

A Study On P/E Performance And Npa In The Indian Banking Sector

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ABSTRACT: The paper is related to the factors like P/E ration and Net NPAs of the all private and public sector bank banks listed on BSE index. It also used Internet based secondary data were used to do exploratory studies. Findings were analysed by framing various hypotheses like Single factor ANOVA test and t-test to find the conclusion related to the P/E ration and Net NPA of all banks (23 public banks and 26 private banks). These hypotheses helped us to come to the conclusion that factors like Net NPAs and P/E ratio of both Private and Public sector is same or different.

INTRODUCTION

The growth story of banking during the last decade has been spectacular and beyond the double digit growth. The key trends were strong regulatory framework, use of multiple channels and technology; strong customer oriented banking services and a growing economy. Although the past couple of years have witnessed a slowdown in the face of high domestic inflation, depreciation of the rupee and the after-math of the crisis in US and Europe, the sector still perform better in India vs. in many other developing countries in terms of growth, profitability, capital adequacy and asset quality etc. Though Indian banks remained well-capitalised, concerns about the growing non-performing assets (NPAs) loomed large. Banks' exposure to the stressed power and airline sectors particularly added to deterioration in their asset quality.

All those assets which do not generate periodical income are known as Non-Performing Loans (NPL) or Non-Performing Assets (NPAs). In India the time frame given for classifying the assets as NPL is 180 days as compared to 45 days to 90 days as per international norms.

Net non performing assets (NPAs) in the system increased from 0.9% in FY11 to 1.2% in FY12. However for PSU banks this ratio increased from 1% in FY11 to 1.5% in FY12. During the year 2011-12, the NPA stock has risen. The slippage ratio of the banking system, which showed a declining trend during 2005-08, increased during 2008-12. Government of India for the resolution and recovery of bad loans, but also have to strengthen their due diligence, credit appraisal and post sanction loan monitoring systems to minimise NPAs. In sync with the acceleration in growth of gross NPAs as well as a lower provisioning coverage, net NPAs registered higher growth. Net NPA ratio was on a higher side for public sector banks, as compared with private sector and foreign banks The State Bank of India (SBI), Punjab National Bank (PNB) and Bank of Baroda (BOB) had the first, second and third largest credit portfolios, respectively. HDFC emerged as among the best performers with a strong Net Interest Margin ratio and the lowest NPA ratio, whereas, ICICI (with the fourth largest credit portfolio) reported a high NPA ratio in 2011.

The Price per Earnings ratio (PE ratio) has two very sensitive components. The numerator depends on the market expectations and perceptions about the firm's performance. The denominator represents the earnings left for distribution to the firm's shareholder after meeting the claims of the debtors. Both components are subject to wide fluctuations from time to time. In finance the PE ratio of stock is used to determine how cheap or expensive the share is priced. The PE of a stock describes the price of a share relative to the earnings of the underlying asset. The lower the PE; the less you have to pay for the stock, relative to what you can expect to earn from it. The higher the PE ratio the more over-valued the stock is.

OBJECTIVES

- To understand Price to Earnings ratio and Non Performing Assets (NPAs) of all private sector and public sector bank
- To study whether Price to Earnings ratio is same for all private sector and public sector banks over 5 years
- To study whether Non Performing Assets (NPAs) is same for private sector and public sector banks over 3 years
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RESEARCH METHODOLOGY

- **Data Sources:** The report used Secondary source of data like websites, stock market sites like BSE and NSE, online articles and journals, RBI site, annual report of banks etc. used for the data collection. No primary source of data collection is used.
- **Sample Size:** 23 public sector banks and 16 private sector banks
- **Tools of Data Collection:** Microsoft Excel, Single factor Anova Test to check whether all the banks have similar P/E and Net NPAs and T-TEST to determine whether there is a statistically significant difference between the P/E and Net NPAs of all banks.

MAJOR FINDINGS**HYPOTHESIS 1-Single Factor Anova Test (P/E ratio)**

Null Hypothesis	H_0 : P/E ratio across all banks is the same for 5 years
Alternate Hypothesis	H_a : P/E ratio across all banks is not same for 5 years
Test	Single Factor Anova Test
Tail	Right Tail Test
Critical	1.48
Observed	4.74
P-Value	0
Alpha	0.05
Accept/Reject	Reject the Null Hypothesis as F observed > F critical

Anova: Single Factor**SUMMARY**

Groups	Count	Sum	Average	Variance
Tranvancore	5.00	21.36	4.27	0.79
Punjab national bank	5.00	210.70	42.14	234.31
State Bank Of Bikaner and Jaipur	5.00	27.87	5.57	1.09
State Bank of India	5.00	17.37	3.47	1.39
State Bank Of Mysore	5.00	27.47	5.49	1.45
IDBI	5.00	32.70	6.54	3.51
Maharashtra Bank	5.00	27.01	5.40	5.66
Canara Bank	5.00	26.98	5.40	2.14
Central Bank of India	5.00	32.49	6.50	18.42
Corporation Bank	5.00	23.10	4.62	1.98
Dena Bank	5.00	19.18	3.84	1.07
Bank of Baroda	5.00	32.29	6.46	3.91
Bank of India	5.00	38.41	7.68	7.03
Syndicate bank	5.00	22.94	4.59	2.93
Vijaya Bank	5.00	23.40	4.68	1.72
United Bank of India	5.00	23.75	4.75	8.93
Indian Bank	5.00	23.23	4.65	1.43
Indian Overseas Bank	5.00	35.05	7.01	10.63
Punjab & Sind	5.00	12.99	2.60	5.74
Oriental	5.00	29.19	5.84	3.39
Allahabad Bank	5.00	24.05	4.81	3.46
Union bank of India	5.00	32.22	6.44	2.92
Andhra bank	5.00	23.35	4.67	1.44
HDFC	5.00	123.00	24.60	19.80
Axis	5.00	66.00	13.20	21.20
Federal	5.00	46.00	9.20	5.70

ING	5.00	58.00	11.60	7.30
Kotak	5.00	197.00	39.40	30.30
Yes Bank	5.00	0.41	0.08	0.00
Indusind	5.00	0.26	0.05	0.00
ICICI	5.00	91.44	18.29	47.92
Jammu & Kashmir	5.00	27.88	5.58	1.64
Karnataka	5.00	0.34	0.07	0.00
Dhanlaxmi	5.00	214.95	42.99	3,555.33
Laxmi Vilas Bank	5.00	57.29	11.46	57.13
South Indian Bank	5.00	37.70	7.54	15.40
Karur Vysya Bank	5.00	39.32	7.86	5.18
City Union Bank	5.00	32.74	6.55	4.18
Development credit bank	5.00	59.02	11.80	388.49

ANOVA

Source of Variation	SS	df	MS	F	P-value	F crit
Between Groups	20,706.26	38	544.9	4.74	0	1.48
Within Groups	17,939.54	156	115			
Total	38,645.80	194				

Since, F observed > F critical i.e. (4.74 > 1.48) that means REJECT the NULL which means that we accept the alternate hypotheses which says that P/E ratio across all banks is not same for 5 years. Now to find which banks have same and which banks have different P/E ratio, we will conduct a t-test.

T-test for checking the average mean for P/E ratio is same or not for Jammu & Kashmir bank and Central bank.

t-Test: Paired Two Sample for Means (having same mean)

	Jammu & Kashmir	Central Bank of India
Mean	5.58	6.5
Variance	1.64	18.42
Observations	5	5
Pearson Correlation	0.21	
Hypothesized Mean Difference	-	
df	4	
t Stat	-0.49	
P(T<=t) one-tail	0.32	
t Critical one-tail	2.13	
P(T<=t) two-tail	0.65	
t Critical two-tail	2.78	

Randomly, 1bank from each sector i.e. Jammu& Kashmir and Central Bank of India was selected to check whether the P/E ratio of both the banks is same or not. But in this case P-value > alpha(0.65>0.05), it means that the P/E ratio are same for Jammu& Kashmir and Central Bank of India.

T-test for checking the average mean for P/E ratio is same or not for HDFC and Bank of India

t-Test: Paired Two Sample for Means (having different mean)

	<i>HDFC</i>	<i>Bank of India</i>
Mean	24.6	7.68
Variance	19.8	7.03
Observations	5	5
Pearson Correlation	0.99	
Hypothesized Mean Difference		-
df	4	
t Stat	20.09	
P(T<=t) one-tail	0	
t Critical one-tail	2.13	
P(T<=t) two-tail	0	
t Critical two-tail	2.78	

Randomly, 1bank from each sector i.e. HDFC and Central Bank of India was selected to check whether the P/E ratio of both the banks is same or not. But in this case P-value < alpha (0.00<0.05), it means that the P/E ratio are not same for HDFC and Central Bank of India.

HYPOTHESIS 2-Single Factor Annova Test (Net NPA %)

Null Hypothesis	H_0 : Net NPA % across all banks is the same for 3 years
Alternate Hypothesis	H_a : Net NPA % across all banks is not same for 3 years
Test	Single Factor Annova Test
Tail	Right Tail Test
Critical	1.56
Observed	3.35
P-Value	0
Alpha	0.05
Accept/Reject	Reject the Null Hypothesis as F observed >F critical

Anova: Single Factor

SUMMARY

<i>Groups</i>	<i>Count</i>	<i>Sum</i>	<i>Average</i>	<i>Variance</i>
Tranvancore	3.00	3.98	1.33	0.09
Punjab national bank	3.00	4.52	1.51	0.72
State Bank Of Bikaner and Jaipur	3.00	5.02	1.67	0.56
State Bank of India	3.00	5.55	1.85	0.06
State Bank of India	3.00	5.55	1.85	0.06
State Bank Of Mysore	3.00	6.00	2.00	0.43
IDBI	3.00	4.25	1.42	0.10
Maharashtra Bank	3.00	2.68	0.89	0.16
Canara Bank	3.00	4.75	1.58	0.30
Central Bank of India	3.00	6.54	2.18	2.00
Corporation Bank	3.00	2.52	0.84	0.13

Dena Bank	3.00	3.62	1.21	0.04
Bank of baroda	3.00	2.17	0.72	0.24
Bank of india	3.00	4.44	1.48	0.33
Syndicate bank	3.00	2.69	0.90	0.01
United Bank of India	3.00	6.01	2.00	0.59
Indian Bank	3.00	4.12	1.37	0.75
Indian Overseas Bank	3.00	5.04	1.68	0.51
Punjab & Sind	3.00	3.91	1.30	0.65
Oriental	3.00	5.46	1.82	0.53
Allahabad Bank	3.00	4.96	1.65	1.78
Union bank of india	3.00	4.50	1.50	0.07
Andhra bank	3.00	3.00	1.00	1.00
HDFC	3.00	0.40	0.13	0.01
Axis	3.00	0.83	0.28	0.00
Federal	3.00	2.11	0.70	0.06
ING	3.00	0.60	0.20	0.03
Kotak	3.00	1.97	0.66	0.00
Yes Bank	3.00	0.09	0.03	0.00
Indusind	3.00	0.86	0.29	0.00
ICICI	3.00	2.61	0.87	0.04
Jammu & Kashmir	3.00	0.49	0.16	0.00
Karnataka	3.00	5.24	1.75	0.10
Dhanlaxmi	3.00	4.32	1.44	2.80
Laxmi Vilas Bank	3.00	2.03	0.68	0.07
South Indian Bank	3.00	0.29	0.10	0.03
Karur Vysya Bank	3.00	-	-	-
City Union Bank	3.00	1.59	0.53	0.01
Development credit bank	3.00	2.28	0.76	0.04

ANOVA

Source of Variation	SS	df	MS	F	P-value	F crit
Between Groups	46.70	38.00	1.23	3.35	0.00	1.56
Within Groups	28.63	78.00	0.37			
Total	75.33	116.00				

Since, $F_{\text{observed}} > F_{\text{critical}}$ i.e. ($3.35 > 1.56$) that means REJECT the NULL which means that we accept the alternate hypotheses which says that Net NPA % across all banks is not same for 3 years. Now to find which banks have same and which banks have different Net NPAs different NPA, we will conduct a t-test.

T-test for checking the average mean for Net NPAs is same or not for Corporation Bank and ICICI bank

t-Test: Paired Two Sample for Means (having same mean)

	Corporation Bank	ICICI
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Mean	0.84	0.87
Variance	0.13	0.04
Observations	3.00	3.00
Pearson Correlation	(0.85)	
Hypothesized Mean Difference	-	
df	2.00	
t Stat	(0.09)	
P(T<=t) one-tail	0.47	
t Critical one-tail	2.92	
P(T<=t) two-tail	0.93	
t Critical two-tail	4.30	

Randomly, 1bank from each sector i.e. Corporation Bank and ICICI bank was selected to check whether the Net NPAs % of both the banks is same or not. But in this case P-value >alpha (0.93>0.05), it means that the Net NPA are same for Corporation Bank and ICICI bank.

T-test for checking the average mean for Net NPAs is same or not for Union Bank of India and Axis

t-Test: Paired Two Sample for Means (having different means)

	<i>Union bank of india</i>	<i>Axis Bank</i>
Mean	1.50	0.28
Variance	0.07	0.00
Observations	3.00	3.00
Pearson Correlation	0.22	
Hypothesized Mean Difference	-	
df	2.00	
t Stat	7.96	
P(T<=t) one-tail	0.01	
t Critical one-tail	2.92	
P(T<=t) two-tail	0.02	
t Critical two-tail	4.30	

Randomly, 1bank from each sector i.e. Union Bank of India and Axis Bank was selected to check whether the Net NPAs of both the banks is same or not. But in this case P-value < alpha (0.01<0.05), it means that the Net NPAs are not same for Union Bank of India and Axis Banks.

CONCLUSION

The result of the Anova test and T-test has proved that Price to Earnings ratio are not same for all banks (private and public) over 5 years In 2013,many banks Net NPA has reduced compared to previous year 2012 like Punjab National bank ,State bank of India, Union bank of India, ING ,Yes bank, etc. In 2013, as compared to public sector private banks have managed well to reduce their Net NPAs as compared to public sector banks due to which government asked state-runs banks to reduce lending rates and clear stalled project but it might further add the rising NPA. The result of the ANOVA test and T-test has proved that Price to Earnings ratio are not same for all banks (private and public) over 3 years and fluctuation in P/E ratio has been more in public sector banks than in private sector banks over 5years

LIMITATION

The study was limited only to banks listed on stock exchange (26 public banks and 16 private banks). Secondary source of data is used for analysis which might be manipulated for some studies which adds to the limitation of the study.

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