

Capital Adequacy Ratio – An Indicator of Financial Soundness A Case Study of HDFC Bank

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1. Abstract

Banking industry is one of most crucial sectors of an economy. Bank is such an institution that works with people's money and works for people's money to earn more money. As banks major business operations rely on the depositors' money which is counted as debt for them, banks have to mandatorily maintain certain rules and regulations to provide protection towards banks' consumers (depositors). In such a case argument can be predominated about the restrictions that why banks must follow these regulations. One of the main reasons is as banks work with monetary unit, failure of one bank or more than one bank can be translated into negative and downward pressure towards the economy. Because of the severe effects existence, precautions are strictly and mandatorily maintained by banks. One of the most important parts of these regulations is to hold an adequate amount of capital. Adequate capital not only ensure solvency but also operate as a shield against loss which in return ensure banks' sustainable economic operations with satisfactory return. However, based on the perspective of banks' solvency it is more urged that adequate capital should be maintained in a standardized level where solvency and profitability will be optimal. In such a case adequate amount of core capital relative to total asset and risk adjusted asset must be maintained as a part of the risk management as well as following the Basel framework. In this paper the focus on one particular prudential regulation, i.e. capital adequacy requirement in the banking sector in India and also analyses the Capital Adequacy norms followed by HDFC Bank, one of the India's leading private banks.

Keywords: Capital adequacy ratio, Basel norms, Tier I capital.

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2. Introduction

Capital adequacy is an indicator of the financial health of the banking system. It is measured by the Capital to Risk-weighted Asset Ratio (CRAR) defined as the ratio of a bank's capital to its total risk-weighted assets. Risk weighted

assets is a measure of amount of banks assets, adjusted for risks. It is decided by central banks and bank regulators to prevent commercial banks from taking excess leverage and becoming insolvent in the process.

Capital adequacy ratio is the ratio which protects banks against excess leverage, insolvency and keeps them out of difficulty. Financial regulators generally impose a capital adequacy norm on their banking and financial systems in order to provide for a buffer to absorb unforeseen losses due to risky investments. A well adhered to capital adequacy regime does play an important role in minimizing the cascading effects of banking and financial sector crises. It is decided by central banks and bank regulators to prevent commercial banks from taking excess leverage and becoming insolvent in the process. Thus, CAR a measure of a bank's ability to meet its obligations. A high CAR means the bank can absorb losses without diluting capital. An appropriate level of capital adequacy ensures that the bank has sufficient capital to expand its business, while at the same time its net worth is enough to absorb any financial downturns without becoming insolvent. It is the ratio which determines banks capacity to meet the time liabilities and other risks such as credit risk, market risk, operational risk etc. As per RBI norms, Indian SCBs should have a CAR of 9% i.e., 1% more than stipulated Basel norms while public sector banks are emphasized to keep this ratio at 12%.

In other words, it measures how much capital does a bank has with it as a percentage of its total credit exposure. Bank regulators enforce this ratio to ensure credit discipline in order to protect depositors and promote stability and efficiency in the financial system. Here, Tier I capital is a bank's core capital consisting of shareholders' equity and retained earnings; while Tier II capital includes revaluation reserves, hybrid capital instruments, and subordinated term debt. Tier III capital

consists of Tier II capital plus short-term subordinated loans.

The formula used to measure Capital Adequacy Ratio is = $(\text{Tier I} + \text{Tier II (Capital funds)}) / \text{Risk weighted assets}$.

Tier-1 Capital

Tier-1 capital, is core capital, consists of equity capital, ordinary share capital, intangible assets and audited revenue reserves. Tier-1 capital is used to absorb losses and does not require a bank to cease operations. Tier-1 capital is the capital that is permanently and easily available to cushion losses suffered by a bank without it being required to stop operating. A good example of a bank's tier one capital is its ordinary share capital.

Tier-2 Capital

Tier-2 capital comprises unaudited retained earnings, unaudited reserves and general loss reserves. This capital absorbs losses in the event of a company winding up or liquidating. Tier-2 capital is the one that cushions losses in case the bank is winding up, so it provides a lesser degree of protection to depositors and creditors. It is used to absorb losses if a bank loses all its Tier-1 capital.

The two capital tiers are added together and divided by risk-weighted assets to calculate a bank's capital adequacy ratio. Risk-weighted assets are calculated by looking at a bank's loans, evaluating the risk and then assigning a weight. When measuring credit exposures, adjustments are made to the value of assets listed on a lender's balance sheet.

Tier-3 Capital

Considering industry wide concerns about the potential stresses on the asset quality and

consequential impact on the performance /profitability of the banks, Tier 3 capital consists of subordinated debt to cover market risk from trading activities.

Risk-Weighted Assets

Risk-weighted assets are used to determine the minimum amount of capital that must be held by banks and other institutions to reduce the risk of insolvency. The capital requirement is based on a risk assessment for each type of bank asset. For example, a loan that is secured by a letter of credit is considered to be riskier and requires more capital than a mortgage loan that is secured with collateral.

A bank with a high capital adequacy ratio is considered safe and likely to meet its financial obligations.

3.About HDFC Bank

HDFC Bank is one of India's leading private banks and was among the first to receive approval from the Reserve Bank of India (RBI) to set up a private sector bank in 1994. HDFC Bank has been playing a key role in reshaping the financial services landscape in the country for over 25 years with a range of products is tailored to meet the diverse needs of our 5.6 Crore+ customers.

HDFC Bank has a banking network of 5,430 branches and 15,292 ATMs spread across 2,848 cities and towns. Bank offers a diverse range of financial products and banking services to customers through a growing branch and ATM network and digital channels such as Netbanking, Phonebanking and MobileBanking. HDFC Bank offers a wide gamut of commercial and transactional banking services to businesses

and organizations of all sizes. Our services include working capital finance, trade services, transactional services and cash management. The bank focuses on three main product areas, foreign exchange and derivatives, local currency money market and debt securities, and equities. For the financial year 2019-20 recorded an improvement in all key financial metrics, namely Net Interest Income, Deposits, Loans and Investments,i.e.,Return on Capital employed 16.8% Return on Assets 2.01% , compared to the previous year's 16.3% and 1.9%.

4.Objectives of the Study

- To discuss the role of RBI in implementation of BASEL norms in banks.
- To study and understand the Capital Adequacy Ratio as an indicator of Financial Soundness of a bank.
- To analyze the trend in Capital Adequacy Ratios values of the HDFC Bank as per Basel norms of 10 years from 2010 – 2020.

5. Research Methodology

The study is based on secondary data, from the Annual reports of the HDFC bank and also from various articles, reports and research papers relating to capital adequacy published in different business journals, magazines, newspaper, periodicals and from the respective websites. The statistical tools used to analyze the data are average, standard deviation, ratio and percentage analysis etc.,

6.The Role of RBI in implementation of BASEL norms in banks

Reserve Bank of India (RBI) is India's Central bank. It plays multi-facet role by executing multiple functions such as overseeing monetary policy, issuing currency, managing foreign exchange, working as a bank of government and as banker of scheduled commercial banks, among others. It also works for overall economic growth of the country.

Basel norms are the international banking regulations issued by the Basel Committee on Banking Supervision (BCBS). The Basel norms is an effort to coordinate banking regulations across the globe, with the goal of strengthening the international banking system. The Basel Committee on BCBS consists of representatives from central banks and regulatory authorities of 27 countries (including India). Its secretariat (administrative office) is located at the Bank of International Settlements (BIS) headquartered in the city of Basel in Switzerland. Hence, the name Basel norms. The Basel Committee has issued three sets of regulations as of 2018 known as Basel-I, II, and III.

These are important global norms that set a common standard for banks across countries. This is why there are global norms called the BASEL norms, to set common standards for banks across countries. Originally set in 1974, with the three aims, to make the banking sector strong enough to withstand economic and financial stress; reduce risk in the system, and improve transparency in banks.

BASEL III rules

After the 2008 financial crisis, there was a need to update the BASEL norms to reduce the risk in the banking system further. Until BASEL III,

the norms had only considered some of the risks related to credit, the market, and operations. To meet these risks, banks were asked to maintain a certain minimum level of capital and not lend all the money they receive from deposits. This acts as a buffer during hard times. The BASEL III norms also consider liquidity risks.

All commercial banks in India, excluding regional rural banks, come under the Basel-III regulations. Commercial banks, which dominate the Indian banking system, account for approximately 87% of total banking system assets. Public sector banks, with a market share of 73% banking assets and 82% of bank branches, play a major role in the Indian financial system.

Foreign banks account for about 6% of the Indian banking sector, according to the Basel Committee.

The three pillars of Basel II still standing in Basil III i.e. Capital requirement ,Supervisory Review and Market discipline .Basel III focus towards the risk in banking sector. It aims to fill up the gaps in Basel II guidelines. These guidelines will ensure that the banks are sufficiently capitalized, have better liquidity and are ready to manage all types of risks, thereby strengthening the banks transparency. The Basel III norms are notified by RBI on May 2012, made effective from January 2013 in a phased manner and will be implemented fully from 31st March 2018

Complying with BASEL III norms is not an easy task for India's banks, which have to increase capital, liquidity and also reduce leverage. This could affect profit margins for Indian banks. Plus, when banks keep aside more money as capital or liquidity, it reduces their capacity to lend money. Loans are the biggest source of profits from banks. Plus, India banks have to meet both LCR as well as the RBI's

Statutory Liquidity Ratio (SLR) and Cash Reserve Ratio (CRR) norms. This means more money would have to be set aside, further stressing balance sheets.

Considering industry wide concerns about the potential stresses on the asset quality and consequential impact on the performance and profitability of the banks, RBI decided to provide some lead time to banks to raise capital within the internationally agreed timeline for full implementation of the Basel III.

7. Data Analysis and Interpretation

A. Calculation of Capital Adequacy Ratio for the period of ten years from 2010-20.

The following table shows the Trends in Capital Adequacy Ratio of HDFC Bank for the period of ten years, that is from 2010-2020.

Table 1: Trends in Capital Adequacy Ratio [capital to risk weighted assets ratio (CRAR)] of HDFC Bank for ten years from 2010-2020

Year	CAR in %	Tier I Capital Ratio
2009-2010	16.22	12.23
2010-2011	16.52	11.60
2011-2012	16.80	11.08
2013-2014	16.07	11.77
2014-2015	16.79	13.66
2015-2016	15.53	13.22
2016- 2017	14.55	12.79
2017-2018	14.82	13.25
2018-2019	17.11	15.78
2019-2020	17.23	18.52
Max	17.23	18.52

Min	14.55	11.08
Avg	16.164	13.39
Std.devn	0.9297	2.2365

(Source: Annual reports of HDFC Bank)

Table 1 shows that HDFC Bank maintained CAR above the stipulated requirement i.e., 9%, at its highest 17.23 in the year 2019-20 and lowest 14.55 in the year 2016-17, for the last ten years the average is 16.164 with a Standard Deviation of 0.9297. It is evident from the table HDFC Bank, that it maintained CAR above the stipulated requirement during the last ten years.

B. Capital adequacy calculation for the year 2019-20

The Bank's capital to risk-weighted assets ratio ('Capital Adequacy Ratio') as at March 31, 2020 is calculated in accordance with the RBI guidelines on Basel III capital regulations ('Basel III'). The phasing-in of the minimum capital ratio requirement under Basel III is as follows:

Table 2: Table showing the Capital adequacy calculation for the year 2019-20

(Rs.crore)

Particulars	March 31, 2020
Tier I capital	171,414.44
Of which CET 1 capital	163,414.44
Tier II capital	12,843.41
Total capital	184,257.85
Total risk weighted assets	994,715.7
Tier I	17.23%
Of which CET 1	16.43%
Tier II	1.29%
Total	18.52%

Capital Adequacy Ratio (CAR) As on March 31, 2020, Bank's total CAR, calculated as per Basel III capital regulations, stood at 18.5 per cent, well above the regulatory minimum requirement of 11.075 per cent including a Capital Conservation Buffer of 1.875 per cent and an additional requirement of 0.20 per cent on account of the Bank being identified as a Domestically Systemic Important Bank. Tier I Capital was at 17.2 per cent as of March 31, 2020.

C. The details of Liquidity Coverage Ratio calculation for the year 2019-2020:

The Liquidity Coverage Ratio (LCR) is one of the Basel Committee's key reforms to develop a more resilient banking sector. The objective of the LCR is to promote the short-term resilience of the liquidity risk profile of banks. It does this by ensuring that banks have an adequate stock of unencumbered high-quality liquid assets (HQLA) that can be converted easily and immediately into cash to meet their liquidity needs for a 30 calendar day liquidity stress scenario. The LCR is expected to improve the banking sector's ability to absorb shocks arising from financial and economic stress, whatever the source, thus reducing the risk of spillover from the financial sector to the real economy

The average LCR for the quarter ended March 31, 2020 was at 132.20% as against 117.28% for the quarter ended March 31, 2019, and well above the present prescribed minimum requirement of 100%. The average HQLA for the quarter ended March 31, 2020 was ₹ 281,400.84 crore, as against ₹ 202,599.15 crore for the quarter ended March 31, 2019. During the same period the composition of government securities and treasury bills in the HQLA remained at 91%.

8. Conclusion

Complying with BASEL III norms is not an easy task for India's banks, which have to increase capital, liquidity and also reduce leverage. This could affect profit margins for Indian banks. Plus, when banks keep aside more money as capital or liquidity, it reduces their capacity to lend money. Loans are the biggest source of profits from banks. Plus, India banks have to meet both LCR as well as the RBI's Statutory Liquidity Ratio (SLR) and Cash Reserve Ratio (CRR) norms. This means more money would have to be set aside, further stressing balance sheets.

Capital adequacy is an important parameter for judging the strength and soundness of banking system. Banks with reasonable CAR can absorb the unexpected losses easily and their cost of funding is also reduced which ultimately improve the profitability of banks.

The given study revealed that the HDFC Bank is maintaining adequate level of CAR. The Bank's continuing focus on deposits helped in the maintenance of a healthy liquidity coverage ratio at 118%, well above the regulatory requirement.

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