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“Performance of the Indian Banking Sector in the Basel-II and Basel-III Capital Adequacy Norms.”

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Abstract:-

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. With a view to analyze the trend in CAR(Capital Adequacy Ratio) values of the selected banks as per Basel norms II and III components of capital tier I capital, tier II capital and capital adequacy ratio have been calculated. We see that the composite capital adequacy of selected banks have been between 10 to 20 percent most of the time.

Introduction:-

Indian financial sector has traditionally been bank based. A sound financial system is indispensable for the growth of a healthy and vibrant economy. Performance of the banking sector is an effective measure and indicator to check the performance of any economy to a large extent. The stage of development of the banking industry is a good reflection of the development of the economy. Evaluation of the financial performance of the banking sector is an effective measure and indicator to check the soundness of economic activities of the country.⁽¹⁾

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. 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 plays an important role in minimizing the cascading effects of banking and financial sector crises.⁽²⁾

With a view to analyze the trend in CAR(Capital Adequacy Ratio) values of the selected banks as per Basel norms II and III components of capital tier I capital, tier II capital and capital adequacy ratio have been calculated.

Literature Review:-

The study by (V.Narasimhan, M. Goel, 2013) attempted to demonstrate that the Indian banks exhibit stability in such times of crisis due to their capital structure and regulatory environment. They found that the capital adequacy of ICICI, Axis bank, HDFC and SBI have been between 10 to 20 percent most of the time. Which was seems to be safe and optimum bet.

The study by (R. Nitsure, 2005) has analyzed Basel II norms, emerging market perspective with Indian focus. This study focused on need of Basel II for Indian banks, how to Basel II was differed from Basel I and what impact on Indian banking sector and economy of Basel II.

Study by (M.Sharma, Y. Nikaido, 2007) observed that in Basel I, India's banking industry was performing reasonably well. They discussed some limitations in the RBI's guidelines on Basel II implementation. The main concerned were the unsatisfactory performance of the credit rating industry, the increased requirement of tier I capital.

Study by (N.Fatima 2014) highlighted the various components of regulatory capital and outlines the basics of Basel's norms in respect to minimum capital requirements for banks. Researcher analyzed the trend in CAR values for top 10 scheduled commercial banks in India. The study found out that ICICI bank maintained the highest CAR while bank of India accounted the least position.

Objectives of the Study:-

- To analyze the trend in CAR (Capital Adequacy Ratio) values of the selected banks from public, old and private sector banks in India as per Basel norms II and III.

Hypothesis:-

On the basis of objectives of the study following hypothesis has been formulated.

- **Null Hypothesis:** There was no difference in CAR values among the selected banks of Indian banking sector,
- **Alternative Hypothesis:** There was a significant difference in CAR values among the selected banks of Indian banking sector.

Research Design & Period of the Study:-

The design of the present study was descriptive and analytical in nature and covers the period of 10 years, from 2005-06 to 2014-15.

Sample Selection:-

Sample size refers to the number of items to be selected from the universe to constitute a sample. 16 banks out of total 37 public and private sector banks in India were selected for research which are registered in Bombay stock exchange, Mumbai. These banks have been divided in three categories (I) 9 banks have been selected from Public Sector Banks (II) 4 banks have been selected from Old Public Sector Banks (III) 3 banks have been selected from New Private Sector Banks. On the basis of their deposit and advances selected banks arranged in sub category, large, medium, and small.

Data Collection Method:-

This study includes mainly secondary source of data which has been taken form published information and through internet. The data on banking companies is collected from, RBI

(Reserve Bank of India), moneycontrol.com website and individual websites of selected banking companies selected for study.

Data Analysis and Interpretation:

- With the help of the data ratio will be calculated and give weightage to all ratio of net worth of concern period to review capital adequacy of the selected banks from public, old and new private sector banks and banking groups.
- Statistical techniques mean, standard deviation, variance, and F test, weighted trend analysis for testing hypotheses will be use to support the findings and conclusions and interbank comparison.

Limitations of the Study:-

- This study will be based on secondary data which has been taken from published annual report and financial literature of the baking companies in India under study and from published journals and magazines and therefore its findings depend entirely on the accuracy of such data.

Table No:- 1

Composite Capital Adequacy Ratio { WiRi }

Composite Capital Adequacy Ratio based on Weighted Mean Where Weight (Wi) are Net Worth & (Ri) are Capital Adequacy Ratios

NO	Banks Name	\bar{R}	\bar{w}
PUBLIC SECTOR BANKS			(In Percent)
1	STATE BANK OF INDIA{L}	12.83	726414
2	BANK OF BARODA{L}	13.35	211835
3	PUNJAB NATIONAL BANK {L}	12.59	221482
4	SYNDICATE BANK {M}	11.93	72925
5	ALLAHABAD BANK {M}	11.84	80751
6	ORIENTAL BANK OF COMMERCE{M}	12.23	95214
7	VIJAYA BANK {S}	12.02	40325
8	BANK OF MAHARASHTRA {S}	12.03	40997
9	PUNJAB AND SIND BANK{S}	12.41	32741
	\bar{R}	12.68	
	\bar{w}		169187
OLD PRIVATE SECTOR BANKS			
10	JAMMU & KASHMIR BANK LTD{L}	13.34	35993
11	FEDERAL BANK{L}	16.79	47563
12	KARNATAKA BANK LTD{M}	12.73	21455
13	DHANLAXMI BANK{S}	10.62	5118
	\bar{R}	14.59	
	\bar{w}		27532
NEW PRIVATE SECTOR BANKS			
14	HDFC BANK {L}	16.23	256410
15	YES BANK LTD{M}	16.46	40473
16	DEVELOPMENT CREDIT BANK {S}	13.95	7564
	\bar{R}	16.20	
	\bar{w}		101482
ALL BANKING SECTOR			
	\bar{R}	13.34	
	\bar{w}		121079

Source:- <http://dbie.rbi.org.in/DBIE/dbie.rbi?site=publications#14> (accessed on 25/8/15)

(car based on Basel II till 2012-13)

<http://dbie.rbi.org.in/OpenDocument/opendoc/openDocument.jsp> (accessed on 22/07/15)

(car based on Basel III for 2013-14 to 2014-15)

Table has been shown following inferences:-

1. It was found that the composite CAR of the selected banks from public, old private and new private sector was 13.34 during the decade for banks wise comparison, which was higher than the ideal level 13.00 which was decided by RBI.
2. It was found that composite car is reported higher by Bank of Baroda (13.35) where as Allahabad bank (11.84) show lower ratio among the selected public sector banks during research period.
3. Only one bank Bank of Baroda got ideal car that is 13.00%, other banks near this position in public sector banks and this was not great worry because RBI gave timeline to 2017-18 for getting ideal position in car.
4. In old private sector banks Federal bank has (16.79%) which were the highest whereas Dhanlaxmi bank (10.62%) showed the lowest car among the all selected banks during research period.
5. In old private sector banks Federal and Jammu & Kashmir bank were got ideal car remaining banks near with this.
6. Yes bank (16.46) show higher where as Dhanlaxmi bank (13.95%) show lower car in new private sector banks during research period.
7. All the new private sector banks got ideal car that was 13.00%.
8. It was seen from the table that from 2007-08 to 2012-13 six years composite car was more than 13.00% and remaining years were near to ideal situation in research period.

Same way, now we only consider Public sector banks, old private sector banks and new private sector banks and compare Large, Medium and Small.

Tests of Normality: Shapiro Wilk Test

Ho: The Factors follows Normal distribution.

H1: The Factors does not follow Normal distribution.

Table No: - 2
Shapiro Wilk Test of Capital Adequacy Ratio

NO	Banking Sector	Size	Statistic	df	Sig.	Distribution
1	Public Sector Banks	Large	0.87	10	0.10	Normal
		Mid	0.98	10	0.97	
		Small	0.97	10	0.89	
2	Old Private Sector Banks	Large	0.87	10	0.11	Normal
		Mid	0.92	10	0.40	
		Small	0.87	10	0.11	
3	New Private Sector Banks	Large	0.85	10	0.06	Normal
		Mid	0.94	10	0.61	
		Small	0.88	10	0.16	

From the above table we can clearly say that CAR of all three sectors was normally distributed. The rest factors do not follows Normal distribution.

Now we like to compare the factors for three types of banks namely, public sector banks, old private sector banks, new private sector banks.

Ho: Average Ratios (or factor) are same for all 3 types of banks.

H1: Average Ratios (or factor) are not same for all 3 types of banks. (i.e. at-least one is different)

To check these hypotheses we can use ANOVA, when factors have Normal distribution. Or Kruskal Wallis Test, when factors do not follows Normal distribution.

Table No: - 3
ANOVAs test on Capital Adequacy Ratio

Source of Variation	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	37.08616929	2	18.54308	7.81459	0.0021**
Within Groups	64.06776191	27	2.37288		
Total	101.1539312	29			

From above two tables mentioned above, we can say that difference between composite capital adequacy ratio of all factors the difference is highly significant.

Conclusion:-

We see that the composite capital adequacy of selected banks have been between 10 to 20 percent most of the time. A capital adequacy in this range seems to be a safe and optimum bet, neither being so low there is a problem in case of a recession, nor not being so high as to hamper growth. We also see an increasing trend in the composite adequacy ratio moving forward most of the years. Federal bank was the best in research period in car compared to other selected banks.

Suggestions:-

- The maintained capital adequacy ratio should be above 13, but need not to above 20.
- Banks must be transparent while submitted data to the RBI.
- Capital adequacy is getting more weightage during BASEL norms and it is gain more popularity after subprime crises. It is also a compulsory requirement under BASEL norms implemented by RBI in India. CAR is decreasing trend in PSBs, so it will responsibility of central government that should inflow capital in PSBs. It is stable situation in OPSBs. OPSBs also will increasing capital to meet requirement of BASEL-III norms, whereas it is positive trend in NPSBs during research period. All three banking sector have good capital base but it should take necessary steps about BASEL-III norms, because it will new for all banks it is fully implemented by 2018.

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