion external effects are confirmed. In contrast, other findings show that in respect of foreign banks in China is a weak relationship between bank capital and liquidity creating that is consistent with the absorption rate risk hypothesis has been confirmed in previous studies.

Drehmann and Nikolaou (2013) in a study entitled "Funding liquidity risk: definition and measurement", stating that funding liquidity risk has played a key role in all banking crises. However, such risks measure based on the information available has remained without result. In this regard using monthly data obtained from the Central Bank of Europe during the period 2005: 01 -2008: 10 to review and test the hypotheses used in the study are discussed. The main findings of the

study suggest that in general liquidity risk of financial resources is low and stable.

Ghossoub (2012) in a study entitled "Liquidity Risk and Financial Competition: Implications for asset prices and monetary policy", to study the impact of bank competition on capital markets and monetary policy. To develop a growth model in which a group of agents subject to liquidity and monetary shocks are discussed. Banks are insured deposits of investors against such risks and hazards and investment them on economic assets. In these conditions, paid to compared a perfectly competitive economy in which the banking sector and an economy in which the financial sector is fully concentrated. Unlike previous studies, banks can have power on both deposits and market capitalization. The findings show that a monopoly banking system can be a significant adverse impact on capital formation, asset prices and the risk associated with it.

Research Model

In this study, we answer this question in the context of different patterns that the effectiveness of internal and external risks affecting the bank deposits is what extent?

S=F(X1, X2, X3, X4, X5, X6, X7)

The independent variables include a variety of risks, including liquidity risk X1 and risks associated with production X2 and credit risk, which includes bank overdue X3. Control variables can be divided into two categories: intra-organizational and inter-organizational variables such the size of bank X4 and the debt ratio X5 and external variables such as inflation X6 and exchange rates X7. The dependent variable is volume of deposits (S). Period is from 2001 to 2011 and for the selection of state and private banks is examined.

Primarily the validity of the variables examined and then by using panel data model was estimated for the period under review and then analysis of variance anisotropy and lack of multicollinearity checked.

Estimation Model

Before of the estimation model is necessary to test the stationary for all variables used in the estimation. The results indicate the stationary of all variables in the model. In these tests the H0 hypothesis, the lack of stationary and H1 hypothesis is based on stationary of variable.

According to **Table 3**, all variables are stationary in levels.

Lime F statistics showed the number 32/841, with zero probability indicating that the using panel data is verified, therefore, according to this statistics and analysis panel data is acceptable. Haussmann test is 14.5 with the probability of more than 5%, which represents

the random effects method is verified **(Table 4)**.

The coefficient of determination indicates show a good fit of the model and the explanatory power of the model is 92% that according to the method used is panel data is a good number. D.W. statistic also revealed the lack of correlation and show the 1/9 number. F-statistics also rejected the coefficients are equal zero. Sign of the coefficients are consistent with theory and theoretical presented in second section this thesis and suggests that influence of all variables used in this study are significant **(Table 5)**.

The breakdown of results is as follows:

A one percent increase in market risk variables causes a 0/762874 decrease in the volume of deposits.

A one percent increase in liquidity risk variable causes a 0/154632 decrease in the volume of deposits.

A one percent increase in credit risk variable causes a 0/325076 decrease in the volume of deposits.

A one percent increase in the size of bank will increase a 0/056630 the volume of deposits.

A one percent increase in the debt ratio variable causes a 0/718334 decrease in the volume of deposits.

A one percent increase in the inflation variable has been 0/00845 decrease in the volume of deposits.

A one percent increase in the exchange rate leads to a 0/776463decrease in the volume of deposits.

Table 1: Classification of risk levels

The first level	The second level	The third level
Sovereign risk **Risk Policy** **Risk of Economic Cycle** **Social Risk** **Disaster Risk**	**Competing Risk** **Reputation risk** **Risk of Law and Legislation**	**Market Risk** **Credit Risk** **Liquidity Risk** **Operational Risk**

Source: (Ismail-Zadeh Moqhery, 2009: 21).

Table 2: Risks of Financial Institutions

	Market Risk	**Equity price risk**
		Commodity price risk
		Foreign Currency Risk
		Interest rate risk
		Transactional Risk

The third level of risks to financial institutions	**Credit Risk**	**Portfolio Concentration Risk**
	Liquidity Risk	**Sources of Liquidity Risk**
		Liquidity risk assets
	Operational Risk	**Information Technology Risk**
		Risk Strategy
		Risk of internal control weaknesses
		Risk of Human Resources

Source: (Ismail-Zadeh Moqhery, 2009: 35**)**

Table 3: Stationary of the variables

Variable	Levin, Lin Chu Statistics	Probability	Results
The volume of deposits	**-3.73224**	**0.0001**	**I(0)**
Market Risk	**-3.05483**	**0.0011**	**I(0)**
Liquidity Risk	**-1.88295**	**0.0299**	**I(0)**
Credit Risk	**-1.92003**	**0.0274**	**I(0)**
the size of bank	**-1.56261**	**0.0515**	**I(0)**
the debt ratio	**-3.39862**	**0.0003**	**I(0)**
Inflation	**-25.3725**	**0.0001**	**I(0)**
Currency	**-4.18533**	**0.0000**	**I(0)**

Source: Computing Research

Table 4: Estimation results of the Haussmann test

probability	Degrees of freedom	Chi-square statistic	Test results
0/26	7	5/16	**Fixed effects**

Source: Computing Research

Table 5: Results of combined regression estimation

Variable	Coefficient	Standard deviation	T Statistics Statistics	Significant Coefficient
c	**0.659489**	**0.7242452**	**0.910588**	**0.3677**
Market Risk	**-0.76287**	**0.2920582**	**-2.612061**	**0.0438**
Liquidity Risk	**-0.15463**	**0.0353406**	**-4.375466**	**0.0001**
Credit Risk	**-0.32508**	**0.1069326**	**-3.040007**	**0.0043**
the size of bank	**0.05663**	**0.0075948**	**7.45633**	**0.0005**
the debt ratio	**-0.71833**	**0.2926606**	**-2.454495**	**0.0518**
Inflation	**-0.00845**	**0.001431**	**-5.904935**	**0.0007**

Currency	**-0.77646**	**0.1709466**	**-4.542136**	**0.0006**
96/1	**D.W. statistic**	**92/0**	**R^2**	
		0/89	$\bar{R}^2$	
0/00001	**Prob F**	**F Limer statistic**= 37.16044		

Source: Computing Research

CONCLUSIONS AND SUGGESTIONS

The results show that effects of variables such as liquidity risk and credit risk, on share of bank deposits is negative and significant and shows that the volatility of liquidity as liquidity risk and the amount of outstanding loans as credit risk increases, level of trust in the bank reduced and your bank will be faced with payment problems which ultimately reduces bank deposits to customer dissatisfaction.

In interpreting the results, we can say three important factors influencing bank deposits including liquidity risk, credit risk and risks associated with production. In other words, bank managers to increase the volume of bank deposits and thus increasing the profitability of banks, must step in order to reduce credit risk, liquidity risk and risks associated with production. It suggests that whatever the bank management have the exact operate to identify timely repayment of the facility and reduce credit risk, this strategy is not only a cost management strategy it is also a resource management. Also banking system management in order to reduce the volatility of bank liquidity can be an important factor to increase bank deposits.

The results further show that debt ratio effect (leverage) on the proportion of bank deposits is negative and significant and suggests that whatever the increased leverage of the branches, type of risks and cynicism and lack of throughput of targets is predicted which ultimately reduced proportion of bank deposits. The results show that the size of bank has a significant positive effect on the proportion of bank deposits and suggests that an increase in bank assets will cause the trust of customers and increasing bank deposits. In the interpreted of control variables can said that whatever bank management use more conservative system to reduce its debt ratio or step in the direction of logical increasing the total assets, can be demonstrated positive outlook for bank and attract more deposits to banks. The results show that external variables such as inflation X6 and exchange rates X7 has a significant and negative impact on the volume of deposits (S) dependent variable which indicates that the higher inflation rate assuming constant interest rates,

reduced deposits and an increase in the exchange rate, run cash flow to the purchase of exchange rates and thus led to deposits decreased. Consistent with the results of the study are presented below proposed policy:

To increase the share of bank deposits, policies based on to reduce the volatility of cash flows, can be effective.

To increase the share of bank deposits, policies based on to reduce the volatility of production can be effective.

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