

Management Thesis -I

On

**Profitability, Liquidity, and Security Analysis of
ICICI, HDFC, & HSBC Bank for the year 2001- 2006**

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TITLE

Profitability, Liquidity, and Security Analysis of ICICI, HDFC, & HSBC
Bank for the year 2001- 2006



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List of Abbreviation

- ICICI: Industrial credit and Investment Corporation of India
- HDFC: Housing Development Finance Corporation.
- HSBC :Honkong Shanghai Bank Corporation
- SBI:-State Bank of India
- CAR: Capital Adequacy Ratio.
- EPS: Earning Per Share
- MPS: Market per Share.



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Summary

This Management Thesis projects focus as on Banking sector to finding Profitability, Liquidity, and Security Analysis of ICICI, HDFC, & HSBC Bank for the year 2001-2006. The main aim of the project is to understand the study of various Terms in banking.

The project gives me knowledge regarding the overall growth in the sector has been brought about by deregulation which opened several new opportunities for banks to increase revenues by diversifying into areas like Investment banking, insurance, credit cards, depository services, mortgage financing, securitization.

This project help to me find out to examine the relationships among measures such as bank's size, operational efficiency, asset management, return on assets (ROA), interest income, and to discuss their impact on the bank's performance.

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Introduction of Topic

Today "The bank has seen robust growth in both retail and corporate advances adding to the bank's profitability," said a banking sector analyst.

"Rural and international banking are strong growth engines for the bank. Overseas business has also contributed to fee income. The bank is extending its reach in the small and medium enterprise segment," the analyst added.

ICICI Bank's net profit for the second quarter this fiscal rose 30% to Rs 755 crore from Rs 580 crore a year ago. The growth was largely driven by a 62% rise in fee-based income to Rs 1,138 crore and a 47% jump in net interest income to Rs 1,577 crore.

Profitability:- According to a Credit Rating and Information Services of India (Crisil) study, Lower operating expenses including rationalisation of employee costs have improved the profitability of banks, contrary to the popular perception that only trading profits helped the banking sector shore up their bottomlines. The reduction in operating expenses was achieved through large-scale voluntary retirement schemes implemented by public sector banks. Since this reduction in operating expenses seems sustainable, it promises a brighter future for the banking sector. Although the non-interest income of banks did increase by 0.3% during this period, it was more than offset by a 0.21% increase in provisions and an identical decline in spreads. Compared to the relatively volatile treasury income, the reduction in operating expenses imparts a greater level of comfort in terms of the banking sector's ability to sustain its profitability in the future and foreign banks.

Liquidity: - Liquidity for a bank means the ability to meet its financial obligations as they come due. Bank lending finances investments in relatively illiquid assets, but it fund its loans with mostly short term liabilities. Thus one of the main challenges to a bank is ensuring its own liquidity under all reasonable conditions.

Security:- An investment instrument, other than an insurance policy or fixed annuity, issued by a corporation, government, or other organization which offers evidence of debt or equity. The official definition, from the Securities Exchange Act of 1934, is: "Any note, stock, treasury stock, bond, debenture, certificate of interest or participation in any profit-sharing agreement or in any oil, gas, or other mineral royalty or lease, any collateral trust certificate, preorganization certificate or subscription, transferable share, investment contract, voting-trust certificate, certificate of deposit, for a security, any put, call, straddle, option, or privilege on any security, certificate of deposit, or group or index of securities (including any interest therein or based on the value thereof), or any put, call, straddle, option, or privilege entered into on a national securities exchange relating to foreign currency, or in general, any instrument commonly known as a 'security'; or any certificate of interest or participation in, temporary or interim certificate for, receipt for, or warrant or right to subscribe to or purchase, any of the foregoing; but shall not include currency or any note, draft, bill of exchange, or banker's acceptance which has a maturity at the time of issuance of not exceeding nine months, exclusive of days of grace, or any renewal thereof the maturity of which is likewise limited."

Profitability, Liquidity, and Security Analysis

1) **Profitability Analysis:** - In a private sector bank, profitability may be an acceptable way of assessing both efficiency and effectiveness but it is a very partial measure in a state-owned bank, whether agricultural or otherwise. The degree of earnings in these banks is determined mainly by their margin between the funding costs and lending rates, which in turn are strongly influenced by the policies of the government. The capital of the bank is contributed by the government, and the central bank supplements this funding with low-cost funds to finance its lending business. These lower costs are designed to reduce the impact for higher costs and greater risks of agricultural lending on the ultimate profitability of the bank. Assessment of the bank's performance in terms of earnings level may thus reveal more about government policy than about the bank's own efficiency.

The framework divides the analysis into five different interrelated aspects of and uses a time-series to analyse any positive or negative trends. The five divisions are:

1. **Deposit mobilization:** - which is central to the success of a financial institution. It provides independence from the political pressures associated with government funding. Apart from contributing to sustainability and mobilization of investment resources, deposits provide security to depositors against future adversities and help build financial discipline and creditworthiness of individuals (regular transactions build up a lender-borrower history, and accumulated deposits can be used to support loans).
2. **Quality of lending:** - which focuses on the most critical part of the financial analysis and requires uniform supplementary data usually not provided in the published accounts. The main points to be reviewed are access to formal credit, risk concentration, portfolio classification, interest accrual and provision for loan losses.
3. **Capital adequacy analysis:** - which determines the quality of assets and the adequacy of provisions since any overvaluation of assets or shortfalls in loan loss provisions will overstate capital. It expresses capital as a percentage of total risk-weighted assets and shows the margin of protection available to both depositors and creditors against unanticipated losses that may be experienced by the bank.
4. **Liquidity analysis:** - which quantifies the ability of the banks to meet debts as they fall due. This ability depends not only on the extent of conversion of assets without loss but also on the bank's ability to raise loans in the market to meet debts, that is the broader aspects of asset and liability management.
5. **Earnings performance analysis:** - which determines if the bank's operation is generating adequate returns on the assets and equity. As most of the agricultural banks are in the public sector, the analyst may not generally pay much attention to return on equity. Considering the emerging trends towards privatisation, however, it is appropriate to introduce emphasis on return on equity.

Savings

A bank mobilizes savings in a variety of forms - savings account, time deposit account, and certificate of deposit. Deposits can be classified by ownership (private, public or inter-bank), and form of withdrawal (savings, time or demand deposits).

1. **Savings deposits** have no specified maturity and no contractual provisions that require the depositor to give written notice of an intention to withdraw funds.
2. **Time deposit** contracts are distinguished from demand and savings accounts by provisions specifying maturity or other withdrawal conditions.
3. **Demand Deposits** The aggregate amount of demand deposits at any given time is the result of central bank's monetary actions controlling the money supply. Each bank has to compete for its share on the basis of services rendered to the depositor, since interest is not paid on these current account balances.
4. A **Certificate of deposit** is a deposit evidenced by a negotiable or nonnegotiable instrument (certified) that provides on its face that the amount of each deposit is payable either on a certain date specified in the certificate or at expiry of a specified period not less than 30 days after the date of the instrument.
5. **Savings-Passbook** To compete successfully in the savings market, banks will have to go beyond mere convenience and offer additional incentives.

Lending

Access to Formal Credit. In evaluating the performance of a banking institution, it is important to assess the extent to which farmers, for example, have availed of institutional credit. In quantifying this 'access' criterion, the following performance indicators can be used. For Eg.

Number of agricultural loans disbursed to total loans disbursed.

$$\frac{\text{No. of agricultural loans disbursed}}{\text{Total No. of loans disbursed}} \times 100$$

The banks generally compile data on the number of loan accounts rather than the number of borrowers. It is sensible to use the number of loan accounts for indicators particularly because an individual borrower can borrow for agricultural purposes as well as non-agricultural purposes.

Capital Adequacy

Banking has a pivotal role in the functioning of the economy. Public confidence is a key factor in the efficient operation of the banking industry. As a result, the banking industry continues to be publicly regulated and closely supervised. Because of the association of capital with bank soundness, one of the main tools of supervisors is the periodic evaluation of the adequacy of bank capital.

A bank must have sufficient capital to absorb risk of losses inherent in the assets of the business so as to protect depositors and other creditors. For specialized banks like agricultural banks with no or limited access to deposits and liquidity, capital must be adequate to satisfy its maturing obligations in the event of a material fall in its loan collections. Prescription of a precise numerical guideline for the capital needs of all institutions or for groups of institutions would be inappropriately inflexible. Such an approach would endorse overtrading by some and be harmfully restrictive to others.

Liquidity Analysis

Banks must be capable of meeting their obligations when they fall due. If the depositors or other lenders do not have confidence that the claims can be met, they will stop depositing or lending funds to the bank. The acquisition of deposits and other funds is a necessary condition for the expansion of loans and investments beyond the amount permitted by the use of equity only. Maintaining adequate liquidity is a key constraint on the bank's profit-making capacity. The ability to meet liquidity may be provided by:

- (i) Holding adequate cash or liquid assets;
- (ii) Securing an appropriately matching future stream of cash flows from maturing assets; and/or
- (iii) Maintaining a diversified deposit base in terms of both maturities and range of parties, bank and non-bank, which may provide the ability to raise new deposits at reasonable cost.

Liquidity ratios provide the primary means of judging a bank's liquidity Position.

Norms for liquidity ratios of business firms are possible because Norms for liquidity ratios of business firms are possible because their liabilities are predictable due to their fixed maturities. For banks, there are no universally recognized liquidity ratios as a large percentage of their liabilities (e.g. deposits) are due on demand. Nevertheless the following ratios can be used as partial indicators.

Earnings Performance

Banks, like other business entities, need to make profit. At least, three main reasons can be identified for banks' profit motive: to provide an appropriate return to the shareholders; to give confidence to the depositors that the business is sound and competently managed; and to maintain and expand the bank's capital base, in order to satisfy prudential criteria and facilitate business growth in real terms. Above all, earnings are the first line of defence against the risks of losses in banking; as well as losses arising from credit risk, interest rate risk, liquidity risk or currency risk.

Measures of Profitability: - Important measures of profitability are

1. Return on assets
2. Return on equity
3. Interest spread
4. Interest margin
5. Other operating income to total assets
6. Intermediation margin

Profit-making involves risks:-There are a number of different types of lending risks that may affect the interest charged to a borrower. These may be classified as:

1. **Credit Risk:** - The risk that claims on others like loans may not be redeemable on the due date at their book value.
2. **Investment Risk:** - The risk that marketable claims on others or directly held assets, may depreciate below their book value.
3. **Liquidity Risk:**-The risk that withdrawal (of deposits) demands might exceed available liquid assets.
4. **Interest Rate Risk:**- The risk which arises from the fact that some of a bank's borrowing and lending will either be for a very short term, needing to be regularly renewed at market rates or be tied to a market rate of interest that will fluctuate.
5. **Currency Risk:**-The risk which arises mainly from a mismatch of a bank's currency assets and liabilities, and from imposition of exchange control.
6. **Net interest income** :- (Interest earnings less interest expenses) is a factor both of interest rates and of the amount of borrowing and lending. A useful understanding may often only be obtained if further information is given, for example, of average interest rates, average interest- earning assets, and average.

Objective

- To know insight into the key success factors affecting the profitability of banks in today's financial services industry, resulting in a deeper understanding of the risk-return trade-offs that banks.
- To know factors that affect the decision-making process in bank asset and liability management;
- To know Inter comparison profitability, Liquidity & security of the bank.
- To know the undervalued & overvalued security analysis of the bank.

Limitations

- The profitability counted on a particular date so this may not represents the entire year.

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Methodology

I follow methodology **Secondary Data.**

- Internet website of the bank:-HDFC/ICICI/HSBC.
- Magazines of the Financial Year.
- www.iloveindia.com

Review of the literature

1. **McKinnon (2005)** has demonstrated how, under fixed exchange rates, wages rise in tandem with productivity, sustaining the balance of international competitiveness. To provide a contrast, we adopt McKinnon's model (McKinnon 2006) that describes how flexible exchange rates might keep wage growth below productivity growth and test it empirically to determine if it fits the Asian context.

Ait-Sahalia, 2002

2. Examines whether interest rates follow a diffusion process (continuous time Markov process), given that only discrete-time interest rates are available. Based on the extended period 1857 to 1995, this work finds that neither short-term interest rates nor long-term interest rates follow Markov processes, but the slope of the yield curve is a univariate Markov process and a diffusion process.

Fama, 2002

3. Examines the ability of forward rates to forecast future spot rates. Based on data for 1974 and subsequent, he finds evidence that very short-term (one-month) forward rates can forecast spot rates one month ahead. Data prior to 1974 indicate that this predictive power extends five months into the future.

Fama, 2003

4. Examines the ability to forecast one-year spot interest rates in the context of forecasting its components: the one-year inflation rate, and the real return on one year bonds. It is found that the expected values of those two components move opposite to one another. This results in a situation where the five-year yield spread (the yield on five-year bonds over the one-year spot rate) is unable to forecast near term spot rates (one or two years ahead); while the spread has power to forecast the inflation and real return components of the spot rate, those components tend to offset somewhat. As the time horizon is extended, the ability to forecast the spot rate improves. Fama also finds that forecasts of these variables are related to the business cycle.

Pennacchi, 2003

5. Over the period 1968-1988, there is evidence that the instantaneous real interest rates and expected inflation are significantly negatively correlated. The inflation expectations are based on surveys of professional economic forecasters, which may not necessarily correspond with market expectations.

Findings

Analysis similar to the above was carried out to assess the impact of partial privatization of the bank depends on the efficiency. Interestingly, in respect of to find out the different profitability ratios, liquidity ratio & security analysis through the CRR hike will definitely impact profitability of banks. We will have to focus on maintaining our net interest margins,"

On the basis of Capital Adequacy

1) Capital Adequacy Ratio: -

This ratio expresses capital as a proportion of total risk-weighted assets. Both capital and assets should be fairly stated with the appropriate loan loss provisions and intangible assets having been deducted.

ICICI Bank the ratio is computed as:

$$\frac{\text{2006 Equity Capital}}{\text{Risk-weighted assets}} \times 100 \qquad \frac{\text{2007 Equity capital}}{\text{Risk-weighted assets}} \times 100$$

The calculation of this ratio involves weighing each category of assets for risks, deducting intangibles from assets, and adding contingent liabilities in risk weighted assets. A suggested outline for risk-weighting of assets is given below.

	<u>MAR 2007</u>	<u>April 2006</u>	<u>MAR 2006</u>
Tier I capital*	8,989.57	5,525.09	6,026.86
Tier II capital	5,622.64 3	875.69	3,458.57
Total capital	14,612.21	9,400.78	9,485.43
Total risk weighted assets	96,067.36	90,734.02	85,052.72
Capital ratios (per cent)			
Tier I	9.36%	6.09%	7.09%
Tier II	5.85%	4.27%	4.06%
Total capital	15.21%	10.36%	11.15%

On The Basis Of Liquidity Earnings Performance

1) Return on Assets

Return on assets, often described as the primary ratio, relates the income earned by the bank to the resources employed by it. Normally 'return' is taken as profit before extraordinary items, since these items fall outside the scope of the bank's normal operations. There are a number of different ways of computing ratios on capital employed.

ICICI Bank

The following is the most common:

$$\frac{\text{Profit before tax} \times 100}{\text{Average total assets}}$$

	6-Mar	7-Apr	6-Mar
(i) Interest income to working funds (per cent)	7.13%	7.83	8.32
(ii) Non-interest income to working funds (per cent)	2.13	2.7	2.37
(iii) Operating profit to working funds (per cent)	1.8	2.09	1.72
(iv) Return on assets (per cent)	1.37	1.31	1.24

2) Earning Assets to Total Assets Ratio:

This consists of earning assets (interest-bearing investments, loans and advances) divided by total assets. It will reveal the extent to which bank's assets are put into productive use. Investment in equipment and buildings may not directly generate income but they are important for the bank's operations. For the (HDFC/ICICI/HSBC) the ratio is computed as:

$$\frac{\text{2005 Earning assets}}{\text{Total assets}} \times 100$$

$$\frac{\text{2006 earning assets}}{\text{Total assets}} \times 100$$

3) Loan Loss Provisions to Total Loans Ratio: This ratio will give useful insight into the quality of a bank's loan portfolio. . For the (HDFC/ICICI/HSBC) the ratio is computed as:

$$\frac{\text{2005 Loan loss provisions}}{\text{Total loans}} \times 100$$

$$\frac{\text{2006 Loan loss provisions}}{\text{Total loans}} \times 100$$

On the basis of Liquidity

1) Cash Ratio

This ratio relates the sum of cash in hand and at banks including the Central Bank to total deposits. For the (HDFC/ICICI/HSBC) the ratio is computed as:

$$\frac{\text{2005 Cash in hand and at banks}}{\text{Total deposits}} \times 100$$

$$\frac{\text{2006 Cash in hand and at banks}}{\text{Total deposits}} \times 100$$

Most Of These Cash Resources Are Not Available To Meet Liquidity Requirements, And Total Deposits Is An Imperfect Measure Of An Individual Bank's Liquidity.

2) Loans to Deposit Ratio

This ratio is a measure of bank liquidity; the higher the ratio, the lower the liquidity. . For the (HDFC/ICICI/HSBC) the ratio is computed as:

$$\frac{\text{2005 Loans}}{\text{Deposits}} \times 100$$

$$\frac{\text{2006 Loans}}{\text{Deposits}} \times 100$$

This ratio does not indicate anything about future loan demands or expected deposit withdrawals. It does not also indicate anything about the liquidity of the remaining assets or the nature of the banks' other liabilities which could be a source of great liquidity need.

3) Loans to Assets Ratio

The loans to asset ratio are similar to the loans to deposits ratio. Other things equal, a rise in this ratio would indicate lower liquidity and the need to evaluate other liquidity ratios . For the (HDFC/ICICI/HSBC) the ratio is computed as:

2005
Loans
-----x 100
Assets

2006
Loans
-----x 100
Assets

There is no standard way to measure a bank's liquidity. Those without access to internal data will have to use a number of ratios. Larger banks will have greater flexibility in liquidity planning because they can practice liability management nationwide. Because of this ability, their liquidity-planning horizon is much shorter than it is for smaller banks.

2) Return on Equity

This ratio relates profit earned after tax by the bank to resources contributed by its owners, For the (HDFC/ICICI/HSBC) the ratio is computed as:

Ordinary share capital + Reserves.

Since the is exempt from tax, profit before and after tax is the same. Since profit after tax is a flow over a period (in this case a year), it is appropriate to use an average figure for equity capital instead of the year-end total in 2005 and 2006. For shareholders, this ratio is the most important measure of profitability, because it relates profit after tax to the book value of their claims.

3) Return on Loans

Loans are the important earning asset for the bank. The ratio of interest and fees earned on loans to total loans is a significant measure of management's ability to price its loan and to achieve an optimum loan mix for the (HDFC/ICICI/HSBC) the ratio is computed as:

Since loans are a flow over a period, an average figure for gross loans has been used instead of the year-end totals.

4) Return on Investments

This ratio relates interest earned on securities to total book value of securities held by a bank. Government securities are held primarily for liquidity purposes while other securities are held for getting benefit from their tax-free status. For the (HDFC/ICICI/HSBC) the ratio is computed as:

Yield on security depends on the general level of interest rates and the maturity distribution of the portfolio. Typically, a portfolio with long-term securities earns more than one with short-term securities, the differential accounting for lower liquidity. As in loans, an average figure has been used instead of the year-end totals.

5) Interest Spread

When a trader buys goods, he adds to its cost an amount to cover expenses and to earn a certain level of profit, and the difference between the cost of goods and the selling price is called a 'margin' or 'spread'. Banks behave in a similar manner, but they deal in money and not goods. Banks acquire funds such as time and savings deposits, and inter-bank borrowing; in return, they promise to pay interest.

$$\frac{\text{Interest + fees on loans}}{\text{Total loans}} \times 100 \qquad \frac{\text{Interest expense}}{\text{Interest bearing liabilities}} \times 100$$

This ratio includes only those assets and liabilities that carry an interest rate. As a result, it reflects the impact of interest rate on bank profits. This would provide a better understanding of the sources of bank earnings and of the vulnerability of bank profitability.

6) Net Interest Margin

This ratio measures the net interest income as a percentage of average total assets. For the (HDFC/ICICI/HSBC) the ratio is computed as:

$$\frac{\text{Interest income - Interest Expense}}{\text{Average total assets}} \times 100 \qquad \frac{\text{Interest income - Interest Expense}}{\text{Average total assets}} \times 100$$

10

6) Operating income to average total assets:-This ratio relates other operating income to average total assets. For the (HDFC/ICICI/HSBC) the ratio is computed as:

$$\frac{\text{2005 Other operating income}}{\text{Average total assets}} \qquad \frac{\text{2006 Other operating income}}{\text{Average total assets}}$$

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This ratio shows the dependence on income other than (operating) interest earnings on loans.

7) Intermediation Margin

The intermediation margin can be defined as the differential between the cost of funds and the yield on earning assets plus related fee income. The differential shows the cost of the bank for intermediating between the lenders and users of funds. For the (HDFC/ICICI/HSBC) the ratio is computed as:

$$\frac{\text{Yield on earning assets + related fee}}{\text{All financial assets}} \times 100 \qquad \frac{\text{Interest expense}}{\text{All funding liabilities}} \times 100$$

CONCLUSION

This looks attractive when we consider that another private sector bank, HDFC Bank, with an equally impressive track record of growth is trading at a higher PEM of 28 times its earnings. We, however, need to consider the higher capital adequacy ratio in the case of HDFC Bank. The Tier-II capital of HDFC Bank is only 30 per cent of its Tier-I capital. For ICICI, Tier-II capital at end-September 30, worked out to 60 per cent of Tier-I. This means HDFC Bank can grow its earnings for a longer time without any expansion in its equity capital. If we assume that such additional resources, its asset base would expand and so would its profits. Such higher profits could bring down the PEM to a more reasonable 21. That still leaves a gap in the valuation between HDFC Bank and ICICI Bank & HSBC Bank. HDFC Bank's profitability however is better than that of ICICI. This means for the same rupee of invested capital, HDFC Bank would deliver more profits than ICICI Bank.

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