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A STUDY ON LIQUIDITY RISK MEASUREMENT IN BANKING WITH RESPECT TO INDIAN OVERSEAS BANK

BY

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A PROJECT REPORT

submitted

In partial fulfillment of the requirements

for the award of the degree

of

MASTER OF BUSINESS ADMINISTRATION

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Kumaraguru College of Technology

(An autonomous institution affiliated to Anna University, Coimbatore)

Coimbatore - 641 049

CERTIFICATES

KCT
BUSINESS SCHOOL

BONAFIDE CERTIFICATE

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DECLARATION

I affirm that the project work titled "**A Study on Liquidity Risk Measurement In Banking With Respect To Indian Overseas Bank**" being submitted in partial fulfillment for the award of master of business administration is the original work carried out by me. It has not found the party other project work submitted for award of any degree or diploma, either in this or any other university.

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EXECUTIVE SUMMARY

EXECUTIVE SUMMARY

Liquidity is the ability to efficiently accommodate deposit as also reduction in liabilities and to fund the loan growth and possible funding of the off-balance sheet claims. The cash flows are placed in different time buckets based on future likely behavior of assets. liabilities and off-balance sheet items. The main objective is to study the extent of liquidity risk in the Indian Overseas Bank and to analyse the systematic risk . excess return and expected return of the Indian Overseas bank. In 2009-2011 the Excess Portfolio Return to the risk free return seems to be decreased to 0.1485.The Liquidity Risk of Indian Overseas Bank has increased from the year 2006-2009 from 0.4348 to 0.5604. In 2009-2010 the risk seems to be decreased and in 2010-2011 it has increased. The bank authorities shall try to increase the deposits to increase the deposits to increase their liquidity position. The bank authorities shall take steps to recover the dues quickly to reduce the risk. Through the research on liquidity risk in the Indian Overseas Bank it has been found that the selected bank has a higher liquidity risk. Hence they might concentrate on project with higher return such that they reduce their systematic risk in assets.

INTRODUCTION

CHAPTER 1

INTRODUCTION

1.1.INTRODUCTION TO THE STUDY

The chance that an investment's actual return will be different than expected. Risk includes the possibility of losing some or all of the original investment. Risk is the potential that a chosen action or activity will lead to a loss. Risk management is the identification, assessment, and prioritization of risks followed by coordinated and economical application of resources to minimize, monitor, and control the probability and/or impact of unfortunate events or to maximize the realization of opportunities. Financial risk is often defined as the unexpected variability or volatility of returns and thus includes both potential worse-than-expected as well as better-than-expected returns. References to negative risk below should be read as applying to positive impacts or opportunity (e.g., for "loss" read "loss or gain") unless the context precludes this interpretation. As per the Reserve Bank of India guidelines issued in Oct. 1999, there are three major types of risks encountered by the banks and these are Credit Risk, Market Risk & Operational Risk.

CREDIT RISK

Credit risk is an investor's risk of loss arising from a borrower who does not make payments as promised. Such an event is called a default. Investor losses include lost principal and interest, decreased cash flow, and increased collection costs, which arise in a number of circumstances:

- A consumer does not make a payment due on a mortgage loan, credit card, line of credit, or other loan
- A business or consumer does not pay a trade invoice when due
- A business does not pay an employee's earned wages when due
- A business or government bond issuer does not make a payment on a coupon or principal payment when due

- An insolvent insurance company does not pay a policy obligation
- An insolvent bank won't return funds to a depositor
- A government grants bankruptcy protection to an insolvent consumer or business

MARKET RISK

Market Risk may be defined as the possibility of loss to bank caused by the changes in the market variables. It is the risk that the value of on-/off-balance sheet positions will be adversely affected by movements in equity and interest rate markets, currency exchange rates and commodity prices.

Market risk is the risk that the value of a portfolio, either an investment portfolio or a trading portfolio, will decrease due to the change in value of the market risk factors. The four standard market risk factors are stock prices, interest rates, foreign exchange rates, and commodity prices. The associated market risks are:

- Equity risk, the risk that stock or stock indexes (e.g. Euro Stoxx 50, etc.) prices and/or their implied volatility will change.
- Interest rate risk, the risk that interest rates (e.g. Libor, Euribor, inflation, etc.) and/or their implied volatility will change.
- Currency risk, the risk that foreign exchange rates (e.g. EUR/USD, EUR/GBP, etc.) and/or their implied volatility will change.
- Commodity risk, the risk that commodity prices (e.g. corn, copper, crude oil, etc.) and/or their implied volatility will change.

Market risk is the risk to the bank's earnings and capital due to changes in the market level of interest rates or prices of securities, foreign exchange and equities, as well as the volatilities, of those prices. Market Risk Management provides a comprehensive and dynamic frame work for measuring, monitoring and managing liquidity, interest rate, foreign exchange and equity as well as commodity price risk of a bank that needs to be closely integrated with the bank's business strategy.

Liquidity risk

Liquidity is the ability to efficiently accommodate deposit as also reduction in liabilities and to fund the loan growth and possible funding of the off-balance sheet claims. The cash flows are placed in different time buckets based on future likely behavior of assets, liabilities and off-balance sheet items. Liquidity risk consists of Funding Risk, Time Risk & Call Risk.

In finance, liquidity risk is the risk that a given security or asset cannot be traded quickly enough in the market to prevent a loss (or make the required profit).

Types of Liquidity Risk

Market liquidity - An asset cannot be sold due to lack of liquidity in the market - essentially a sub-set of market risk. This can be accounted for by:

- Widening bid/offer spread
- Making explicit liquidity reserves
- Lengthening holding period for VaR calculations

Funding liquidity - Risk that liabilities:

- Cannot be met when they fall due
- Can only be met at an uneconomic price
- Can be name-specific or systemic

Causes of liquidity risk

Liquidity risk arises from situations in which a party interested in trading an asset cannot do it because nobody in the market wants to trade that asset. Liquidity risk becomes particularly important to parties who are about to hold or currently hold an asset, since it affects their ability to trade.

Manifestation of liquidity risk is very different from a drop of price to zero. In case of a drop of an asset's price to zero, the market is saying that the asset is worthless. However, if one party cannot find another party interested in trading the asset, this can potentially be only a problem of the market participants with finding each other. This is why liquidity risk is usually found to be higher in emerging markets or low-volume markets.

Liquidity risk is financial risk due to uncertain liquidity. An institution might lose liquidity if its credit rating falls, it experiences sudden unexpected cash outflows, or some other event causes counterparties to avoid trading with or lending to the institution. A firm is also exposed to liquidity risk if markets on which it depends are subject to loss of liquidity.

Liquidity risk tends to compound other risks. If a trading organization has a position in an illiquid asset, its limited ability to liquidate that position at short notice will compound its market risk. Suppose a firm has offsetting cash flows with two different counterparties on a given day. If the counterparty that owes it a payment defaults, the firm will have to raise cash from other sources to make its payment. Should it be unable to do so, it too will default. Here, liquidity risk is compounding credit risk.

A position can be hedged against market risk but still entail liquidity risk. This is true in the above credit risk example—the two payments are offsetting, so they entail credit risk but not market risk. Another example is the 1993 Metallgesellschaft debacle. Futures contracts were used to hedge an Over-the-counter finance OTC obligation. It is debatable whether the hedge was effective from a market risk standpoint, but it was the liquidity crisis caused by staggering margin calls on the futures that forced Metallgesellschaft to unwind the positions.

Accordingly, liquidity risk has to be managed in addition to market, credit and other risks. Because of its tendency to compound other risks, it is difficult or impossible to isolate liquidity risk. In all but the most simple of circumstances, comprehensive metrics of liquidity risk do not exist. Certain techniques of asset-liability management can be applied to assessing liquidity risk. A simple test for liquidity risk is to look at future net cash flows on a day-by-day basis. Any day that has a sizeable negative net cash flow is of concern. Such an analysis can be supplemented with stress testing. Look at net cash flows on a day-to-day basis assuming that an important counterparty defaults.

Analyses such as these cannot easily take into account contingent cash flows, such as cash flows from derivatives or mortgage-backed securities. If an organization's cash flows are largely contingent, liquidity risk may be assessed using some form of scenario analysis. A general approach using scenario analysis might entail the following high-level steps:

- Construct multiple scenarios for market movements and defaults over a given period of time
- Assess day-to-day cash flows under each scenario.

Because balance sheets differ so significantly from one organization to the next, there is little standardization in how such analyses are implemented.

Regulators are primarily concerned about systemic and implications of liquidity risk.

Measures of liquidity risk

Liquidity gap

Culp defines the liquidity gap as the net liquid assets of a firm. The excess value of the firm's liquid assets over its volatile liabilities. A company with a negative liquidity gap should focus on their cash balances and possible unexpected changes in their values.

As a static measure of liquidity risk it gives no indication of how the gap would change with an increase in the firm's marginal funding cost.

Liquidity risk elasticity

Culp denotes the change of net of assets over funded liabilities that occurs when the liquidity premium on the bank's marginal funding cost rises by a small amount as the liquidity risk elasticity. For banks this would be measured as a spread over libor, for nonfinancial the LRE would be measured as a spread over commercial paper rates.

Problems with the use of liquidity risk elasticity are that it assumes parallel changes in funding spread across all maturities and that it is only accurate for small changes in funding spreads.

Research Model

$$Y1 = \alpha + \beta 1X1 + \beta 2X2 + \beta 3X3 + \beta 4X4 + \beta 5X5$$

Liquidity risk is the dependent variable of this study. Explanation of dependent and independent variables along with their proxies are specified in Table.

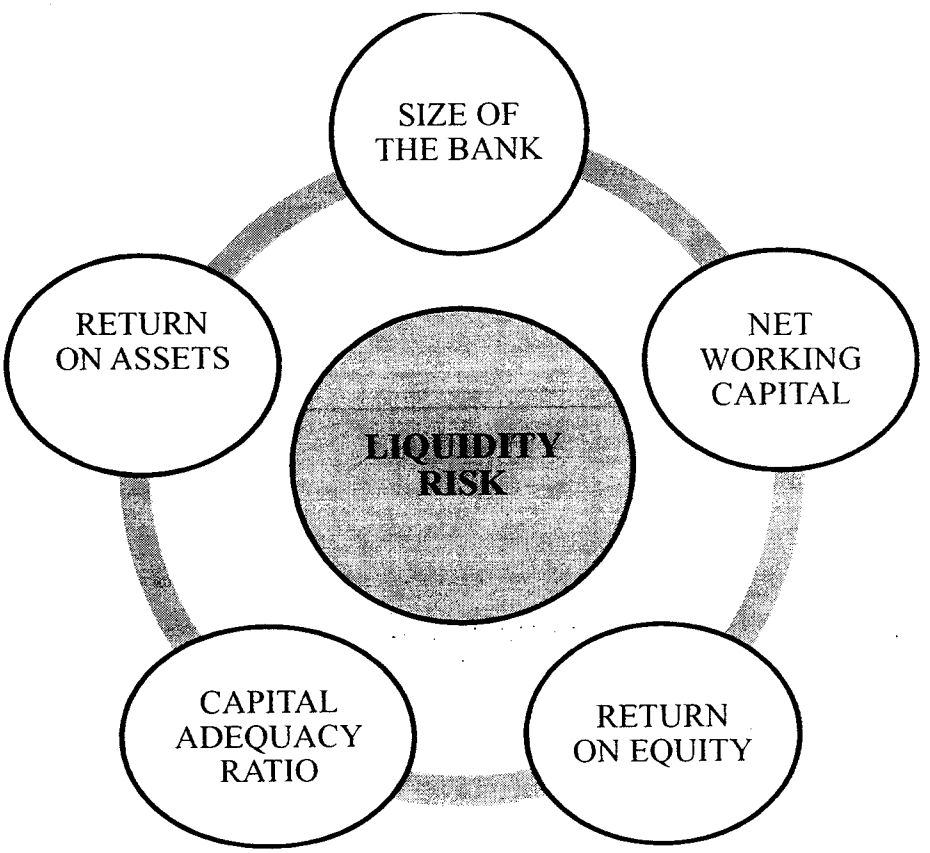

Table showing the variables and their proxies

SYMBOL	VARIABLE	PROXIES
Y_1	Liquidity Risk	
$A(\alpha)$	Value of the intercept / Excess return	
X_1	Size of the Bank	Logarithm of Total Assets
X_2	Net Working Capital	Ratio of short-term claims less short-term debt to net assets
X_3	Return On Equity	Net Profit (after tax)/ Net Worth
X_4	Capital Adequacy Ratio	Tier 1 + Tier 2 capital / Risk Weighted Assets
X_5	Return On Assets	Net Profit / Total Assets

1.3.COMPANY PROFILE

Indian Overseas Bank (IOB) was founded on February 10th 1937, by Shri.M.Ct.M. Chidambaram Chettyar, a pioneer in many fields - Banking, Insurance and Industry with the twin objectives of specialising in foreign exchange business and overseas banking. At the dawn of Independence IOB had 38 branches in India and 7 branches abroad. Deposits stood at Rs.6.64 Crs and Advances at Rs.3.23 Crs at that time. It was one of the 14 major banks that was nationalised in 1969.

Indian Overseas Bank has an ISO certified in-house Information Technology department, which has developed the software that 2555 branches use to provide online banking to customers; the bank has achieved 100% networking status as well as 100% CBS status of branches with a total number of 2555 CBS branches and 6 Extension Counters.

On the eve of Nationalisation in 1969, the bank had 195 branches in India with aggregate deposits of Rs.67.70 Crs. and Advances of Rs. 44.90 Crs. in 1979. The Bank has sponsored 3 Regional Rural Banks viz. Puri Gramya Bank, Pandyan Grama Bank, Dhenkanal Gramya Bank The Bank setup a separate Computer Policy and Planning Department (CPPD) to implement the programme of computerisation, to develop software packages on its own and to impart training to staff members in this field. IOB started STAR services in December 1999 for speedy realisation of outstation cheques. Now the Banks has 14 STARS centres and one Controlling Centre for providing this service.

During 1999, it started tapping the potential of internet by enabling ABB card holders in Delhi to pay their telephone bills by just logging on to MTNL web site and by authorising the Bank to debit towards the telephone bills. A Voluntary Retirement Scheme was introduced in the Bank on the lines of IBA package with Boards approval. The scheme was offered to Officers/Employees from December 15, 2000.

Board of Directors

- Shri. M.Narendra - Chairman and Managing Director
- Shri A.K. Bansal - Executive Director
- Shri A.D.M.Chavali - Executive Director
- Dr. Alok Pande - Government Nominee Director
- Shri.S.V.Raghavan - RBI Nominee Director
- Shri. Sridhar Lal Lakhotia - Workmen employee Director
- Shri K. Ananda Kumar - Officer Employee Director
- Shri.Ajit Vasant Sardesai - Share holder Director

International Expansion

- 1937-38: As mentioned above, IOB was international from its inception with branches in Rangoon, Penang, and Singapore.
- 1941: IOB opened a branch in Malaya that presumably closed almost immediately because of the war.
- 1946: IOB opened a branch in Ceylon.
- 1947: IOB opened a branch in Bangkok and re-opened others.
- 1948: United Commercial Bank (see below) opened a branch in Malaya.
- 1949: IOB opened a branch in Bangkok.
- 1963: The Burmese government nationalized IOB's branch in Rangoon.
- 1973: IOB, Indian Bank and United Commercial Bank established United Asian Bank Berhad in Malaysia.

1.2.INDUSTRY PROFILE

The Banking Industry was once a simple and reliable business that took deposits from investors at a lower interest rate and loaned it out to borrowers at a higher rate. The Indian Banking industry, which is governed by the Banking Regulation Act of India, 1949 can be broadly classified into two major categories, non-scheduled banks and scheduled banks. Scheduled banks comprise commercial banks and the co-operative banks. In terms of ownership, commercial banks can be further grouped into nationalized banks, the State Bank of India and its group banks, regional rural banks and private sector banks (the old/ new domestic and foreign). These banks have over 67,000 branches spread across the country.

However deregulation and technology led to a revolution in the Banking Industry that saw it transformed. Banks have become global industrial powerhouses that have created ever more complex products that use risk and securitization in models that only PhD students can understand. Through technology development, banking services have become available 24 hours a day, 365 days a week, through ATMs, at online banking's, and in electronically enabled exchanges where everything from stocks to currency futures contracts can be traded .

The Banking Industry at its core provides access to credit. In the lenders case, this includes access to their own savings and investments, and interest payments on those amounts. In the case of borrowers, it includes access to loans for the creditworthy, at a competitive interest rate. Banking services include transactional services, such as verification of account details, account balance details and the transfer of funds, as well as advisory services, that help individuals and institutions to properly plan and manage their finances. Online banking channels have become key in the last 10 years.

The collapse of the Banking Industry in the Financial Crisis, however, means that some of the more extreme risk-taking and complex securitization activities that banks increasingly engaged in since 2000 will be limited and carefully watched, to ensure that there is not another banking system meltdown in the future.

Mortgage banking has been encompassing for the publicity or promotion of the various mortgage loans to investors as well as individuals in the mortgage business. Online banking services has developed the banking practices easier worldwide. Banking in the small business sector plays an important role. Find various banking services available for small businesses.

- 1977: IOB opened a branch in Seoul.
- 1979: IOB opened a Foreign Currency Banking Unit in Colombo, Sri Lanka.
- 1992: Bank of Commerce (BOC), a Malaysian bank, acquired United Asian Bank.
- 2007: IOB took over Bharat Overseas Bank
- 2009: IOB took over assets and liabilities of Shree Suvarna Sahakari Bank.

1.4.STATEMENT OF THE PROBLEM

- Risk management plays a vital role in any organizations growth. The investor evaluates the performance based on the risk and return of the organization.
- The researcher has taken up the above issues of liquidity risk in banking sector especially in Indian Overseas Bank.
- The researcher have the intention to study about high risk exposure of Indian Overseas Bank.

1.5.OBJECTIVES OF THE STUDY

- To study the extent of liquidity risk in the Indian Overseas Bank.
- To analyse the systematic risk , excess return and expected return of the Indian Overseas bank.
- To study the return on equity, return on asset, capital adequacy ratio and size of the bank of Indian Overseas Bank.

1.6. SCOPE OF THE STUDY

The scope of the study is confined to five financial years of the Indian Overseas Bank. The study would focus on measuring the risk and return based on the values used from the annual report and the sensex value. whether the risk is high or low accordingly.

REVIEW OF LITERATURE

CHAPTER 2

REVIEW OF LITERATURE

Muhammad Farhan Akhtar, Khizer Ali, Shama Sadaqat.(2011)[1] investigates the significance of Size of the firm, Networking Capital, Return on Equity, Capital Adequacy and Return on Assets (ROA), with liquidity Risk Management in conventional and Islamic banks of Pakistan. The study found positive but insignificant relationship of size of the bank and net-working capital to net assets with liquidity risk in both models. In addition Capital adequacy ratio in conventional banks and return on assets in islamic banks is found to be positive and significant at 10% significance level.

Sawada (2010)[2] investigated that in the times of crises, due to the liquidity shock persuaded by the depositors, banks increase their cash holdings by selling their securities in the financial market, not by liquidating their loans. As they adjust their portfolio dynamically through selling and buying their securities in financial market.

Ojo (2010)[3] emphasized on the significance of risks all the way through a position to the vital role engaged by capital adequacy. On the basis of Accord principles the study observed that beside substantial development, a lot work is yet to be done specifically relative to liquidity risk

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[1] Muhammad Farhan Akhtar, Khizer Ali, Shama Sadaqat. "Liquidity Risk Management: A comparative study between Conventional and Islamic Banks of Pakistan". Interdisciplinary Journal of Research in Business, Vol. 1, Issue. 1, January 2011(pp.35-44)

[2] 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.

[3] Ojo, M. (2010). "Risk management by the Basel Committee: Evaluating progress made from the 1988 Basel Accord to recent developments". Journal of Financial Regulation and Compliance, 18, 305-315.

Vaihekoskia (2009)[4] investigated that in the period of systematic liquidity risk (illiquidity) of those stocks which provides high rate of return were negatively related to the price of liquidity risk. Therefore, systematic liquidity risk is not priced as an asset-specific risk but as market-wide systematic risk as it is enough to occupy all liquidity related risks.

Uddin (2009)[5] identified that there exists the negative relationship between liquidity and stock return, as stock become more illiquid the liquidity risk increases more than the relative rate, also indicate that return is not affected by the fluctuations in the relative stock liquidity.

Dinger (2009)[6] proposed that in emerging economies, due to the existence of transnational banks aggregate liquidity shortage risk has been reduced, as in normal circumstances they are holding low liquidity assets but in crises they holds higher liquid assets as compared to single market banks.

Hassan (2009)[7] argues that three types of risks are being faced by Islamic banks in Brunei Darussalam such as, credit risk, foreign-exchange risk and operating risk, and they are managing those risks very efficiently with the help of risk management practices, which includes risk identification (RI) and risk assessment and analysis (RAA).

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[4] Vaihekoskia, M. (2009). "Pricing of liquidity risk: empirical evidence from Finland". Applied Financial Economics , 1547 — 1557.

[5] Uddin, M. H. (2009). "Reexamination of stock liquidity risk with a relative measure". Studies in Economics and Finance , 24-35.

[6] Dinger, V. (2009). "Do foreign-owned banks affect banking system liquidity risk?". Journal of Comparative Economics , 647–657.

[7] Hassan, A. (2009). "Risk management practices of Islamic banks of Brunei Darussalam". The Journal of Risk Finance , 23-37.

Zheng and Shen (2008)[8] stated that in the presence of liquidity risk more realistic loss can be estimated by liquidity adjusted conditional value at risk which provides a better measure for risk. And also suggested efficient Monte Carlo method: which applies to portfolio of securities or single securities, and finds approximate conditional value at risk and risk at value of all percentiles from the loss distribution with in single set of samples.

[8] Zheng, H., & Shen, Y. (2008). "Jump liquidity risk and its impact on CVaR". The Journal of Risk Finance . [illegible]

RESEARCH METHODOLOGY

CHAPTER 3

RESEARCH METHODOLOGY

3.1. TYPE OF RESEARCH

Analytical Research

Under this research, the researcher goes with the specific topic about which he she have not made any kind of conclusions termed as question. The researcher surveys the information and views already out there both before and during research. At the end of the research the researcher will be able to contribute his own thoughts to the discussion by drawing some conclusions about the topic chosen. hence this study comes under analytical research.

3.2. DATA AND SOURCES OF DATA

Nature Of Data:

The data used in this research is secondary data

Sources of Data:

The secondary data is collected from the annual reports of the Indian Overseas Bank as well as the data collected from the BSE Website.

3.3. TIME PERIOD COVERED

The research comprises of the time period of 5 Financial Years which is used by Indian Overseas Bank. The Financial Year is from 2006-2011.

3.4. TOOLS AND FORMULAS USED

Calculation of Size of the Bank

Size of the bank = Logarithm of total assets

Calculation of Networking Capital

Networking capital = Current Assets – Current Liabilities, (stocks + debtors + cash & equivalents + current assets, other) - creditors, short/ Total assets

Calculation of Return On Equity

Return On Equity = Net Income / Shareholders Equity (OR) Profit After tax/ Net worth

Calculation of Capital Adequacy Ratio

Capital Adequacy Ratio = (Tier 1 capital + Tier 2 capital)/ Risk Weighted Assets

Calculation of Return On Assets

Return On Assets = Net Profit After Tax / Total Assets(or) (Opening + Closing)/2

Calculation of Alpha

Alpha (α) = Rp – β(Rm-Rf)

3.5. LIMITATIONS OF THE STUDY

In order to do the research articulately utmost care has been taken but still it can have certain limitations

- The analysis is made using secondary data only.
- The period of study only for five years(2006 -2011)
- This study is applicable only to Indian Overseas Bank

ANALYSIS & INTERPRETATION

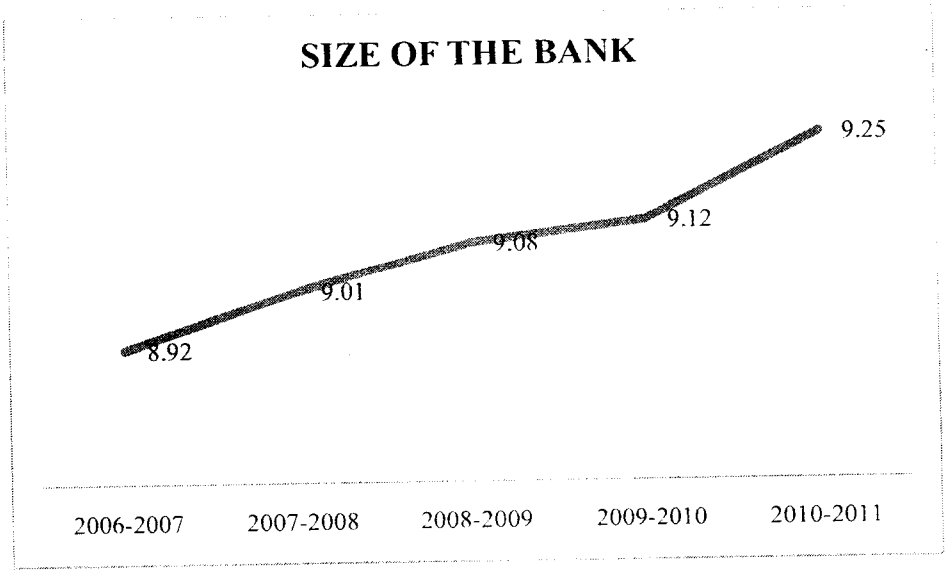
CHAPTER 4

ANALYSIS AND INTERPRETATION

Table 4.1 : SIZE OF THE BANK

YEAR	SIZE OF THE BANK
2006-2007	8.92
2007-2008	9.01
2008-2009	9.08
2009-2010	9.12
2010-2011	9.25

Chart 4.1 SIZE OF THE BANK



Interpretation:

The size of the bank is calculated by taking logarithm of total assets. From the above table and chart it is observed that the size of the banks keeps on increasing.

In 2006-2007 the size of the bank is 8.92. In 2007-2008 the size of the bank is 9.01which seems to be increased by 1.009% from the previous year. In 2008-2009 the size of the bank is 9.08 which seems to be increased by 0.7769% from the previous year. In 2009-2010 the size of the bank is 9.12 which seems to be increased by 0.4405% from the previous year. In 2010-2011 the size of the bank is 9.25 which seems to be increased by 1.4254% from the previous year.

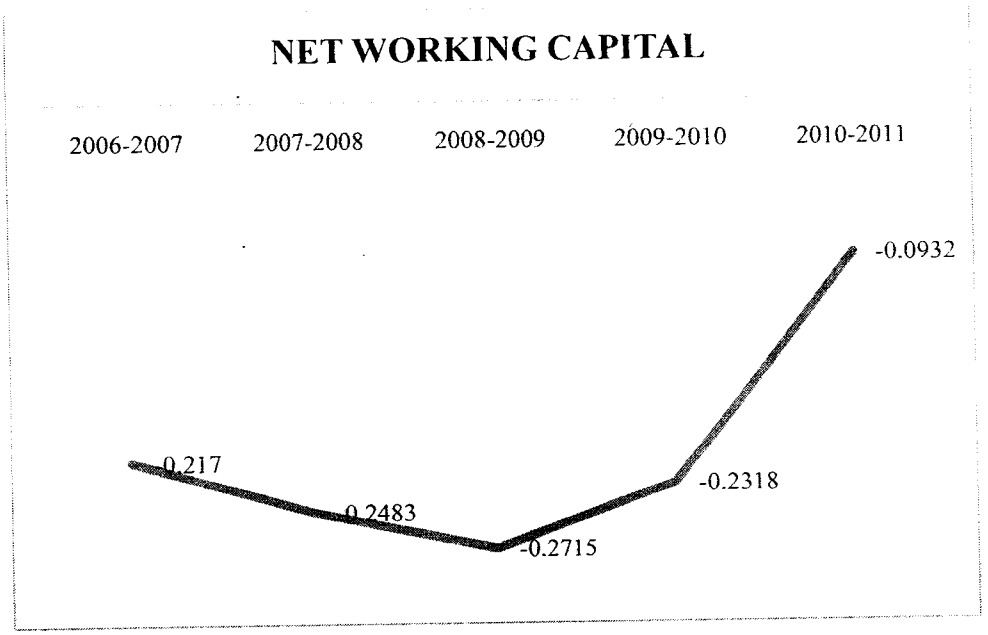
Inference:

The size of the Indian Overseas Bank is increased from 8.92 to 9.25 which has been increased by 3.7% during the year 2006 – 2011. This indicates that the total assets has increased.

Table 4.2 : NET WORKING CAPITAL

YEAR	NET WORKING CAPITAL
2006-2007	-0.2170
2007-2008	-0.2483
2008-2009	-0.2715
2009-2010	-0.2318
2010-2011	-0.0932

Chart 4.2: NET WORKING CAPITAL



Interpretation:

The Working Capital to Total Assets ratio measures a company's ability to cover its short term financial obligations. From the above table and chart it is observed that the Networking Capital to Total Assets of the IOB bank keeps on changing.

In 2006-2007 the Networking Capital to Total Assets of the bank is -0.2170. In 2007-2008 the Networking Capital to Total Assets of the bank is -0.2483 which seems to get decreased from the previous year 2007-2008 which indicates the company may have too many Total Current Liabilities, reducing the amount of Working Capital available. In 2008-2009 the Networking Capital to Total Assets of the bank is -0.2715 which seems to get decreased from the previous year 2008-2009 which indicates the company may have too many Total Current Liabilities, reducing the amount of Working Capital available. In 2009-2010 the Networking Capital to Total Assets of the bank is -0.2318 which seems to get increased from the previous year 2008-2009 which indicates the company's liquidity is improving over time. In 2010-2011 the Networking Capital to Total Assets of the bank is -0.0932 which seems to get increased from the previous year 2010-2011 which indicates the company's liquidity is improving over time.

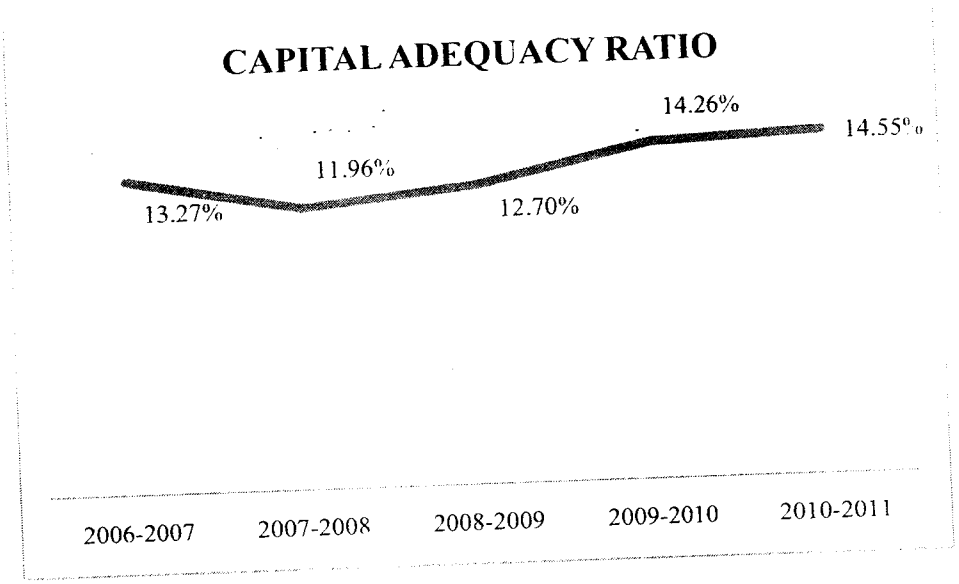
Inference:

The Networking Capital to the Total Asset Ratio of the Indian Overseas Bank had decreased from -0.2170 to -0.2715 during the period of 2006-2009 which indicates that the company has too many Total Current Liabilities, reducing the amount of Working Capital available. The Networking Capital to the Total Asset Ratio of the Indian Overseas Bank had increased from -0.2715 to -0.0932 during the period of 2009-2011 which indicates that the company's liquidity is improving over time.

Table 4.3 : CAPITAL ADEQUACY RATIO

YEAR	CAPITAL ADEQUACY RATIO
2006-2007	13.27%
2007-2008	11.96 %
2008-2009	12.70%
2009-2010	14.26%
2010-2011	14.55%

Chart 4.3: CAPITAL ADEQUACY RATIO



Interpretation:

Capital adequacy ratio is used to measure the amount of a bank's capital in relation to the amount of its risk weighted credit exposures. From the above table and chart it is observed that the Capital Adequacy Ratio of the IOB bank keeps on changing.

In 2006-2007 the Capital Adequacy Ratio of the bank is 13.27%. In 2007-2008 the Capital Adequacy Ratio of the bank is 11.96% which seems to be decreased when compared to the previous year. In 2008-2009 the Capital Adequacy Ratio of the bank is 12.70% which seems to be increased when compared to the previous year. In 2009-2010 the Capital Adequacy Ratio of the bank is 14.26% which seems to be increased when compared to the previous year. In 2010-2011 the Capital Adequacy Ratio of the bank is 14.55% which seems to be increased when compared to the previous year.

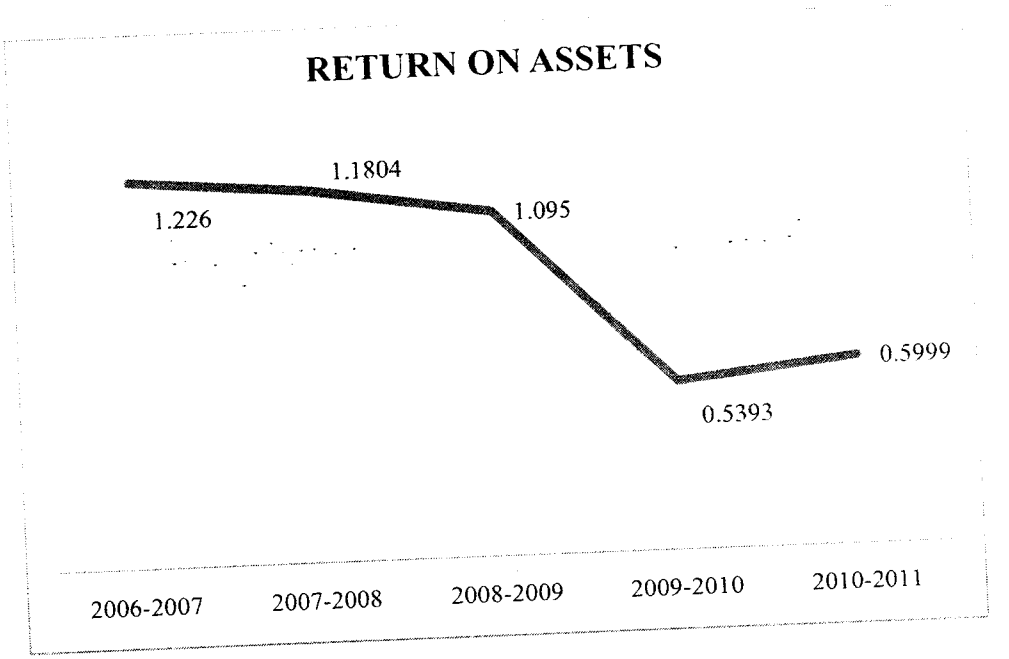
Inference:

The Capital Adequacy Ratio of the Indian Overseas Bank is increasing during the year 2008 – 2011 from 11.96% to 14.55% which indicates that the amount of a bank's capital in relation to the amount of its risk weighted credit exposures has increased.

Table 4.4 : RETURN ON ASSETS

YEAR	RETURN ON ASSETS
2006-2007	1.2260
2007-2008	1.1804
2008-2009	1.0950
2009-2010	0.5393
2010-2011	0.5999

Chart 4.4: RETURN ON ASSETS



Interpretation:

From the above table and chart it is observed that the Return on Assets of the IOB bank keeps on changing.

In 2006-2007 the Return on Assets is 1.226. In 2007-2008 the Return on Assets is 1.1804 which seems to be decreasing when compared to the previous year. It indicates that the earnings has become lesser for the amount of assets. In 2008-2009 the Return on Assets is 1.095 which seems to be decreasing when compared to the previous year. It indicates that the earnings has become lesser for the amount of assets. In 2009-2010 the Return on Assets is 0.5393 which seems to be decreasing when compared to the previous year. It indicates that the earnings has become lesser for the amount of assets. In 2010-2011 the Return on Assets is 0.5999 which seems to be increasing when compared to the previous year. It indicates that the earnings is growing for the amount of assets.

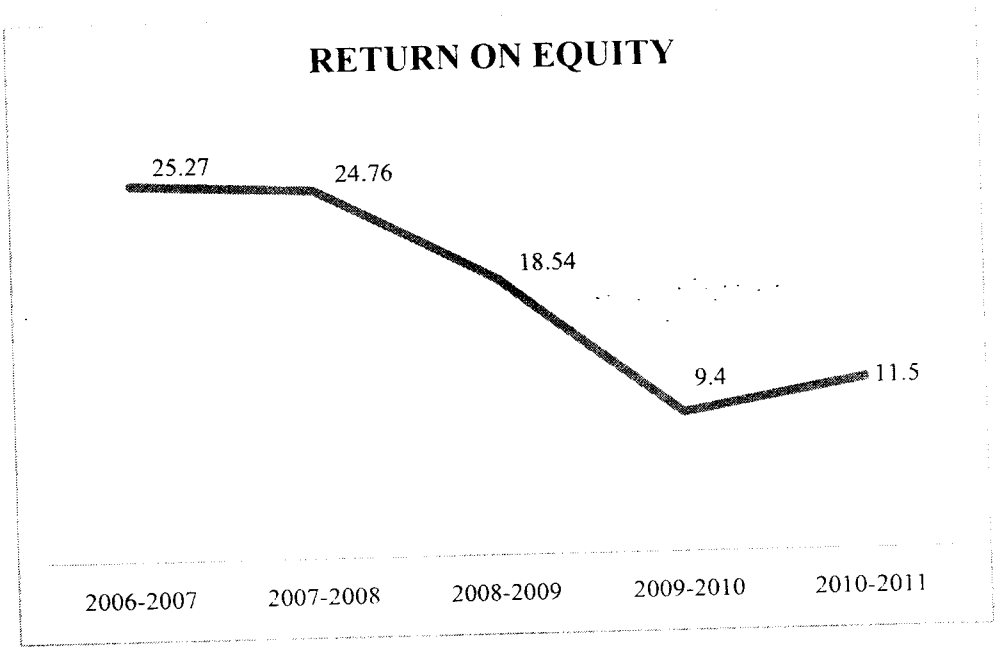
Inference:

The Return on Assets of the Indian Overseas Bank has decreased during the year 2006-2010 from1.226 to 0.5393 which indicates that the earnings are low for the assets. In 2010-2011 the return on assets seems to be increased from 0.5393 to 0.5999. It indicates that the earnings is growing for the amount of assets.

Table 4.5 : RETURN ON EQUITY

YEAR	RETURN ON EQUITY
2006-2007	25.2717
2007-2008	24.7565
2008-2009	18.5400
2009-2010	9.3953
2010-2011	11.5019

Chart 4.5: RETURN ON EQUITY



Interpretation:

From the above table and chart it is observed that the Return on Equity of the IOB bank keeps on changing.

In 2006-2007 the Return on Equity is 25.27%. In 2007-2008 the Return on Equity is 24.76% which seems to be decreasing when compared to the previous year that indicates the profit generated by the company with the money invested by the shareholder's has decreased. In 2008-2009 the Return on Equity is 18.54% which seems to be less when compared to the previous year that indicates the profit generated by the company with the money invested by the shareholder's has decreased. In 2009-2010 the Return on Equity is 9.40% which seems to be less when compared to the previous year that indicates the profit generated by the company with the money invested by the shareholder's has decreased. In 2010-2011 the Return on Equity is 11.50% which seems to be increasing when compared to the previous year that indicates the profit generated by the company with the money invested by the shareholder's has increased.

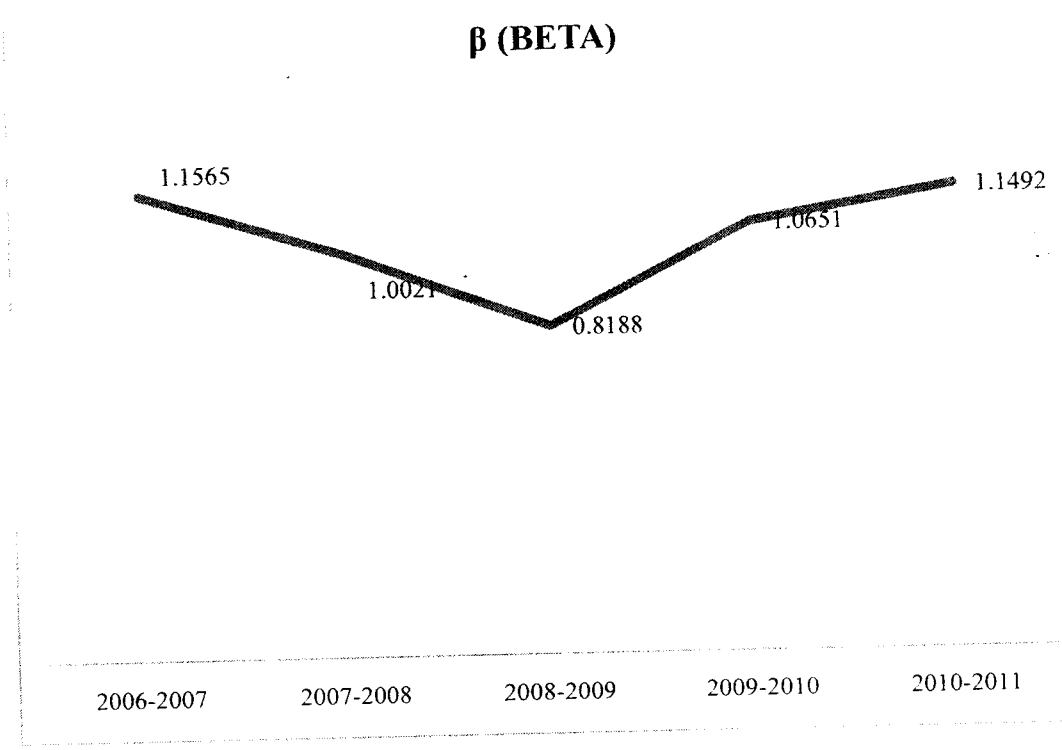
Inference:

The Return on Equity of the Indian Overseas Bank has decreased during the year 2006-2010 from 25.27% to 9.40% which seems to be less when compared to the previous year that indicates the profit generated by the company with the money invested by the shareholder's has decreased. In 2010-2011 the Return on Equity seems to be increased.

Table 4.6 : BETA(β)

YEAR	BETA(β)
2006-2007	1.1565
2007-2008	1.0021
2008-2009	0.8188
2009-2010	1.0651
2010-2011	1.1492

Chart 4.6: BETA(β)



Interpretation:

From the above table and chart it is observed that the Beta (Systematic Risk) of the IOB bank keeps on changing.

In 2006-2007 the systematic risk is 1.1565 which is quite higher than the market beta. In 2007-2008 the systematic risk beta is 1.0021 which is higher than the market beta but it is lesser when compared to the previous year 2006-2007. In 2008-2009 the systematic risk beta is 0.8188 which is lesser than the Market beta the systematic risk had reduced quite a lot from the previous year. In 2009-2010 the systematic risk beta is 1.0651 which is higher than the market beta and it has increased from the previous year. In 2010-2011 the beta is 1.1492which is higher than the previous year systematic risk and also the current year market risk.

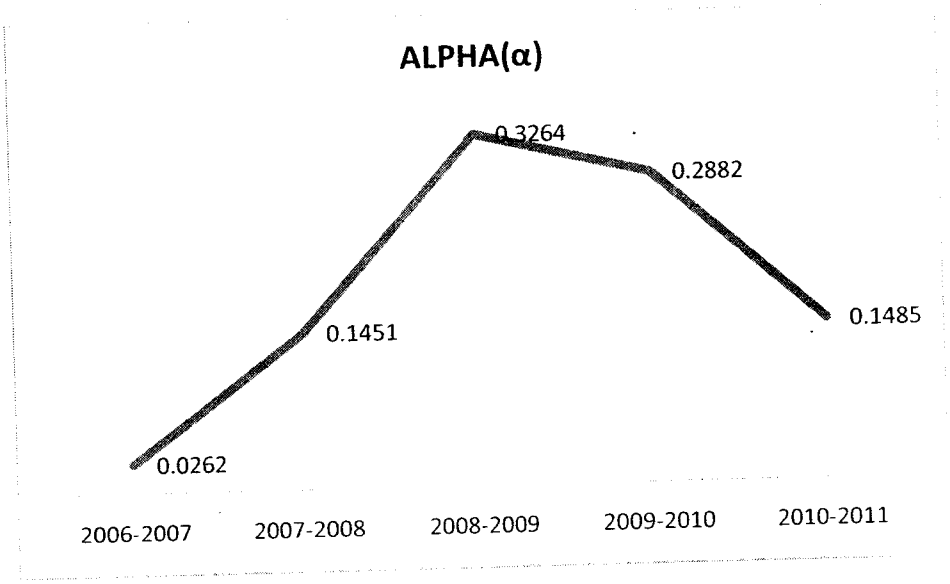
Inference:

The Beta (Systematic Risk) of the Indian Overseas Bank has seen a considerable changes in the past 5 years. The systematic risk beta has decreased from 1.1565 to 0.8188 in time period of 2006-2009. The systematic risk beta has increased from 0..8188 to 1.1492 in 2009-2011.

Table 4.7 : ALPHA(α)

YEAR	Alpha (α)
2006-2007	0.0262
2007-2008	0.1451
2008-2009	0.3624
2009-2010	0.2882
2010-2011	0.1485

Chart 4.7: ALPHA(α)



Interpretation:

Alpha denotes the Excess Portfolio Return to the risk free return. From the above table and chart it is observed that the Alpha(Excess Return) of the IOB bank keeps on changing.

In 2006-2007 the excess portfolio return to the risk free return is 0.0262. In 2007-2008 the alpha is 0.1451 which seems to be high when compared to the previous year. In 2008-2009 the excess portfolio return to the risk free return is 0.3942 which seems to be higher when compared to the previous year. In 2009-2010 the excess portfolio return to the risk free return is 0.2882 which seems to be less when compared to the previous year. In 2010-2011 the excess portfolio return to the risk free return is 0.1485 which seems to be lower when compared to the previous year.

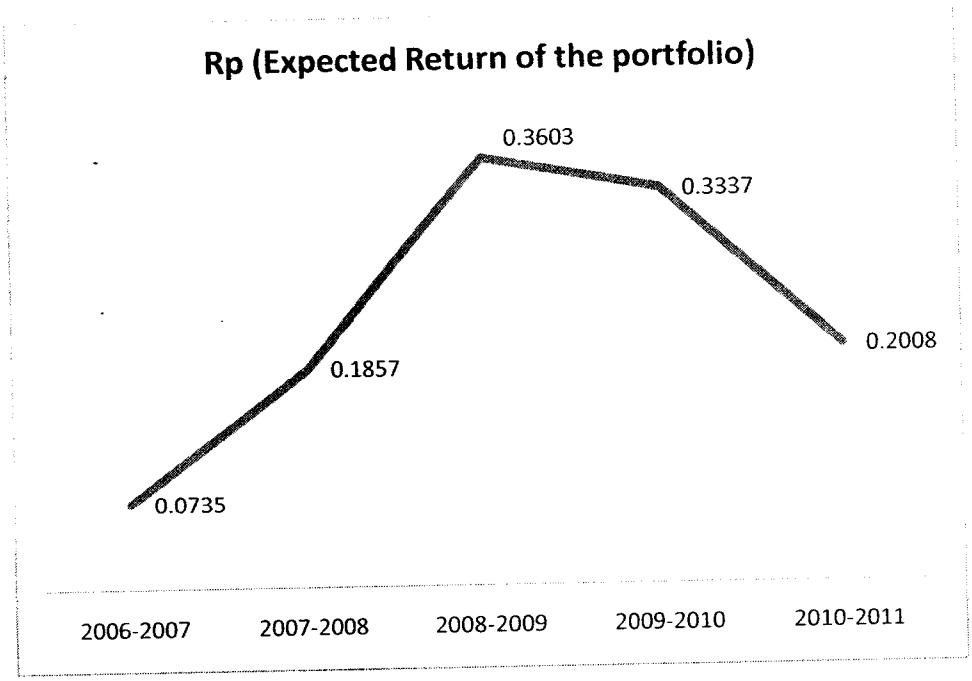
Inference :

The Excess Portfolio Return to the risk free return of the Indian Overseas Bank has increased during the year 2006-2009 from 0.0262 to 0.3942. In 2009-2011 the Excess Portfolio Return to the risk free return seems to be decreased to 0.1485.

Table 4.8 : Rp(Expected Return of the Portfolio)

YEAR	R_p
2006-2007	0.0735
2007-2008	0.1857
2008-2009	0.3603
2009-2010	0.3337
2010-2011	0.2008

Chart4.8 : Rp(Expected Return of the Portfolio)



Interpretation:

From the above table and chart it is observed that the Expected Return of the IOB bank keeps on changing.

In 2006-2007 the Expected Return is 0.0735.In 2007-2008 the Expected Return is 0.1857 which seems to be high when compared to the previous year. In 2008-2009 the Expected Return is 0.3603 which seems to be higher when compared to the previous year. In 2009-2010 the Expected Return is 0.3337 which is less when compared to the previous year. In 2010-2011 the Expected Return is 0.2008 which is less compared to the previous year

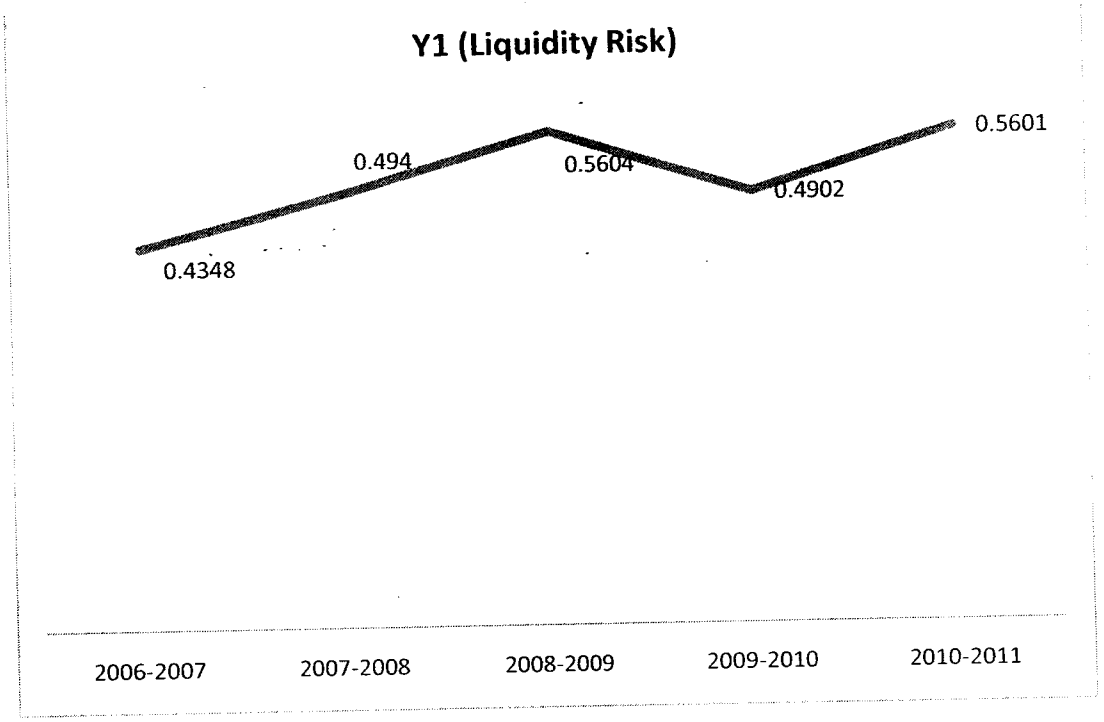
Inference :

The Expected Return of the Indian Overseas Bank has increased from the year 2006-2009 from 0.0735 to 0.3603 that indicates the expectancy level has increased during this period. In 2009-2011 the Expected Return seems to be decreased from 0.3603 to 0.2008 which indicates that the expectancy level has gone down.

Table 4.9 : Y_1 (Liquidity Risk)

YEAR	Y_1(Liquidity Risk)
2006-2007	0.4348
2007-2008	0.4940
2008-2009	-0.1602
2009-2010	0.4902
2010-2011	0.5601

Chart 4.9: Y_1 (Liquidity Risk)



Interpretation:

From the above table and chart it is observed that the Liquidity Risk the IOB bank keeps on changing.

In 2006-2007 the Liquidity Risk is 0.4348. In 2007-2008 the Liquidity Risk is 0.494 has increased which indicates that the asset cannot be traded quick enough to prevent loss. In 2008-2009 the Liquidity Risk is 0.5604 has increased which indicates that the asset cannot be traded quick enough to prevent loss. In 2009-2010 the Liquidity Risk is 0.4902 has decreased which indicates that the asset can be traded quick enough to prevent loss when compared to previous year. In 2010-2011 the Liquidity Risk is 0.5601 has increased which indicates that the asset cannot be traded quick enough to prevent loss.

Inference:

The Liquidity Risk of Indian Overseas Bank has increased from the year 2006-2009 from 0.4348 to 0.5604. In 2009-2010 the risk seems to be decreased and in 2010-2011 it has increased.

FINDINGS, SUGGESTIONS AND CONCLUSION

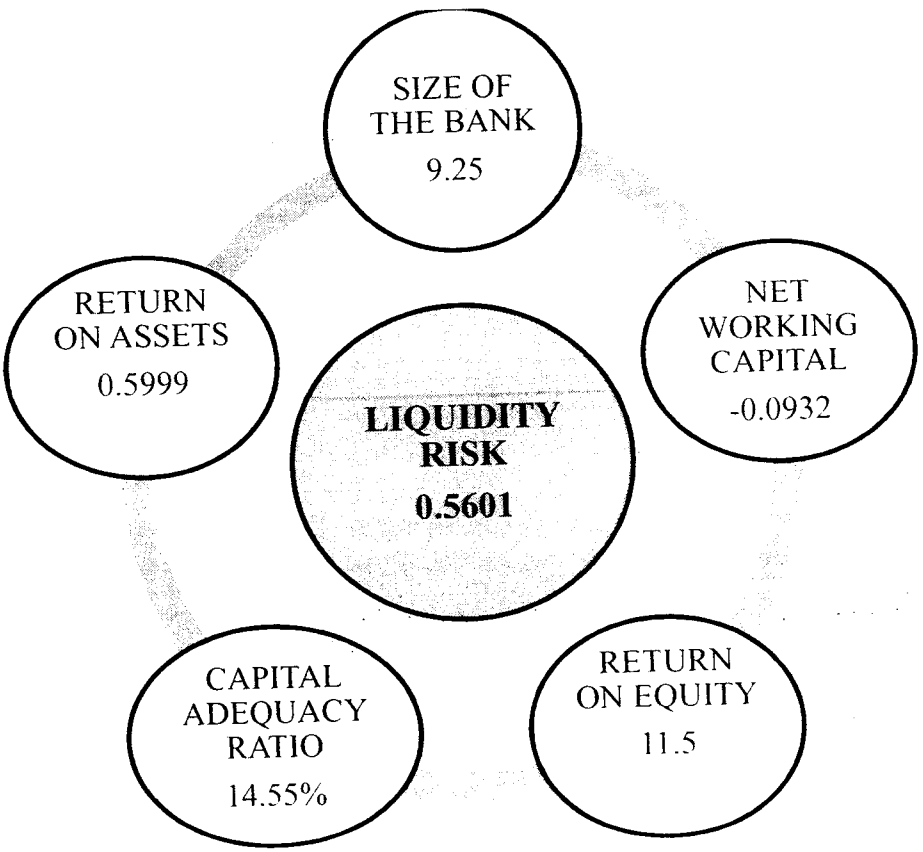
CHAPTER 5

FINDINGS, SUGGESTIONS AND CONCLUSION

5.1. FINDINGS

- The size of the Indian Overseas Bank is increasing over the period of time
- The Networking Capital to the Total Asset Ratio of the Indian Overseas Bank is increasing from the year 2009.
- The Capital Adequacy Ratio of the Indian Overseas Bank is increasing from the year 2008
- The Return on Assets of the Indian Overseas Bank has decreased from the year 2006-2010. In 2010-2011 the return on assets seems to be increasing.
- The Return on Equity of the Indian Overseas Bank has decreased from the year 2006-2010. In 2010-2011 the Return on Equity seems to be increasing.
- The Beta (Systematic Risk) of the Indian Overseas Bank has decreased from the year 2006-2009. In 2009-2011 the Beta (Systematic Risk) seems to be increasing.
- The Alpha(Excess Return) of the Indian Overseas Bank has increased from the year 2006-2009. In 2009-2011 the Alpha(Excess Return) seems to be decreasing
- The Expected Return of the Indian Overseas Bank has increased from the year 2006-2009. In 2009-2011 the Expected Return seems to be decreasing.

- The Liquidiy Risk of Indian Overseas Bank has increased from the year 2006-2009. In 2009-2010 the risk seems to be decreasing and in 2010-2011 it has increased.



5.2. SUGGESTIONS

- The bank authorities shall take steps to recover the dues quickly to reduce the risk.
- The bank management should have some base to select the customers before sanctioning loans.
- Loan can be given mainly based on easily liquidating the securities.
- The bank authorities shall try to increase the deposits to increase the deposits to increase their liquidity position.

5.3. CONCLUSION

Through the research on liquidity risk in the Indian Overseas Bank it has been found that the selected bank has a higher liquidity risk. Hence they might concentrate on project with higher return such that they reduce their systematic risk in assets. The Return on Equity that indicates the profit generated by the company with the money invested by the shareholder's has increased.

The study has proven that the role of risk plays a vital role in the development of the each and every company.

5.4 FURTHER SCOPE

In future the researchers may concentrate on the topics like market risk, operational risk, credit risk. The researchers may also extend their area of research on other sectors. The same study can be done using various other ratio and models.

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