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## PERFORMANCE APPRAISAL OF INDIAN BANKING SECTOR: A COMPARATIVE STUDY OF SELECTED PRIVATE AND FOREIGN BANKS

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### ABSTRACT

*In the present study, an attempt is made to analyze the performance of selected private and foreign banks in India on the basis of parameters recommended in CAMEL Model, i.e. C-capital adequacy, A-asset quality, M-management efficiency, E-earnings quality and L-liquidity, which is divided into seven sections. First section includes a brief review of some of the earlier studies. Second section covers the scope, objectives, hypotheses and research methodology of the study. In third, fourth, fifth, sixth and seventh section, an attempt is made to analyze the capital adequacy, asset quality, management efficiency, earnings quality and liquidity of selected six banks in all selecting 3 banks from each category i.e. ICICI, HDFC and AXIS from private sector; and Citibank, Standard Chartered and HSBC from foreign banks in India for a period of 12 years, i.e. 2000 to 2011. To achieve the objectives of the study, the use is made of secondary data collected mainly from Report on Trends and Progress of Banking in India, Performance Highlights of Private and Foreign Banks in India, various journals such RBI Bulletin, IBA Bulletin, etc. To test the statistical significance of the results, one-way ANOVA technique has been used. It is found that the ability of the management to meet the need for additional capital is better in ICICI and Citibank in their groups as the capital adequacy ratio in these banks is better than other banks. The quality of assets indicates what types of advances the bank has made to generate interest income, which is better in HDFC and HSBC in their groups as the ratio of net NPAs to total assets/advances is better in these banks than other banks. Management efficiency is better in ICICI and Standard Chartered bank in their groups as the credit-deposits ratio is better in these banks than other banks. From the investors' point of view, HDFC and Standard Chartered are in a better position as their earnings quality is better in their respective groups which is evident from the ratio of operating profits to average working funds. On the other hand, from the depositors' point of view, ICICI and Citibank followed by HDFC and HSBC are in a better position in their respective groups as is evident from the ratio of liquid assets to total deposits/total assets.*

### KEYWORDS

Capital adequacy, Asset Quality, Efficiency, Earnings quality, Liquidity.

### INTRODUCTION

After the set back of early nineties when the Government of India had to pledge the gold to acquire foreign currency to meet the severe problem of balance of payment temporarily, the Government planned to liberalize the Indian economy and open its door to the foreigners to speed up the development process as a long-term solution for the ailing economy. The economic liberalization move, which was initiated in 1991 when the new government assumed office, has touched all the spheres of national activity. Perhaps one area where the deregulatory policies had the maximum impact was the banking sector. Until 1991, the banking in India was largely traditional. The bankers were prudent and cautious people who seldom took risks and were content with the normal banking activities i.e. accepting of deposits and lending against them. Labeled as "Agents of Social Change", their outlook was rigidly controlled by the policies of the Government, which were centered more on the alleviation of poverty and the upliftment of the downtrodden. The 1969 and 1980's nationalization of banks, bringing private banks under the state control, had the objective of realizing this government dream. Even as late as 1991-92, the profitability was a forbidden word in banking business. The banks were established to fulfill social objectives and their performance was evaluated on their 'task fulfillment' initiatives. Lending to the priority sectors, opening of rural branches, achievements in the implementation of Government sponsored schemes and adherence to the policies and programmes of the Government were the parameters considered for judging the performance of a bank. Indian banking system has made commendable progress in extending its geographical spread and functional reach. The nationalization of banks helped in increasing the number of branches, volume of deposits and ensured wider dispersal of the advances. Despite impressive quantitative achievements in resource mobilization and in extending the credit reach, some deficiencies have, over the years, crept into the financial system such as decline in the productivity and efficiency of the system, erosion of the profitability of the system, directed lending played a critical role in depressing the profits, the directed investments in the form of SLR and CRR hindered income earning capability and potentials, portfolio quality suffered due to political and administrative interference in credit decision-making, increase in cost structure due to technological backwardness, average ratio of capital funds to RWAs remained low which created problems in international operations and the system remained de-linked from sound international banking practices. Realizing all these ill effects, the efforts were made to bring reforms in the financial system of the country. The seed of the reforms in India were sown by the Narasimham Committee appointed by the RBI under the chairmanship of M. Narasimham, the former Governor of RBI, to examine the aspects relating to the structure, organization, functions and procedures of the financial system and suggest remedial measures. The Committee submitted its reports in November 1991 and thus, began a new chapter in Indian banking. The financial system reforms were based on the principles of operational flexibility and functional autonomy so that the efficiency, productivity and profitability of the financial institutions can be enhanced continuously. It also aimed at providing a diversified, efficient and competitive financial system with the ultimate objective of improving the efficiency of available resources, increasing the return on investments so that an accelerated growth of all the sectors of the economy can be promoted. The specific goals of the reforms were the development of transparent and efficient capital and money markets, promotion of competition through free entry/exit in financial sector, improvement in access of financial savings, improvement of financial health of banks by recapitalizing, restructuring etc. of weaker banks, improvement in the managerial competence and quality of human resources, and building the financial institutions and infrastructure to improve the supervision, audit, technology and legal framework.

### LITERATURE REVIEW

The articles published on different facets of Indian banking reforms are restrictive in nature and have been found wanting in terms of the assessment of the impact of the reforms on the banking sector. A brief review of some of them is as follows:

**Reddy and Yuvaraja (2001)** were of the view that the adoption of international capital adequacy standards, deregulation of interest rates and entry of private and foreign banks underlined that the speed and sequencing of the financial sector reforms should be as per the requirements of the Indian economy. **Rao (2002)** concluded that the international regulations are forcing the Indian banks to adopt better operational strategies and upgrade the skills. The system requires new technologies, well-guarded risk and credit appraisal system, treasury management, product diversification, internal control, external regulation as well as skilled human resources to achieve the international excellence and to face the global challenges. **Muniappan (2003)** focused on two areas - firstly, challenges faced by the Indian banks and secondly, the management of these challenges. Every aspect of the banking industry, be it profitability, NPA management, customer service, risk management, HRD etc., has to undergo the process of transformation of aligning with the international best practices. He concluded that the future of Indian banking system needs a long-term strategy, which should cover areas like structural aspects, business strategies, prudential control systems, integration of markets, technology issues, credit delivery mechanism and information sharing, etc. **Ghosh and Das (2005)** highlighted the ways

how market forces may motivate banks to select high capital adequacy ratios as a means of lowering their borrowing costs. If the effect of competition among banks is strong, then it may overcome the tendency for bank capitalization. If systemic effects are strong, regulation is required. Empirical tests for the Indian public sector banks during the 1990s demonstrated that better capitalised banks experienced lower borrowing costs. **Mohan (2006)** focused on the changes in efficiency and productivity in Indian banking and stated that the patterns of efficiency and technological change witnessed in Indian banking can be viewed as consistent with expectations in an industry undergoing rapid change in response to the forces of deregulation. In reaction to evolving market prospects, a few pioneering banks might adjust quickly to seize the emerging opportunities, while others respond slowly and cautiously. **Sharma and Nikadio (2007)** presented an analytical review of the capital adequacy regime of the banking sector in India and concluded that in the regime of Basel I, Indian banking system performed reasonably well, with an average CRAR of about 12 per cent, which was higher than the internationally accepted level of 8 per cent as well as India's own minimum regulatory requirement of 9 per cent. **Fred, Stephen and Arthur (2009)** used a multivariate discriminant model to differentiate between low efficiency and high efficiency community banks (less than \$1 billion in total assets) based upon the efficiency ratio, a commonly used financial performance measure that relates non-interest expenses to total operating income. The discriminant model was applied using data for 2006-2008 and also included the periods of high performance as well as the deteriorating industry conditions associated with the current financial crisis. The model's classification accuracy ranges approximately from 88-96 per cent for both original and cross-validation data sets. **Dwivedi and Charyulu (2011)** analyzed the impact of various market and regulatory initiatives on efficiency improvements of Indian banks with the help of Data Envelopment Analysis (DEA) and found that national banks, new private banks and foreign banks have showed high efficiency over a period of time than the remaining banks. **Uppal (2011)** analyzed the performance of major banks in terms of productivity and profitability in the pre and post e-banking period and concluded that performance of all the banks under study is much better in post-e-banking period and further foreign banks are at the top position, whereas the performance of the public sector banks is comparatively very poor. **Ghosh and Ghosh (2011)** emphasized on management of non-performing assets in the perspective of the public sector banks in India under strict asset classification norms, use of latest technological platform, recovery procedures and other bank specific indicators in the context of stringent regulatory framework of the Reserve Bank of India and concluded that the reduction of non-performing asset is necessary for improving the profitability of banks and to comply with the capital adequacy norms as per the Basel Accord(s). **Thiagarajan, Ayyappan and Ramachandran (2011)** analysed the role of market discipline on the behaviour of commercial banks with respect to their capital adequacy and concluded that the commercial banks are well capitalized and the ratio is well over the regulatory minimum requirement. The private sector banks show a higher percentage of tier-I capital over the public sector banks. However the public sector banks show a higher level of tier-II capital. The study also indicated that market forces influenced the banks' behaviour to keep their capital adequacy well above the regulatory norms. The Non-Performing Assets influenced the cost of deposits for both public and private sector banks in a significant manner. The return on equity had a significant positive influence on the cost of deposits for private sector banks. The public sector banks can reduce the cost of deposits by increasing their Tier-I capital.

Induced by the forgoing revelations, an attempt is made to analyze the performance of selected private and foreign banks in India on the basis of parameters recommended in CAMEL Model, i.e. C-capital adequacy, A-asset quality, M-management efficiency, E-earnings quality and L-liquidity, which is divided into four sections. First section includes a brief review of some of the earlier studies. Second section covers the scope, objectives, hypotheses and research methodology of the study. In third, fourth, fifth, sixth and seventh section, an attempt is made to analyze the capital adequacy, asset quality, management efficiency, earnings quality and liquidity of selected six banks in all selecting 3 banks from each category i.e. ICICI, HDFC and AXIS from private sector; and Citibank, Standard Chartered and HSBC from foreign banks in India.

## OBJECTIVES, HYPOTHESES AND METHODOLOGY

### OBJECTIVES OF THE STUDY

The present study is conducted to achieve the following objectives:

1. To study the present position of capital adequacy of selected private and foreign banks in India.
2. To analyze the asset quality of selected private and foreign banks in India.
3. To appraise the management efficiency of selected private and foreign banks in India.
4. To examine the earnings quality of selected private and foreign banks in India.
5. To analyze the liquidity of selected private and foreign banks in India.

### RESEARCH HYPOTHESES

To achieve the above objective of the study, the following hypotheses are formulated and tested:

1. There is no significant difference in the bank/group-wise capital adequacy of the selected private and foreign banks in India.
2. There is no significant difference in the bank/group-wise asset quality of selected private and foreign banks in India.
3. There is no significant difference in the bank/group-wise management efficiency of selected private and foreign banks in India.
4. There is no significant difference in the bank/group-wise earnings quality of selected private and foreign banks in India.
5. There is no significant difference in the bank/group-wise liquidity of selected private and foreign banks in India.

### RESEARCH METHODOLOGY

The present study covers the performance analysis of selected private (ICICI, HDFC and AXIS Bank) and foreign banks (Citi Bank, Standard Chartered Bank and HSBC Bank) for a period of 12 years, i.e. 2000 to 2011. To achieve the objectives of the study, the use is made of secondary data which were collected from the various sources like Report on Trends and Progress of Banking in India, Performance Highlights of Private and Foreign Banks in India, various journals such RBI Bulletin, IBA Bulletin, Professional Banker, ICAFI Journal of Bank Management. To test the statistical significance of the results, one-way ANOVA technique has been used.

### MANAGEMENT OF CAPITAL ADEQUACY

It is important for a bank to maintain depositors' confidence and preventing the bank from bankruptcy. Capital may be taken as a cushion to protect depositors and promote the stability and efficiency of financial system of any country. Capital adequacy reflects the overall financial condition of the banks and also the ability of the management to meet the need for additional capital whenever required. It also indicates whether the bank has enough capital to absorb the unexpected losses or not. Capital Adequacy Ratios act as indicators of bank leverage. The following ratio measures the Capital Adequacy:

#### CAPITAL ADEQUACY RATIO

The banks are required to maintain the Capital Adequacy Ratio (CAR) as specified by RBI from time to time. As per the latest RBI norms, the banks in India should have a CAR of 9 per cent. It is arrived at by dividing the sum of Tier-I and Tier-II capital by aggregate of Risk Weighted Assets (RWAs). The higher the CAR, the stronger is a bank as it ensures high safety against bankruptcy. Tier-I Capital includes equity capital and free reserves. Tier-II Capital comprises of subordinate debt of 5-7 years tenure revaluation reserves, general provisions and loss reserves, hybrid debt capital instruments and undisclosed reserves and cumulative perpetual preference shares. As is evident from the Table-3.1, average capital adequacy ratio is highest in ICICI and Citibank in private and foreign banks respectively. There is no significant difference in the average capital adequacy ratio of selected private and foreign banks individually and when all the banks taken together as the calculated value is less than the critical value in all the cases during the period under study.

#### ADVANCES TO TOTAL ASSETS

The ratio of the advances to total assets indicates a bank's aggressiveness in lending, which ultimately results in better profitability. Higher ratio of advances to total assets is preferred to a lower one. Total advances also include receivables. The value of total assets is excluding the revaluation of all the assets. As is evident from Table-3.2, average ratio of advances to total assets is highest in ICICI and Citibank in private and foreign banks respectively. There is no significant difference in the average ratio of advances to total assets in selected private sector banks. However, the difference between the average ratios of advances to



total assets in selected foreign banks is found significant at 5 percent level of significance. As a whole, there is a significant difference in the average ratio of advances to total assets in selected private and foreign banks at 5 per cent level when all the banks taken together during the period under study.

#### **GOVERNMENT SECURITIES TO TOTAL INVESTMENTS**

The percentage of investment in government securities to total investments is a very important indicator, which shows the risk-taking ability of the bank. It indicates a bank's strategy as being high profit-high risk or low profits-low risk. It also gives a view as to the availability of alternative investment opportunities. Government securities are generally considered as the most safe debt instrument, which as a result, carries the lowest return. Since government securities are risk-free, the higher the G-Securities to investment ratio, the lower the risk involved in a bank's investments. As is evident from Table-3.3, average ratio of government securities to total investments is highest in ICICI and Citibank in private and foreign banks respectively. There is no significant difference in the average ratio of government securities to total investments in selected private sector banks. However, the difference between the average ratios of government securities to total investments in selected foreign banks is found significant at 5 percent level of significance. As a whole, there is a significant difference in the average ratio of government securities to total investments in selected private and foreign banks at 5 per cent level when all the banks are taken together during the period under study.

From the above analysis, it is concluded that there is no significant difference in the capital adequacy ratio of selected private and foreign banks. However, a significant difference is found in average ratio of advances to total assets and government securities to total investments of foreign banks and when all the individual banks are considered together. But this difference is found insignificant in case of selected private sector banks during the period under study. Therefore, the null hypothesis i.e. there is no significant difference in the bank/group-wise capital adequacy of the selected private and foreign banks in India can be partially accepted.

#### **MANAGEMENT OF ASSET QUALITY**

The quality of assets is an important parameter to gauge the strength of bank. The prime motto behind measuring the assets quality is to ascertain the component of net NPAs as percentage to total assets/net advances. This indicates what types of advances the bank has made to generate interest income. Thus, assets quality indicates the type of the debtors the bank is having.

##### **GROSS NPAs TO TOTAL ADVANCES**

This ratio is arrived at by dividing the gross NPAs by total advances. Lower the ratio better is the performance of the bank. As is evident from the Table-4.2, average ratio of gross NPAs to total advances is lowest in PNB, HDFC and Citibank in public, private and foreign banks respectively. There is no significant difference in the average ratio of gross NPAs to total advances in selected public sector and private sector banks. However, the difference between the average ratios of gross NPAs to total advances in selected foreign banks is found significant at 5 percent level of significance. As a whole, there is a significant difference in the average ratio of gross NPAs to total advances in selected private and foreign banks at 5 per cent level when all the individual banks are considered together during the period under study.

##### **NET NPAs TO TOTAL ASSETS**

This ratio indicates the efficiency of the bank in assessing credit risk and, to an extent, recovering the debts. This ratio is arrived at by dividing the net NPAs by total assets. Total assets are considered net of revaluation reserves. Lower the ratio better is the performance of the bank. As is evident from the Table-4.2, average ratio of net NPAs to total assets is lowest in HDFC and HSBC in private and foreign banks respectively. There is no significant difference in the average ratio of net NPAs to total assets in selected foreign banks. However, the difference between the average ratios of net NPAs to total assets in selected private sector banks is found significant at 5 percent level of significance. As a whole, there is a significant difference in the average ratio of net NPAs to total assets in selected private and foreign banks at 5 per cent level when all the individual banks are considered together during the period under study.

##### **NET NPAs TO NET ADVANCES**

It is the most standard measure of assets quality. In this ratio, Net NPAs are measured as a percentage of net advances. Net NPAs are gross NPAs net of provisions on NPAs and interest in suspense account. As is evident from the Table-4.3, average ratio of net NPAs to net advances is lowest in HDFC and HSBC in private and foreign banks respectively. There is no significant difference in the average ratio of net NPAs to net advances in selected public and foreign banks. However, the difference between the average ratios of net NPAs to net advances in selected private sector banks is found significant at 5 percent level of significance. As a whole, there is a significant difference in the average ratio of net NPAs to net advances in selected private and foreign banks at 5 per cent level when all the individual banks are considered together during the period under study.

From the above analysis, it is concluded that there is no significant difference in the asset quality of selected foreign banks. However it is found significant in private sector banks and when all the individual banks are considered together during the period under study. Therefore, the null hypothesis i.e. there is no significant difference in the bank/group-wise asset quality of the selected private and foreign banks in India can be partially accepted.

#### **MANAGEMENT OF EFFICIENCY**

Management efficiency is another important element of the CAMEL Model. The ratio in this segment involves subjective analysis to measure the efficiency and effectiveness of management. The management of the bank takes crucial decisions depending on its risk perception. It sets vision and goals for the organization and sees that it achieves them. This parameter is used to evaluate management efficiency as to assign premium to better quality banks and discount poorly managed ones. The ratio used to evaluate management efficiency is described as under:

##### **TOTAL ADVANCES TO TOTAL DEPOSITS (CREDIT-DEPOSITS RATIO)**

This ratio measures the efficiency and ability of the bank's management in converting the deposits available with the bank (excluding other funds like equity capital, etc.) into high earning advances. Total deposits include demand deposits, savings deposits, term deposits and deposits of other banks. Total advances also include the receivables. As is evident from Table-5.1, average ratio of total advances to total deposits is highest in ICICI and Standard Chartered in private and foreign banks respectively. The difference between the average credit-deposits ratio in selected private sector banks and foreign banks is found significant at 5 percent level of significance. As a whole, there is a significant difference in the average credit-deposits ratio of selected private and foreign banks at 5 per cent level when all the individual banks are considered together during the period under study.

##### **BUSINESS PER EMPLOYEE**

This ratio shows the productivity of human resource of the bank. It is used as a tool to measure the efficiency of all the employees of a bank in generating business for the bank. It is arrived at by dividing the total business by total number of employees. Higher the ratio, the better it is for the bank. By business, we mean the sum of Total Deposits and Total Advances in a particular year. As is evident from Table-5.2, average business per employee is highest in AXIS and Citibank in private and foreign banks respectively. The difference between the average business per employee in selected private sector banks and foreign banks is found significant at 5 percent level of significance. As a whole, there is a significant difference in the average business per employee of selected private and foreign banks at 5 per cent level when all the individual banks are considered together during the period under study.

##### **PROFITS PER EMPLOYEE**

This ratio shows the surplus earned per employee. It is arrived at by dividing the Profit after Tax earned by the bank by the total number of employees. Higher the ratio better is the efficiency of the management. As is evident from Table-5.3, average profits per employee are highest in ICICI and Citibank in private and foreign banks respectively. The difference between the average profits per employee in selected private sector banks and foreign banks is found significant at 5 percent level of significance. As a whole, there is a significant difference in the average profits per employee of selected private and foreign banks at 5 per cent level when all the individual banks are considered together during the period under study.

From the above analysis, it is concluded that there is a significant difference in the management efficiency of selected private sector banks, foreign banks and all the individual banks when considered together during the period under study. Therefore, the null hypothesis i.e. there is no significant difference in the bank/group-wise management efficiency of the selected private and foreign banks in India can be partially accepted.

## MANAGEMENT OF EARNINGS QUALITY

The quality of earnings is a very important criterion that determines the ability of a bank to earn consistently, going into the future. It basically determines the profitability of the banks. It also explains the sustainability and growth in earnings in the future. This parameter gains importance in the light of the argument that much of a bank's income is earned through non-core activities like investments, treasury operations, and corporate advisory services and so on. The following ratios try to assess the quality of income in terms of income generated by core activity- income from lending operations:

### OPERATING PROFITS TO AVERAGE WORKING FUNDS

This ratio indicates how much a bank can earn from its operations net of the operating expenses for every rupee spent on working funds. This is arrived at by dividing the operating profits by average working funds. Average Working Funds are the total resources (total assets or liabilities) employed by a bank. It is the daily average of the total assets/liabilities during a year. The higher the ratio, the better it is. This ratio determines the operating profits generated out of working funds employed. The better utilization of funds will result in higher operating profits. Thus, this ratio will indicate how a bank has employed its working funds in generating profits. Banks which use their assets efficiently will tend to have a better average than the industry average. As is evident from Table-6.1, average ratio of operating profits to average working funds is highest in AXIS and Standard Chartered in private and foreign banks respectively. There is a significant difference in the average ratio of profits to average working funds of selected private sector banks and foreign banks, which is found significant at 5 percent level of significance. As a whole, there is a significant difference in the average ratio of profits to average working funds of selected private and foreign banks at 5 per cent level when all the individual banks are considered together during the period under study.

### SPREAD OR NET INTEREST MARGIN (NIM) TO TOTAL ASSETS

NIM, being the difference between the interest income and the interest expended, as a percentage of total assets shows the ability of the bank to keep the interest on deposits low and interest on advances high. It is an important measure of a bank's core income (income from lending operations). The interest income includes dividend income and interest expended includes interest paid on deposits, loan from the RBI, and other short term and long term loans. As is evident from Table-6.2, average ratio of spread to total assets is highest in HDFC and Citibank in private and foreign banks respectively. There is a significant difference in the average ratio of net interest margin to total assets of selected private and foreign banks. As a whole, there is also a significant difference in the average ratio of net interest margin to total assets of selected private and foreign banks at 5 per cent level when all the individual banks are considered together during the period under study.

### NON-INTEREST INCOME TO TOTAL INCOME

Fee-based income accounts for a major portion of a bank's other income. The bank generates higher fee income through innovative products and adapting the technology for sustained service levels. This stream of revenue is not dependent on the bank's capital adequacy and consequent potential to generate income is immense. Thus, this ratio measures the income from operations, other than lending, as a percentage of the total income. Non-interest income is the income earned by the banks excluding income on advances and deposits with the RBI. The higher ratio of non-interest income to total income indicates the fee-based income. As is evident from Table-6.3, average ratio of non-interest income to total income is highest in ICICI and HSBC in private and foreign banks respectively. There is no significant difference in the average ratio of non-interest income to total income of selected foreign banks. However, the difference between the average ratios of non-interest income to total income in selected private sector banks is found significant at 5 percent level of significance. As a whole, there is a significant difference in the average ratio of non-interest income to total income of selected private and foreign banks at 5 per cent level when all the individual banks are considered together during the period under study.

### NET PROFITS TO TOTAL INCOME

This ratio is calculated by dividing the net profits by total income, which includes interest income and other income. As is evident from table 6.4, average ratio of net profits to total income is highest in AXIS and Citibank in private and foreign banks respectively. There is a significant difference in the average ratio of net profits to total income of selected private sector banks and foreign banks, which is found significant at 5 percent level of significance. As a whole, there is a significant difference in the average ratio of net profits to total income of selected private and foreign banks at 5 per cent level when all the individual banks are considered together during the period under study.

From the above analysis, it is concluded that the difference is found significant only in case of operating profits to average working funds and spread to total assets in foreign banks. However, it is also found significant in private sector banks and when all the individual banks are considered together during the period under study. Therefore, the null hypothesis i.e. there is no significant difference in the bank/group-wise earnings quality of the selected private and foreign banks in India can be partially accepted.

## MANAGEMENT OF LIQUIDITY

Liquidity is very important for any organization dealing with money. Banks have to take proper care in hedging liquidity risk while at the same time ensuring that a good percentage of funds are invested in higher return generating investments so that banks can generate profit while at the same time provide liquidity to the depositors. Among a bank's assets, cash investments are the most liquid. The ratios used to measure the liquidity are as follows:

### LIQUID ASSETS TO TOTAL ASSETS

Liquid Assets include cash in hand, balance with the RBI, balance with other banks (both in India and abroad), and money at call and short notice. Total assets include the revaluations of all the assets. The proportion of liquid assets to total assets indicates the overall liquidity position of the bank. As is evident from table 7.1, average ratio of liquid assets to total assets is highest in HDFC and Citibank in private and foreign banks respectively. There is no significant difference in the average ratio of liquid assets to total assets of selected private banks. However, the difference between the average ratios of liquid assets to total assets in selected foreign banks is found significant at 5 percent level of significance. As a whole, there is a significant difference in the average ratio of liquid assets to total assets of selected private and foreign banks at 5 per cent level when all the individual banks are considered together during the period under study.

### LIQUID ASSETS TO TOTAL DEPOSITS

This ratio measures the liquidity available to the depositors of the bank. Total deposits include demand deposits, savings deposits, term deposits, and deposits of other financial institutions. Liquid assets include cash in hand, balance with the RBI, balance with other banks (both in India and abroad), and money at call and short notice. As is evident from table 7.2, average ratio of liquid assets to total deposits is highest in ICICI and Citibank in private and foreign banks respectively. There is no significant difference in the average ratio of liquid assets to total deposits of selected private banks. However, the difference between the average ratios of liquid assets to total deposits in selected foreign banks is found significant at 5 percent level of significance. As a whole, there is a significant difference in the average ratio of liquid assets to total deposits of selected private and foreign banks at 5 per cent level when all the individual banks are considered together during the period under study.

From the above analysis, it is concluded that there is no significant difference in the management of liquidity of selected private sector banks. Therefore, the null hypothesis i.e. there is no significant difference in the bank/group-wise liquidity of the selected private banks can be accepted. On the other hand, the difference is found significant in case of in foreign banks and when all the individual banks are considered together during the period under study. Therefore, the null hypothesis i.e. there is no significant difference in the bank/group-wise liquidity of the selected private and foreign banks in India cannot be accepted.

## CONCLUSION

As a whole, it is concluded that overall financial condition and also the ability of the management to meet the need for additional capital is better in ICICI and Citibank in their groups as the capital adequacy ratio in these banks is better than other banks. The quality of assets indicates what types of advances the bank has made to generate interest income, which is better in HDFC and HSBC in their groups as the ratio of net NPAs to total assets/advances is better in these banks than other banks. The management of the bank takes crucial decisions depending on its risk perception. It sets vision and goals for the organization and sees that it achieves them. This parameter is used to evaluate management efficiency as to assign premium to better quality banks and discount poorly managed ones. Management efficiency is better in ICICI and Standard Chartered bank in their groups as the credit-deposits ratio is better in these banks than other banks.

The quality of earnings is a very important criterion that determines the ability of a bank to earn consistently, going into the future. It basically determines the profitability of the banks. It also explains the sustainability and growth in earnings in the future. Therefore, from the investors' point of view, HDFC and Standard Chartered are in a better position as their earnings quality is better in their respective groups which is evident from the ratio of operating profits to average working funds. On the other hand, banks have to take proper care in hedging liquidity risk while at the same time ensuring that a good percentage of funds are invested in higher return generating investments so that banks can generate profit while at the same time provide sufficient liquidity to the depositors. Therefore, from the depositors' point of view, ICICI and Citibank followed by HDFC and HSBC are in a better position in their respective groups as is evident from the ratio of liquid assets to total deposits/total assets.

### SIGNIFICANCE AND LIMITATIONS

The results obtained from the present study will be helpful to the policy makers, depositors, investors and other stakeholders to take decisions about the capital adequacy, asset quality, management efficiency, earnings quality and liquidity of the selected private and foreign banks in India. As the present study covers the performance analysis of selected private and foreign banks (only three banks from each category) for a period of 12 years only, therefore results drawn cannot be applied to the banking sector as whole for the entire period especially after the reforms. Availability of time and lack of experience on the part of the researcher may be considered a stumbling block in achieving the objectives of the study.

### REFERENCES

1. Reddy, B. Ram Chandra and Yuvaraja, B. (2001), "Some Aspects of Financial Sector Reforms", Banking theory and financial system, 2002, Kalyani publication, p. 208-215, Ludhiana.
2. Rao, D. Nageswara (2002), "Indian Banking in the New Scenario", Front Line, October-November 2002.
3. Muniappan, G. P. (2003), "Management of Challenges in Banks", NIBM Annual Day Celebration, Pune.
4. Ghosh, S. and A. Das (2005), "Market Discipline, Capital Adequacy and Bank Behaviour", Economic and Political weekly, Vol. 40, pp. 1210 -1215.
5. Mohan, Rakesh (2006) "Reforms, productivity and efficiency in banking: The Indian experience." Reserve Bank of India Bulletin, Vol.60, Issue-3, Mar 2006, pp.279-293.
6. Sharma, Mandira and Nikaido, Yuko (2007) "Capital adequacy regime in India: An overview." Indian Council for Research on International Economic Relations, Working Paper No. 196.
7. Fred H. Hays, Stephen A. De Lurgio and Arthur H. Gilbert (2009), "Efficiency Ratios and Community Bank Performance", Journal of Finance and Accountancy, pp.1-15.
8. Dwivedi, Amit Kumar and Charyulu, D. Kumara (2011), "Efficiency of Indian Banking Industry in the Post-Reform Era" IIMA, Ahmadabad, W.P. No. 2011-03-01.
9. Uppal, R. K. (2011), "E-Age Technology - New Face of Indian Banking Industry: Emerging Challenges and New Potentials" Journal of Social and Development Sciences, Vol. 1, No. 3, pp. 115-129, April.
10. Ghosh, Debarshi and Ghosh, Sukanya (2011) "Management of Non-Performing Assets in Public Sector Banks: Evidence from India" International Conference on Management, pp. 750-760.
11. Thiagarajan, Somanadevi & Ayyappan, S. and Ramachandran, A. (2011) "Market Discipline, Behavior and Capital Adequacy of Public and Private Sector Banks in India" European Journal of Social Sciences, Vol. 23, Number 1, pp. 109-115.

### TABLES

TABLE 3.1: CAPITAL ADEQUACY RATIO (Percent)

Years	Private Sector Banks			Foreign Banks		
	ICICI	HDFC	AXIS	Citibank	Standard Chartered	HSBC
2000	19.64	12.19	11.37	10.62	9.50	10.30
2001	11.57	11.09	9.00	11.25	9.63	12.37
2002	11.44	13.93	10.65	11.04	9.28	10.92
2003	11.10	11.12	10.90	11.30	10.56	18.10
2004	10.36	11.66	11.21	11.11	10.87	14.54
2005	11.78	12.16	12.66	10.78	10.46	14.03
2006	13.35	11.41	11.08	11.33	9.93	10.61
2007	11.69	13.08	11.57	11.06	10.44	11.06
2008	14.92	13.60	13.73	12.13	10.59	10.59
2009	15.92	15.09	13.69	14.81	11.56	15.31
2010	19.14	16.45	15.80	20.76	14.81	15.58
2011	17.63	15.32	12.65	18.32	14.48	N.A.
Average	14.04	13.09	12.02	12.88	11.01	11.95
ANOVA	2.10 (Critical Value-3.28)			1.41 (Critical Value-3.28)		
Overall ANOVA	1.549 (Critical Value-2.35)					

Note: Axis Bank was renamed in 2006 before that it was UTI Bank.

Source: Data Compiled from the Performance highlights of Various Banks.

**TABLE 3.2: ADVANCES TO TOTAL ASSETS (Percent)**

Years	Private Sector Banks			Foreign Banks		
	ICICI	HDFC	AXIS	Citibank	Standard Chartered	HSBC
2000	30.29	29.51	52.58	44.38	45.26	33.37
2001	35.63	29.69	44.62	45.21	40.39	37.72
2002	44.02	28.61	37.22	52.96	47.76	40.94
2003	39.23	38.56	41.51	50.03	44.49	39.22
2004	48.60	41.87	38.77	51.55	47.07	37.97
2005	52.83	49.64	41.28	53.57	53.56	45.23
2006	58.14	47.69	44.86	53.82	52.39	44.86
2007	56.82	51.45	50.34	49.52	51.15	42.08
2008	56.43	47.62	54.45	45.76	45.41	39.44
2009	57.56	53.95	55.21	37.92	38.48	29.15
2010	49.86	56.56	57.76	38.38	46.80	25.96
2011	57.26	57.68	58.67	36.38	46.11	30.06
Average	48.89	44.40	48.10	46.62	46.57	37.17
ANOVA	0.78 (Critical Value-3.28)			10.81* (Critical Value-3.28)		
Overall ANOVA	3.632* (Critical Value -2.35)					

\*Significant at 5 percent level of significance.

Note: Axis Bank was renamed in 2006 before that it was UTI Bank.

Source: Data Compiled from the Performance highlights of Various Banks.

**TABLE 3.3: GOVERNMENT SECURITIES TO TOTAL INVESTMENTS (Percent)**

Years	Private Sector Banks			Foreign Banks		
	ICICI	HDFC	AXIS	Citibank	Standard Chartered	HSBC
2000	63.73	55.92	66.22	77.33	60.69	58.27
2001	49.72	47.76	57.89	81.82	57.46	61.38
2002	63.31	44.11	64.26	80.14	57.65	70.96
2003	80.58	47.48	48.14	80.48	64.05	80.58
2004	68.84	59.52	64.88	80.58	71.62	84.97
2005	68.31	58.02	50.1	81.79	76.69	83.45
2006	76.18	69.14	54.77	90.08	79.84	70.87
2007	77.65	73.76	62.39	92.42	84.14	72.42
2008	71.70	74.69	60.97	94.99	92.67	75.51
2009	67.79	88.67	60.88	96.79	90.32	57.37
2010	61.20	87.17	61.84	97.83	80.88	67.99
2011	51.18	75.73	61.82	97.09	85.66	55.41
Average	66.68	65.16	59.51	87.61	75.14	69.93
ANOVA	1.436 (Critical Value-3.28)			9.120* (Critical Value-3.28)		
Overall ANOVA	10.075* (Critical Value -2.35)					

\*Significant at 5 percent level of significance.

Note: Axis Bank was renamed in 2006 before that it was UTI Bank.

Source: Data Compiled from the Performance highlights of Various Banks.

**TABLE 4.1: GROSS NPAS TO TOTAL ADVANCES (Per cent)**

Years	Private Sector Banks			Foreign Banks		
	ICICI	HDFC	AXIS	Citibank	Standard Chartered	HSBC
2000	2.58	3.52	5.52	1.82	8.47	9.95
2001	5.82	3.17	4.68	1.37	8.12	7.05
2002	10.85	3.27	5.27	0.94	3.57	5.70
2003	5.31	2.26	17.38	1.96	3.27	5.31
2004	4.97	1.89	2.93	2.57	2.99	4.35
2005	3.11	1.72	1.99	2.04	2.77	3.24
2006	1.52	1.45	1.69	1.60	2.84	1.89
2007	2.11	1.40	1.08	1.61	2.65	1.71
2008	3.36	1.43	0.82	2.06	2.17	2.33
2009	4.42	2.01	1.10	4.52	2.82	5.58
2010	5.23	1.44	1.26	3.48	2.64	7.17
2011	4.64	1.06	1.12	2.06	2.33	3.63
Average	4.49	2.05	3.73	2.17	3.72	4.82
ANOVA	2.004 (Critical Value-3.28)			5.458* (Critical Value-3.28)		
Overall ANOVA	2.43*(Critical Value -2.35)					

\*Significant at 5 percent level of significance.

Note: Axis Bank was renamed in 2006 before that it was UTI Bank.

Source: Data Compiled from the Performance highlights of Various Banks.

**TABLE 4.2: NET NPAS TO TOTAL ASSETS (Percent)**

Years	Private Sector Banks			Foreign Banks		
	ICICI	HDFC	AXIS	Citibank	Standard Chartered	HSBC
2000	0.52	0.32	0.13	0.47	0.92	0.34
2001	0.29	0.13	0.14	0.31	0.62	0.36
2002	N.A	0.14	1.29	0.21	0.19	0.93
2003	0.4	0.14	0.83	0.58	0.13	0.40
2004	1.09	0.07	0.46	0.72	0.24	0.27
2005	0.89	0.12	0.57	0.53	0.60	0.23
2006	0.42	0.21	0.44	0.51	0.82	0.26
2007	0.58	0.22	0.36	0.50	0.73	0.18
2008	0.87	0.23	0.23	0.56	0.47	0.23
2009	1.20	0.34	0.22	1.00	0.53	0.41
2010	1.05	0.18	0.23	0.82	0.65	0.60
2011	0.59	0.10	0.16	0.44	0.12	0.27
Average	0.66	0.18	0.42	0.55	0.50	0.37
ANOVA	7.90* (Critical Value-3.28)			1.899 (Critical Value-3.28)		
Overall ANOVA	4.607*(Critical Value -2.35)					

\*Significant at 5 percent level of significance.

Note: Axis Bank was renamed in 2006 before that it was UTI Bank.

Source: Data Compiled from the Performance highlights of Various Banks.

**TABLE 4.3: NET NPAS TO NET ADVANCES (Percent)**

Years	Private Sector Banks			Foreign Banks		
	ICICI	HDFC	AXIS	Citibank	Standard Chartered	HSBC
2000	1.53	1.09	4.54	1.05	2.04	1.04
2001	2.19	0.45	3.43	0.70	1.53	0.99
2002	5.48	0.50	2.74	0.40	0.40	2.27
2003	5.21	0.37	2.30	1.17	0.31	1.03
2004	5.21	0.37	2.39	1.40	0.52	0.70
2005	2.21	0.16	1.29	1.00	1.12	0.50
2006	0.72	0.44	0.98	0.95	1.57	0.58
2007	1.02	0.43	0.72	1.02	1.43	0.43
2008	1.55	0.47	0.42	1.23	1.04	0.58
2009	2.09	0.63	0.40	2.63	1.37	1.42
2010	2.12	0.31	0.40	2.14	1.40	2.31
2011	1.11	0.19	0.29	1.21	0.27	0.91
Average	2.54	0.45	1.65	1.24	1.08	1.06
ANOVA	7.83* (Critical Value-3.28)			0.31 (Critical Value-3.28)		
Overall ANOVA	5.801*(Critical Value -2.35)					

\* Significant at 5 percent level of significance.

Note: Axis Bank was renamed in 2006 before that it was UTI Bank.

Source: Data Compiled from the Performance highlights of Various Banks.

**TABLE 5.1: TOTAL ADVANCES TO TOTAL DEPOSITS (Percent)**

Years	Private Sector Banks			Foreign Banks		
	ICICI	HDFC	AXIS	Citibank	Standard Chartered	HSBC
2000	37.07	41.08	61.30	64.85	86.18	50.66
2001	42.93	39.77	53.02	65.99	101.93	62.77
2002	146.59	38.60	43.56	74.69	95.84	63.49
2003	110.61	52.53	42.32	71.18	72.44	64.07
2004	91.17	58.35	44.68	74.56	80.97	59.18
2005	91.57	70.33	49.20	84.30	88.67	74.18
2006	88.54	62.84	55.63	87.62	84.60	67.37
2007	84.97	68.74	62.73	86.76	88.09	66.45
2008	62.94	92.30	68.09	83.20	90.13	70.26
2009	69.24	99.98	69.48	77.25	89.75	55.21
2010	89.70	75.17	73.84	67.32	86.22	42.11
2011	95.91	76.70	75.25	71.64	84.22	50.64
Average	84.27	64.70	58.26	75.78	87.42	60.53
ANOVA	4.72* (Critical Value-3.28)			31.92* (Critical Value-3.28)		
Overall ANOVA	6.964* (Critical Value -2.35)					

\* Significant at 5 percent level of significance.

Note: Axis Bank was renamed in 2006 before that it was UTI Bank.

Source: Data Compiled from the Performance highlights of Various Banks.

**TABLE 5.2: BUSINESS PER EMPLOYEE (Rs. in Lakhs)**

Years	Private Sector Banks			Foreign Banks		
	ICICI	HDFC	AXIS	Citibank	Standard Chartered	HSBC
2000	829.52	922.00	1101.00	1,160.64	570.01	467.44
2001	815.22	643.00	959.00	1,336.24	617.78	528.67
2002	486.49	778.00	896.00	1566.82	794.41	595.80
2003	1120.00	856.00	926.00	1660.19	840.54	622.78
2004	1010.00	866.00	808.00	1666.92	780.11	820.91
2005	880.00	806.00	895.00	1359.91	786.36	779.45
2006	905.00	758.00	1020.00	1607.92	837.29	975.65
2007	1027.00	607.00	1024.00	1360.48	924.20	979.68
2008	1008.00	506.00	1117.00	1763.78	817.35	1012.34
2009	1154.00	446.00	1060.00	1880.10	971.77	961.81
2010	765.00	590.00	1111.00	1979.89	1083.45	1135.52
2011	735.00	653.00	1366.00	1745.94	1345.62	1221.70
Average	894.60	702.58	1023.58	1382.83	864.04	841.81
ANOVA	11.94*(Critical Value-3.28)			40.337* (Critical Value-3.28)		
Overall ANOVA	29.397*(Critical Value -2.35)					

\* Significant at 5 percent level of significance.

**Note:** Axis Bank was renamed in 2006 before that it was UTI Bank.

**Source:** Data Compiled from the Performance highlights of Various Banks.

**TABLE 5.3: PROFITS PER EMPLOYEE (Rs. in Lakhs)**

Years	Private Sector Banks			Foreign Banks		
	ICICI	HDFC	AXIS	Citibank	Standard Chartered	HSBC
2000	10.92	9.60	6.91	19.22	10.27	4.36
2001	10.45	8.61	7.27	19.34	11.21	6.62
2002	5.00	9.75	7.79	22.14	20.38	5.00
2003	11.00	10.09	8.22	24.26	25.15	4.50
2004	12.00	9.39	8.07	28.33	13.37	6.32
2005	11.00	8.80	7.03	21.75	11.50	8.90
2006	10.00	7.39	8.69	21.71	14.50	12.07
2007	9.00	6.13	7.59	17.33	19.62	14.32
2008	10.00	4.94	8.39	37.33	20.22	16.69
2009	11.00	4.18	10.02	45.12	23.82	16.06
2010	9.00	5.98	12.00	18.32	26.31	11.73
2011	10.00	7.37	14.00	28.61	26.36	23.20
Average	9.95	7.68	8.83	25.29	18.56	10.81
ANOVA	3.883* (Critical Value-3.28)			13.13* (Critical Value-3.28)		
Overall ANOVA	22.21*(Critical Value -2.35)					

\* Significant at 5 percent level of significance.

**Note:** Axis Bank was renamed in 2006 before that it was UTI Bank.

**Source:** Data Compiled from the Performance highlights of Various Banks.

**TABLE 6.1: OPERATING PROFITS TO AVERAGE WORKING FUNDS (Percent)**

Years	Private Sector Banks			Foreign Banks		
	ICICI	HDFC	AXIS	Citibank	Standard Chartered	HSBC
2000	2.81	4.18	2.60	3.87	4.15	2.85
2001	2.35	2.83	1.50	4.05	4.07	3.18
2002	2.14	2.61	3.46	4.24	5.44	2.77
2003	2.49	2.58	2.50	3.76	4.93	2.49
2004	2.09	2.58	3.49	4.42	4.95	3.54
2005	2.18	2.56	2.04	3.81	3.50	3.79
2006	1.98	2.75	2.43	4.02	4.74	3.77
2007	2.05	2.98	2.27	3.98	5.25	4.09
2008	2.14	3.13	2.57	4.04	5.54	4.23
2009	2.33	2.94	2.95	3.72	5.66	4.39
2010	2.72	3.33	3.48	3.66	6.14	3.73
2011	2.37	3.12	3.17	3.16	4.60	3.08
Average	2.30	2.96	2.70	3.89	4.91	3.49
ANOVA	5.975* (Critical Value-3.28)			18.464* (Critical Value-3.28)		
Overall ANOVA	37.041*(Critical Value -2.35)					

\* Significant at 5 percent level of significance.

**Note:** Axis Bank was renamed in 2006 before that it was UTI Bank.

**Source:** Data Compiled from the Performance highlights of Various Banks.

TABLE 6.2: SPREAD TO TOTAL ASSETS (Percent)

Years	Private Sector Banks			Foreign Banks		
	ICICI	HDFC	AXIS	Citibank	Standard Chartered	HSBC
2000	1.54	2.60	1.36	4.55	4.24	2.75
2001	2.05	3.24	0.91	3.97	3.73	3.03
2002	0.57	2.65	1.39	3.76	3.76	2.63
2003	1.33	2.73	1.64	3.76	3.87	2.88
2004	1.50	3.16	2.39	4.58	4.23	3.29
2005	1.69	3.46	1.94	4.29	3.72	3.52
2006	1.87	3.46	2.17	4.53	4.06	3.67
2007	1.93	4.07	2.14	4.05	4.06	4.17
2008	1.83	3.93	2.36	4.36	3.74	3.90
2009	2.21	4.05	2.50	4.19	3.24	3.87
2010	2.23	3.77	2.77	4.25	4.38	3.60
2011	2.22	3.80	2.70	3.65	3.75	3.66
Average	1.75	3.41	2.02	4.16	3.90	3.41
ANOVA	33.33*(Critical Value-3.28)			11.565* (Critical Value-3.28)		
Overall ANOVA	54.602*(Critical Value -2.35)					

\* Significant at 5 percent level of significance.

Note: Axis Bank was renamed in 2006 before that it was UTI Bank.

Source: Data Compiled from the Performance highlights of Various Banks.

TABLE 6.3: NON-INTEREST INCOME TO TOTAL INCOME (Percent)

Years	Private Sector Banks			Foreign Banks		
	ICICI	HDFC	AXIS	Citibank	Standard Chartered	HSBC
2000	18.54	15.57	15.87	20.65	19.17	20.45
2001	15.05	12.84	15.49	22.97	21.07	23.07
2002	21.08	16.37	26.07	29.59	23.90	24.18
2003	25.22	18.95	21.89	27.63	19.69	24.56
2004	25.63	18.78	21.89	28.01	21.70	26.47
2005	26.63	15.85	25.40	30.00	17.41	28.89
2006	22.62	20.07	20.16	25.39	25.71	29.65
2007	23.24	17.98	17.78	23.49	25.00	25.68
2008	22.25	18.42	20.40	29.09	32.25	29.83
2009	19.65	16.77	21.10	34.37	35.41	29.91
2010	22.53	19.76	25.32	20.77	33.33	29.25
2011	20.38	17.87	23.41	23.35	28.01	25.61
Average	21.90	17.43	21.23	26.27	25.22	26.46
ANOVA	7.615*(Critical Value-3.28)			0.25 (Critical Value-3.28)		
Overall ANOVA	10.102*(Critical Value -2.35)					

\* Significant at 5 percent level of significance.

Note: Axis Bank was renamed in 2006 before that it was UTI Bank.

Source: Data Compiled from the Performance highlights of Various Banks.

TABLE 6.4: NET PROFITS TO TOTAL INCOME (Percent)

Years	Private Sector Banks			Foreign Banks		
	ICICI	HDFC	AXIS	Citibank	Standard Chartered	HSBC
2000	10.06	14.90	8.87	10.82	13.93	9.74
2001	11.02	14.54	8.18	12.55	13.00	11.70
2002	9.47	14.59	8.41	12.00	18.97	8.42
2003	9.63	15.53	10.25	14.31	30.02	7.66
2004	13.57	16.82	13.01	18.05	18.51	9.33
2005	15.63	17.77	14.30	19.07	19.93	14.72
2006	13.74	15.55	13.40	17.17	21.99	16.45
2007	10.75	13.58	11.83	15.71	25.31	17.91
2008	10.50	12.83	12.17	21.45	23.70	16.80
2009	9.71	11.44	13.22	20.85	21.80	14.30
2010	12.13	14.63	16.13	11.23	24.98	11.09
2011	15.79	16.18	17.12	17.34	23.34	21.87
Average	11.83	14.86	12.24	15.88	21.29	13.33
ANOVA	5.822*(Critical Value-3.28)			10.611*(Critical Value-3.28)		
Overall ANOVA	12.021*(Critical Value -2.35)					

\* Significant at 5 percent level of significance.

Note: Axis Bank was renamed in 2006 before that it was UTI Bank.

Source: Data Compiled from the Performance highlights of Various Banks.

TABLE 7.1: LIQUID ASSETS TO TOTAL ASSETS (Percent)

Years	Private Sector Banks			Foreign Banks		
	ICICI	HDFC	AXIS	Citibank	Standard Chartered	HSBC
2000	28.29	16.14	13.39	12.46	9.94	15.73
2001	18.21	19.59	11.57	15.69	5.29	13.69
2002	12.18	16.22	18.8	12.46	6.41	16.99
2003	6.07	10.41	23.45	15.15	4.67	5.65
2004	6.76	11.36	8.14	17.59	4.82	5.71
2005	7.68	8.70	11.91	14.12	4.15	7.39
2006	6.76	9.41	7.32	13.93	10.42	7.67
2007	10.77	10.03	9.44	13.56	6.84	14.63
2008	9.51	11.09	11.41	13.90	7.72	12.10
2009	7.90	9.55	10.16	15.25	4.33	11.87
2010	10.70	13.46	8.42	15.90	5.38	9.02
2011	8.39	10.70	8.82	19.06	6.38	9.01
Average	11.10	12.22	11.90	14.92	6.36	10.79
ANOVA	0.161 (Critical Value-3.28)			28.016* (Critical Value-3.28)		
Overall ANOVA	5.728* (Critical Value -2.35)					

\*Significant at 5 percent level of significance.

**Note:** Axis Bank was renamed in 2006 before that it was UTI Bank.

**Source:** Data Compiled from the Performance highlights of Various Banks.

TABLE 7.2: LIQUID ASSETS TO TOTAL DEPOSITS (Percent)

Years	Private Sector Banks			Foreign Banks		
	ICICI	HDFC	AXIS	Citibank	Standard Chartered	HSBC
2000	34.62	22.47	15.61	18.21	18.93	23.87
2001	21.94	26.24	13.75	22.91	13.35	22.79
2002	39.85	21.89	22.00	17.58	16.73	26.35
2003	9.23	15.48	9.41	21.55	7.61	9.23
2004	12.44	11.93	27.03	25.45	8.30	8.90
2005	12.95	12.33	14.20	22.22	6.88	12.12
2006	10.32	12.42	9.08	22.68	16.82	11.52
2007	16.10	13.40	11.77	23.76	11.78	23.10
2008	15.56	14.66	14.27	25.26	15.32	21.55
2009	13.72	12.26	12.79	31.07	10.09	20.48
2010	19.24	17.88	10.76	27.89	9.92	14.63
2011	15.11	14.23	11.31	37.54	11.64	15.18
Average	18.42	16.26	14.33	24.68	12.28	17.48
ANOVA	1.067 (Critical Value-3.28)			16.488* (Critical Value-3.28)		
Overall ANOVA	5.784* (Critical Value -2.35)					

\*Significant at 5 percent level of significance.

**Note:** Axis Bank was renamed in 2006 before that it was UTI Bank.

**Source:** Data Compiled from the Performance highlights of Various Banks.



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