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NEED/IMPORTANCE OF THE STUDY
STATEMENT OF THE PROBLEM
OBJECTIVES
HYPOTHESIS (ES)
RESEARCH METHODOLOGY
RESULTS & DISCUSSION
FINDINGS
RECOMMENDATIONS/SUGGESTIONS
CONCLUSIONS
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TREND ANALYSIS OF PROFITABILITY UNDER BASEL NORMS - WITH REFERENCE TO INDIAN COMMERCIAL BANKS

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ABSTRACT
Declining return on assets of SBI group and nationalized banks shows negative effect on profitability whereas private banks reports increasing trend of return on assets, which shows good profitability. Globally, adoption of Basel III successfully achieved its main objectives by strengthening the solvency of banks hence improving stability. But frequent revisions in its approach related to risk weighted capital framework has extended its scope. Looking at the rising non-performing assets, capital crunch, fragile global economy and country's economic scenario, complying with Basel III will be difficult for Indian banks. Thus, infusion of capital in nationalized banks by Indian government will be beneficial step.

KEYWORDS
Indian commercial banks, profitability analysis.

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G21.

INTRODUCTION
To assess the impact of Basel III framework on banks at international grounds, Basel Committee for Banking Supervision (BCBS) undertakes a monitoring exercise on a representative sample on institutions (divided in 2 groups: Group 1 includes 101 international active banks and Group 2 includes 129 other banks) in each country and summarize the aggregate results in its monitoring reports. As per monitoring report of 2016 (BCBS, 2016) all large internationally active banks meet Basel III minimum and CET1 target capital requirement. However, group 1 reports no shortfall of capital whereas group 2 reports capital shortfall of 7.2 billion due to additional tier-1 capital and leverage ratio requirements.

As per the Regulatory Consistency Assessment Program (RCAP) assessment, Indian banks are implementing Basel III with adequate success. Capital adequacy ratio is adequate; however, no Indian bank has received approval to use the advanced Basel approaches for reporting regulatory capital (RCAP, 2015). The Reserve Bank has already started phasing in implementation of the Liquidity Coverage Ratio (LCR) from January 2015 and is committed to the scheduled implementation of NSFR from January 1, 2018 for banks in India (RBI press release, 2015). The Reserve Bank proposes to issue draft guidelines on Net Stable Funding Ratio (NSFR) by May 15, 2015. Guidelines for countercyclical capital buffers are also issued by RBI on February 5, 2015. This buffer will help in contraction of credit and stabilizing GDP. For this, Credit to GDP gap is the main indicator. Also, final guidelines for Large Exposures Framework was issued on April, 2014 which is to be implemented by March 31, 2019. These standards propose to objectively define a group of connected counterparties on the basis of Control criteria and lower the exposure ceiling to such groups (RBI reports, 2016).

All the banks in India irrespective of their ownership have adequate capital adequacy ratio ranging from 9.63% to 16.50% as on March 31st, 2015. However, if we talk about the financial position of banks, then it is stable yet challenging. Stable, because of good capital position and challenging because of unstable domestic economic environment. Low investment growth, deteriorating asset quality, declining returns and elevated credit costs are posing challenges for the banks on the road of success. From year 2003 to 2015, banks have reported declining return on assets and increasing non-performing assets. Banks, particularly nationalized banks are facing significant shortfall of capital. To overcome the problems posed by challenging environment of India, banks need to infuse large capital over the next few years to be Basel III compliant. As per the announcements made by Indian government, the government has infused Rs 6990 crore in banks during FY 2015-16. Till last fiscal year, the Indian government has infused Rs 80,000 crore in nationalized banks. The government has aimed to capitalize nationalized banks with Rs 70, 000 crores for 4 years up to FY 2018-19 but as per the current scenario it may go up a little. Banks find difficulty in raising capital from market. Thus, this capital infusion is necessary and may beneficial for banks.

LITERATURE REVIEW
Barua et al. (2016) analyses the performance of scheduled commercial banks under Basel II. They also studied whether global financial crisis had any impact on the performance of scheduled commercial banks in India. Study found that the profitability of scheduled commercial banks, measured through return on assets, improved post crisis. Bank category wise, return on assets of private banks and foreign banks were significantly different in the two periods, while the difference was not that significant in case of public banks. Nieuwkerk, B. V. and Vries, B. D. (2015) discuss the possibilities for improving the combination of regulation, supervision and market discipline. The authors support the direction of higher buffers, which make banks more secure. The authors argue for an integrated approach, in which requirements are seen from a holistic point of view and regulation and supervision will be fine-tuned where necessary. They argue that the capital regulations have become extremely complex and therefore less transparent Dawood, U. (2014) evaluates the profitability of the 23 commercial banks operating in Pakistan for the period of 2009 to 2012. Study undertakes the only internal factors that impact on the profitability of the commercial banks in Pakistan. This study used the ordinary least square (OLS) method to look into the impact of cost efficiency, liquidity, capital adequacy, deposits and size of the bank on the profitability (return on assets) of the commercial banks. The results reflect that high cost efficiency leads lower profitability. Liquidity and profitability of the commercial banks develop the negative relationship. Capital adequacy and deposits both formulate the positive relationship with the profitability of commercial banks. Roy, S. (2013) discusses the impact of Basel III on banks. The author states that banks in India may able to comply with the higher capital requirements. But if the government holds the existing shareholding, this will widen the fiscal deficit, inflation, lower economic growth, credit offtake and thereby bank's profitability. Apart from government support banks have to raise capital from the market which will push the interest rate up and cost of capital will rise, while return on equity (ROE) will come down.

RESEARCH FRAMEWORK

Good decision making becomes the foundation of any successful industry whether it is banking or any other. Good decisions are the outcome of efficient planning process and forecasts are the inputs into the financial planning process. Forecasting is a process which revolves around future expectations. Based on previous time period's data, one can predict future which help banks to plan accordingly and to assess whether conditions are adverse or favorable. Thus, the objective of this paper is to analyze the trend of profitability of Indian commercial banks with reference to different Basel accord namely Basel I, Basel II and Basel III. In this paper, profitability is measured with the help of return on assets. It is calculated by dividing net income by average of total assets. It indicates how profitable one bank is as compare to its total assets. Also, an attempt is made to analyze the future impact by making forecast. Reviewing forecast will help banks to take necessary actions or plan their actions accordingly.

Future impact is analyzed with the help of forecasting techniques. Broadly, forecasting techniques can be classified as quantitatively and qualitatively. Qualitative techniques involve no statistical data but it is based on expert's opinion and experience. Whereas, quantitative techniques are based on historical data and is analyzed with the help of statistical techniques. In this study, both quantitative and qualitative methods have been used. Opinions of various experts on this subject are analyzed through published report. Annual data for the time of 13 years i.e. March 2003 to March 2015 is taken into consideration and forecasting is made for the year ending 2016. The data is secondary in nature and is retrieved from website of Reserve Bank of India.

ANALYSIS AND RESULTS

Under this section, trend analysis of return on assets is made separately for each type of ownership i.e. SBI (State Bank of India and its Associates), Nationalized Banks and Private Sector Banks.

RETURN ON ASSETS

Return on Assets (SBI)

FIGURE 1: TREND ANALYSIS OF RETURN ON ASSETS OF SBI AND ITS ASSOCIATES

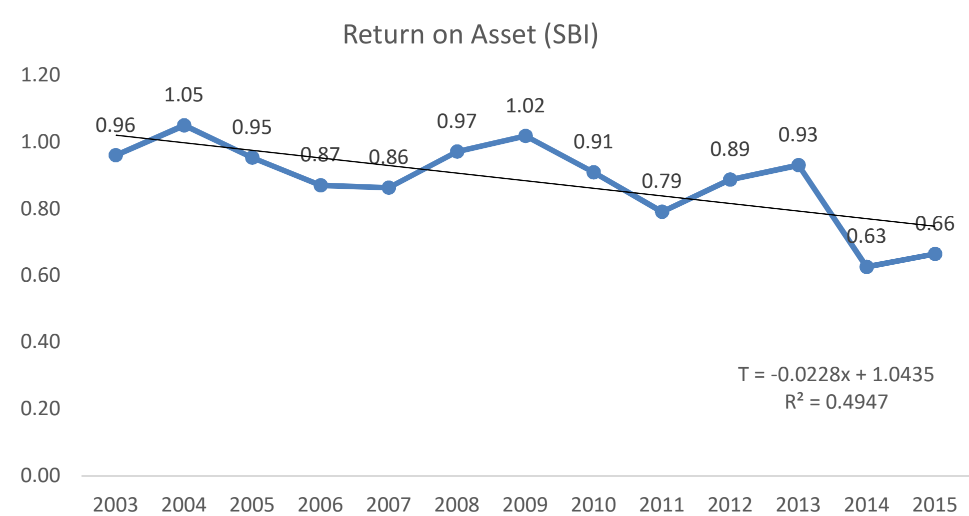

Figure 1, shows a decreasing trend when it comes to ratio for return on asset at SBI. During 2003 the return on asset was 0.96 and it ended at 0.66 in 2015. It represents that ROA is falling with the implementation of Basel accord. In 2003, with Basel I ROA is much higher as compare to ROA with Basel III in year 2015. Though the cyclic trend was there but overall decreasing trend is observed. Trend is contributing 49.47% towards the return on assets ratio as described byR^2.

Now, to forecast return on assets ratio we apply univariate multiplicative time series model. Following equation shows the trend;

$T = b_1 \times t + b_0 \ldots (1)$

Where, b_0 represents the intercept and $b_1$represents the slope of the trend line. After calculating values of b_0 and b_1, the classical trend equation modifies to;

$T = -0.0228 \times t + \ 1.0435 \ldots (2)$

Irregularities are ruled out by using multiplicative mode as;

$y = T \times C \times I \times S \ldots (3)$

Where, C represents cyclic component, T represents secular trend, I represent irregularity, and S represents seasonal trend.

Since there are no seasonal components included in the data hence the model reduces to

$y = T \times C \times I \ldots (4)$

And

$I = \frac{y}{TC} \ldots (5)$

Irregularities of the data are smoothened out as per equation (5)

TABLE 1: CALCULATIONS FOR FORECASTING OF RETURN ON ASSETS FOR SBI AND ITS ASSOCIATES

Year	T (Time)	Return on Asset (y)	T	I (Irregularity)
2003	1	0.96	1.02	0.94
2004	2	1.05	1.00	1.05
2005	3	0.95	0.98	0.98
2006	4	0.87	0.95	0.91
2007	5	0.86	0.93	0.93
2008	6	0.97	0.91	1.07
2009	7	1.02	0.88	1.15
2010	8	0.91	0.86	1.06
2011	9	0.79	0.84	0.94
2012	10	0.89	0.82	1.09
2013	11	0.93	0.79	1.17
2014	12	0.63	0.77	0.81
2015	13	0.66	0.75	0.89

Source: Self Calculations

The prediction equation for return on assets ratio by using time series is given by
$y_t = (-0.0228 \times t + 1.0435) \times \bar{I} \ldots (6)$
Therefore, the return on assets for 2016 is given by;
$\boldsymbol{y_{2016} = (-0.0228 \times 14 + 1.0435) \times 0.999 = 0.725 \ldots (7)}$
Similarly, the ratios can be calculated for subsequent years.
Return on Assets (Nationalized Banks)

FIGURE 2: TREND ANALYSIS OF RETURN ON ASSETS OF NATIONALIZED BANKS

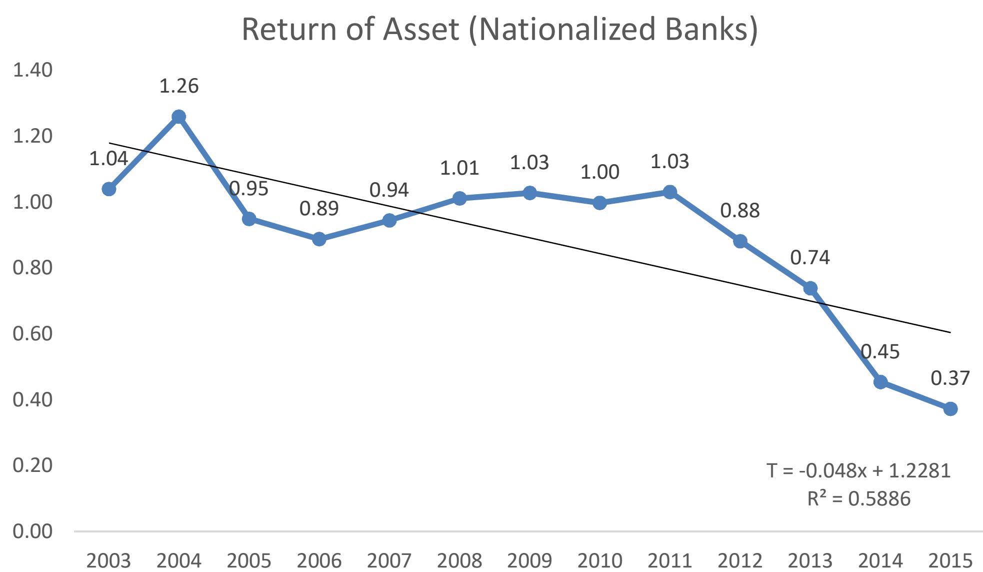

Figure 2, shows a highly decreasing trend when it comes to ratio for return on assets at nationalized banks. During year 2003 the return on asset was 1.04 and it tappers at 0.37 in 2015. Though the cyclic trend was there but overall decreasing trend is observed. Trend is contributing 58.86% towards the net interest margin rate ratio as described by R^2.

Now, to forecast return on assets ratio we apply univariate multiplicative time series model. After calculating values of b_0 and b_1. The classical trend equation modifies to;
$T = -0.048 \times t + 1.2281 \ldots (8)$
Irregularities of the data are smoothened out as per equation (5)

TABLE 2: CALCULATIONS FOR FORECASTING OF RETURN ON ASSETS FOR NATIONALIZED BANKS

Year	t (Time)	Return on Asset (y)	T	I (Irregularity)
2003	1	1.04	1.18	0.88
2004	2	1.26	1.13	1.11
2005	3	0.95	1.08	0.88
2006	4	0.89	1.04	0.86
2007	5	0.94	0.99	0.96
2008	6	1.01	0.94	1.08
2009	7	1.03	0.89	1.15
2010	8	1.00	0.84	1.18
2011	9	1.03	0.80	1.29
2012	10	0.88	0.75	1.18
2013	11	0.74	0.70	1.05
2014	12	0.45	0.65	0.70
2015	13	0.37	0.60	0.62

Source: Self calculations

The prediction equation for return on assets ratio by using time series is given by
$y_t = (-0.048 \times t + 1.2281) \times \bar{I} \ldots (9)$
Therefore, the Return on assets for 2016 is given by;
$\boldsymbol{y_{2016} = (-0.048 \times 14 + 1.2281) \times 0.995 = 0.554 \ldots (10)}$
Similarly, the ratios can be calculated for subsequent years.

RETURN ON ASSETS (PRIVATE SECTOR BANKS)

FIGURE 3: TREND ANALYSIS OF RETURN ON ASSETS OF PRIVATE SECTOR BANKS

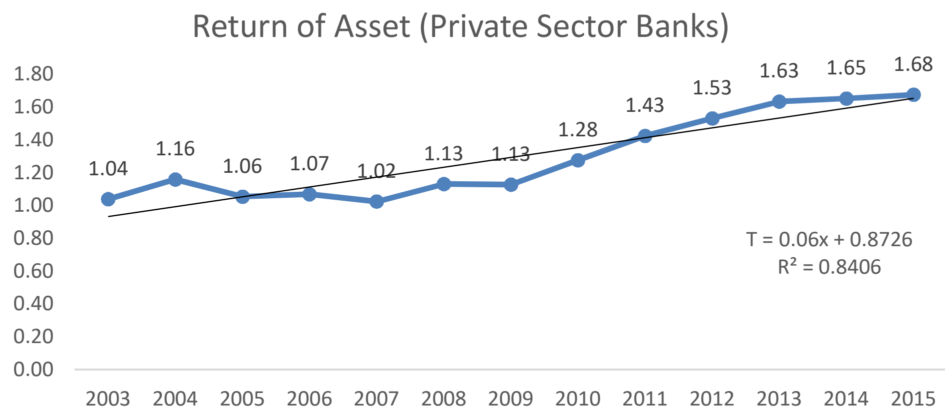

Figure 3, shows an increasing trend against SBI and Nationalized banks, when it comes to ratio for return on assets at private banks. During 2003 with Basel I, the return on asset was 1.04 and it grows to 1.68 in 2015 when banks are implementing Basel III. Though the long cyclic trend was there but overall increasing trend is observed. Trend is contributing 84.06% towards the return on asset ratio as described by R^2.

Now, to forecast return on assets ratio we apply univariate multiplicative time series model. After calculating values of b_0 and b_1. The classical trend equation modifies to;

$T = 0.06 \times t + 0.8726 \ldots (11)$

Irregularities of the data are smoothened out as per equation (5)

TABLE 3: CALCULATIONS FOR FORECASTING OF RETURN ON ASSETS FOR PRIVATE SECTOR BANKS

Year	t (Time)	Return on Asset (y)	T	I (Irregularity)
2003	1	1.04	0.93	1.12
2004	2	1.16	0.99	1.17
2005	3	1.06	1.05	1.00
2006	4	1.07	1.11	0.96
2007	5	1.02	1.17	0.87
2008	6	1.13	1.23	0.92
2009	7	1.13	1.29	0.87
2010	8	1.28	1.35	0.94
2011	9	1.43	1.41	1.01
2012	10	1.53	1.47	1.04
2013	11	1.63	1.53	1.07
2014	12	1.65	1.59	1.04
2015	13	1.68	1.65	1.01

Source: Self calculations

The prediction equation for Return on Assets deposit ratio by using time series is given by

$y_t = (0.06 \times t + 0.8726) \times \bar{I} \ldots (12)$

Therefore, the Return on assets for 2016 is given by;

$\boldsymbol{y_{2016} = (0.06 \times 14 + 0.8726) \times 1.001 = 1.716 \ldots (13)}$

Similarly, the ratios can be calculated for subsequent years.

The above analysis shows that return on asset is highest in case of private banks and lowest in case of nationalized banks which shows more profitability in case of private banks. Nationalized banks are at third position in case of other ratios as well which depicts poor financial condition and opens scope for improvement as compare to other banks.

CONCLUSION

Declining return on assets of SBI group and nationalized banks shows negative effect on profitability whereas private banks reports increasing trend of return on assets which shows good profitability. Globally, adoption of Basel III successfully achieved its main objectives by strengthening the solvency of banks hence improving stability. But frequent revisions in its approach related to risk weighted capital framework has extended its scope. Looking at the rising non-performing assets, capital crunch, fragile global economy and country's economic scenario, complying with Basel III will be difficult for Indian banks. Thus, infusion of capital in nationalized banks by Indian government will be beneficial step.

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I am sure that your feedback and deliberations would make future issues better – a result of our joint effort.

Looking forward to an appropriate consideration.

With sincere regards

Thanking you profoundly

Academically yours

Sd/-
Co-ordinator

DISCLAIMER

ABOUT THE JOURNAL

In this age of Commerce, Economics, Computer, I.T. & Management and cut throat competition, a group of intellectuals felt the need to have some platform, where young and budding managers and academicians could express their views and discuss the problems among their peers. This journal was conceived with this noble intention in view. This journal has been introduced to give an opportunity for expressing refined and innovative ideas in this field. It is our humble endeavour to provide a springboard to the upcoming specialists and give a chance to know about the latest in the sphere of research and knowledge. We have taken a small step and we hope that with the active co-operation of like-minded scholars, we shall be able to serve the society with our humble efforts.

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