

COMPARISON OF TOP 10 BANKS OF INDIA

Year of comparison: 2023

Analytical tools used: MYSQL & EXCEL

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Course: MA Economics

Formation of Tables:

1.

```
mysql> create database start;
Query OK, 1 row affected (0.01 sec)

mysql> use start;
Database changed
```

2.

```
mysql> create table info(bank_id int primary key, bank_name char(50), casa float, roe float, roa float, nim float, roce float);
Query OK, 0 rows affected (0.03 sec)

mysql> insert into info values(1, 'HDFC BANK', 44.37, 15.89, 1.81, 3.67, 3.1),
-> (2, 'BANK OF BARODA', 39.47, 14.36, 0.96, 2.83, 1.91),
-> (3, 'SBI', 42.66, 16.8, 0.93, 2.7, 1.74),
-> (4, 'ICICI BANK LTD', 45.83, 16.13, 2.01, 3.92, 3.27),
-> (5, 'KOTAK MAHINDRA', 52.82, 13.17, 2.23, 4.39, 3.15),
-> (6, 'AXIS ', 47.15, 7.63, 0.72, 3.26, 1.57),
-> (7, 'PUNJAB NATIONAL BANK', 41.99, 2.74, 0.17, 2.74, 1.57),
-> (8, 'CANARA', 31.08, 16.03, 0.78, 2.33, 2.11),
-> (9, 'IDBI BANK LTD', 53.01, 9.82, 1.1, 3.45, 2.78),
-> (10, 'INDUSIND BANK LTD', 40.14, 13.6, 1.61, 3.84, 3.26);
Query OK, 10 rows affected (0.01 sec)
Records: 10 Duplicates: 0 Warnings: 0
```

```
mysql> rename table info to performance_ratios;
Query OK, 0 rows affected (0.03 sec)

mysql> select * from performance_ratios;
```

bank_id	bank_name	casa	roe	roa	nim	roce
1	HDFC BANK	44.37	15.89	1.81	3.67	3.1
2	BANK OF BARODA	39.47	14.36	0.96	2.83	1.91
3	SBI	42.66	16.8	0.93	2.7	1.74
4	ICICI BANK LTD	45.83	16.13	2.01	3.92	3.27
5	KOTAK MAHINDRA	52.82	13.17	2.23	4.39	3.15
6	AXIS	47.15	7.63	0.72	3.26	1.57
7	PUNJAB NATIONAL BANK	41.99	2.74	0.17	2.74	1.57
8	CANARA	31.08	16.03	0.78	2.33	2.11
9	IDBI BANK LTD	53.01	9.82	1.1	3.45	2.78
10	INDUSIND BANK LTD	40.14	13.6	1.61	3.84	3.26

```
10 rows in set (0.01 sec)
```

3.

```
mysql> create table valuation_ratios(bank_id int, price_to_earnings float, price_to_book float);
Query OK, 0 rows affected (0.02 sec)
```

```
mysql> insert into valuation_ratios(1,19.48,3.1),
-> (2,5.86,0.83),
-> (3,8.4,1.41),
-> (4,17.95,2.9),
-> (5,23.12,3.08),
-> (6,24.39,2.04),
-> (7,13.22,1.15),
-> (8,4.58,6.5),
-> (9,13.04,1.27),
-> (10,11.12,1.52);
```

```
mysql> alter table valuation_ratios
-> add column eps float;
Query OK, 0 rows affected (0.12 sec)
Records: 0 Duplicates: 0 Warnings: 0
```

```
mysql> update valuation_ratios set eps = 82.64 where bank_id = 1;
Query OK, 1 row affected (0.03 sec)
Rows matched: 1 Changed: 1 Warnings: 0
```

```
mysql> update valuation_ratios set eps = 28.82 where bank_id = 2;
Query OK, 1 row affected (0.01 sec)
Rows matched: 1 Changed: 1 Warnings: 0
```

```
mysql> update valuation_ratios set eps = 62.35 where bank_id = 2;
Query OK, 1 row affected (0.01 sec)
Rows matched: 1 Changed: 1 Warnings: 0
```

```
mysql> update valuation_ratios set eps = 28.82 where bank_id = 2;
Query OK, 1 row affected (0.00 sec)
Rows matched: 1 Changed: 1 Warnings: 0
```

```
mysql> update valuation_ratios set eps = 62.35 where bank_id = 3;
Query OK, 1 row affected (0.01 sec)
Rows matched: 1 Changed: 1 Warnings: 0
```

```
mysql> update valuation_ratios set eps = 48.86 where bank_id = 4;
Query OK, 1 row affected (0.01 sec)
Rows matched: 1 Changed: 1 Warnings: 0
```

```
mysql> update valuation_ratios set eps = 74.96 where bank_id = 5;
Query OK, 1 row affected (0.00 sec)
Rows matched: 1 Changed: 1 Warnings: 0
```

```
mysql> update valuation_ratios set eps = 35.2 where bank_id = 6;
Query OK, 1 row affected (0.01 sec)
Rows matched: 1 Changed: 1 Warnings: 0
```

```
mysql> update valuation_ratios set eps = 1.94 where bank_id = 7;
```

```

Query OK, 1 row affected (0.01 sec)
Rows matched: 1  Changed: 1  Warnings: 0

mysql> update valuation_ratios set eps = 62.04 where bank_id = 8;
Query OK, 1 row affected (0.01 sec)
Rows matched: 1  Changed: 1  Warnings: 0

mysql> update valuation_ratios set eps = 3.45 where bank_id = 9;
Query OK, 1 row affected (0.01 sec)
Rows matched: 1  Changed: 1  Warnings: 0

mysql> update valuation_ratios set eps = 96.01 where bank_id = 10;
Query OK, 1 row affected (0.01 sec)
Rows matched: 1  Changed: 1  Warnings: 0

```

```

mysql> alter table valuation_ratios
    -> add foreign key (bank_id)
    -> references performance_ratios(bank_id);
Query OK, 10 rows affected (0.07 sec)
Records: 10  Duplicates: 0  Warnings: 0

```

```

mysql> select * from valuation_ratios;
+-----+-----+-----+-----+
| bank_id | price_to_earnings | price_to_book | eps |
+-----+-----+-----+-----+
| 1 | 19.48 | 3.1 | 82.64 |
| 2 | 5.86 | 0.83 | 28.82 |
| 3 | 8.4 | 1.41 | 62.35 |
| 4 | 17.95 | 2.9 | 48.86 |
| 5 | 23.12 | 3.08 | 74.96 |
| 6 | 24.39 | 2.04 | 35.2 |
| 7 | 13.22 | 1.15 | 1.94 |
| 8 | 4.58 | 6.5 | 62.04 |
| 9 | 13.04 | 1.27 | 3.45 |
| 10 | 11.12 | 1.52 | 96.01 |
+-----+-----+-----+-----+
10 rows in set (0.00 sec)

```

4.

```

mysql> create table npa(bank_id int, gross float, net float);
Query OK, 0 rows affected (0.02 sec)

mysql> insert into npa values(1,1.17,0.3),

```

```
-> (2,3.51,0.78),  
-> (3,2.76,0.71),  
-> (4,2.76,0.48),  
-> (5,1.75,0.43),  
-> (6,1.96,0.41),  
-> (7,6.8,1.95),  
-> (8,5.15,1.57),  
-> (9,5.05,0.44),  
-> (10,1.94,0.58);
```

Query OK, 10 rows affected (0.01 sec)

Records: 10 Duplicates: 0 Warnings: 0

```
mysql> rename table npa to npa_in_percentage;  
Query OK, 0 rows affected (0.02 sec)
```

```
mysql> alter table npa_in_percentage  
-> add foreign key (bank_id)  
-> references performance_ratios(bank_id);  
Query OK, 10 rows affected (0.06 sec)  
Records: 10 Duplicates: 0 Warnings: 0
```

```
mysql> select * from npa_in_percentage;
```

bank_id	gross	net
1	1.17	0.3
2	3.51	0.78
3	2.76	0.71
4	2.76	0.48
5	1.75	0.43
6	1.96	0.41
7	6.8	1.95
8	5.15	1.57
9	5.05	0.44
10	1.94	0.58

10 rows in set (0.01 sec)

5.

```
mysql> show tables;
+-----+
| Tables_in_start |
+-----+
| npa_in_percentage |
| performance_ratios |
| valuation_ratios |
+-----+
3 rows in set (0.10 sec)
```

6. **BANKS CONSIDERED:**

```
mysql> select bank_name from performance_ratios;
+-----+
| bank_name |
+-----+
| HDFC BANK |
| BANK OF BARODA |
| SBI |
| ICICI BANK LTD |
| KOTAK MAHINDRA |
| AXIS |
| PUNJAB NATIONAL BANK |
| CANARA |
| IDBI BANK LTD |
| INDUSIND BANK LTD |
+-----+
10 rows in set (0.01 sec)
```

7.GENERAL OVERVIEW:

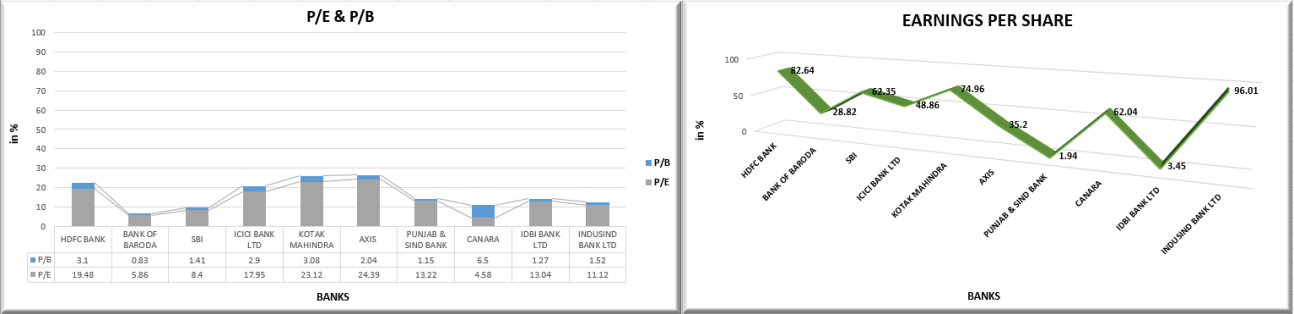
BANK NAME	CASA % (Current)	ROE % (return on equity)	ROA % (return on assets)	NIM % (Net interest margin)	ROCE % (Return on Capital Employed)	P/E	P/B	gross npa	net npa	EPS
HDFC BANK	44.37	15.89	1.81	3.67	3.1	19.48	3.1	1.17	0.3	82.64
BANK OF BARODA	39.47	14.36	0.96	2.83	1.91	5.86	0.83	3.51	0.78	28.82
SBI	42.66	16.8	0.93	2.7	1.74	8.4	1.41	2.76	0.71	62.35
ICICI BANK LTD	45.83	16.13	2.01	3.92	3.27	17.95	2.9	2.76	0.48	48.86
KOTAK MAHINDRA	52.82	13.17	2.23	4.39	3.15	23.12	3.08	1.75	0.43	74.96
AXIS	47.15	7.63	0.72	3.26	1.57	24.39	2.04	1.96	0.41	35.2
PUNJAB & SIND BANK	41.99	2.74	0.17	2.74	1.57	13.22	1.15	6.8	1.95	1.94
CANARA	31.08	16.03	0.78	2.33	2.11	4.58	6.5	5.15	1.57	62.04
IDBI BANK LTD	53.01	9.82	1.1	3.45	2.78	13.04	1.27	5.05	0.44	3.45
INDUSIND BANK LTD	40.14	13.6	1.61	3.84	3.26	11.12	1.52	1.94	0.58	96.01

DASHBOARD

PERFORMANCE RATIOS OF BANKS

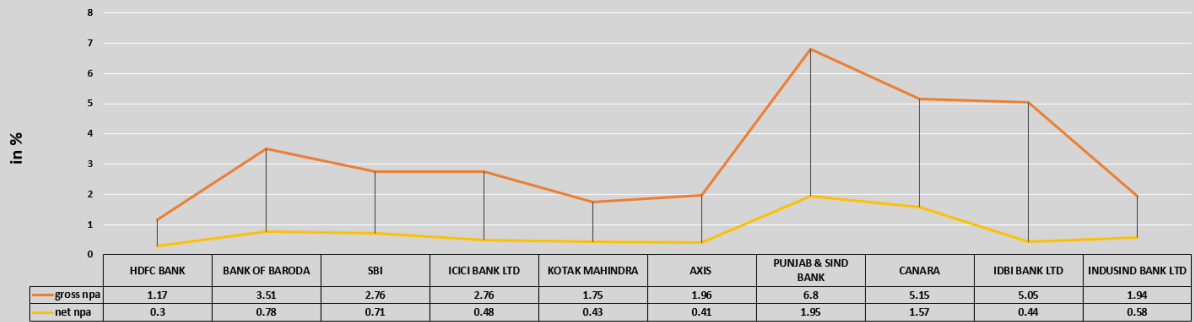


VALUATION RATIOS OF BANK



NON PERFORMING ASSET

NPA



BANKS

ANALYSIS

```
mysql> select bank_name, casa from performance_ratios
-> where casa in (select max(casa) from performance_ratios);
+-----+-----+
| bank_name | casa |
+-----+-----+
| IDBI BANK LTD | 53.01 |
+-----+-----+
1 row in set (0.01 sec)
```

```
mysql> select bank_name, casa from performance_ratios
-> where casa in (select min(casa) from performance_ratios);
+-----+-----+
| bank_name | casa |
+-----+-----+
| CANARA | 31.08 |
+-----+-----+
1 row in set (0.00 sec)
```

The **CASA** ratio indicates how much of a bank's total deposits are in both current and savings accounts.

IDBI bank has Higher CASA means that the bank has a larger pool of stable funding to lend out and generate revenue.

CANARA bank has A low CASA ratio means the bank relies heavily on

```
mysql> select bank_name, roe from performance_ratios
-> where roe in (select max(roe) from performance_ratios);
+-----+-----+
| bank_name | roe |
+-----+-----+
| SBI | 16.8 |
+-----+-----+
1 row in set (0.00 sec)
```

```
mysql> select bank_name, roe from performance_ratios
-> where roe in (select min(roe) from performance_ratios);
+-----+-----+
| bank_name | roe |
+-----+-----+
| PUNJAB NATIONAL BANK | 2.74 |
+-----+-----+
1 row in set (0.00 sec)
```

Return on equity (ROE) is the measure of a company's net income divided by its shareholders' equity. ROE is a gauge of a corporation's profitability and how efficiently it generates those profits.

SBI have higher ROE, means it is the better at converting its equity financing into profits.

PUNJAB NATIONAL BANK (OR PUNJAB & SIND BANK) have lowest roi among the top 10 banks of India it means that the bank has not used the capital invested by shareholders efficiently. It reflects that the bank is not in a position to provide investors with substantial

```
mysql> select bank_name, roa from performance_ratios
-> where roa in (select max(roa) from performance_ratios);
+-----+-----+
| bank_name | roa |
+-----+-----+
| KOTAK MAHINDRA | 2.23 |
+-----+-----+
1 row in set (0.00 sec)
```

```
mysql> select bank_name, roa from performance_ratios
-> where roa in (select min(roa) from performance_ratios);
+-----+-----+
| bank_name | roa |
+-----+-----+
| PUNJAB NATIONAL BANK | 0.17 |
+-----+-----+
1 row in set (0.00 sec)
```

Return on assets

it shows how profitable a bank's assets are in generating revenue. ROA is indicative of how efficient the bank is in deploying its assets to generate income.

KOTAK MAHINDRA bank has higher ROA, it suggests that the bank is generating more income from its assets and might be more profitable.

PUNJAB NATIONAL BANK(OR PUNJAB & SIND BANK) has lower RoA means that bank is not able to utilise assets efficiently.

```
mysql> select bank_name, nim from performance_ratios
-> where nim in (select max(nim) from performance_ratios);
+-----+-----+
| bank_name | nim |
+-----+-----+
| KOTAK MAHINDRA | 4.39 |
+-----+-----+
1 row in set (0.00 sec)
```

```
mysql> select bank_name, nim from performance_ratios
-> where nim in (select min(nim) from performance_ratios);
+-----+-----+
| bank_name | nim |
+-----+-----+
```

Net interest margin

This is the difference between interest earned by a bank on loans and the interest it pays on deposits.

KOTAK MAHINDRA bank have high NIM, it is indicative of the bank earning more on its loans than paying on its deposits which usually points towards higher profitability.


```

+-----+-----+
| CANARA | 2.33 |
+-----+-----+
1 row in set (0.00 sec)

```

CANARA bank have mow NIM ratio.

```

mysql> select bank_name, roce from performance_ratios
-> where roce in (select max(roce) from performance_ratios);
+-----+-----+
| bank_name | roce |
+-----+-----+
| ICICI BANK LTD | 3.27 |
+-----+-----+
1 row in set (0.00 sec)

mysql> select bank_name, roce from performance_ratios
-> where roce in (select min(roce) from performance_ratios);
+-----+-----+
| bank_name | roce |
+-----+-----+
| AXIS | 1.57 |
| PUNJAB NATIONAL BANK | 1.57 |
+-----+-----+
2 rows in set (0.01 sec)

```

Return on capital employed (ROCE) is a financial statistic that may be used to analyze the profitability and capital efficiency of a firm.

ICICI bank have high ROCE value, indicates that a larger chunk of profits can be invested back into the bank for the benefit of shareholders. The reinvested capital is employed again at a higher rate of return, which helps produce higher earnings-per-share growth. A high ROCE is, therefore, a sign of a successful growth bank.

AXIS bank and PUNJAB NATIONAL BANK(OR PUNJAB & SIND BANK) have lower roce ratio indicates that a bank is not using its capital

```

mysql> select bank_name, price_to_earnings from valuation_ratios
-> inner join performance_ratios on performance_ratios.bank_id = valuation_ratios.bank_id where price_to_earnings in (select max(price_to_earnings) from valuation_ratios);
+-----+-----+
| bank_name | price_to_earnings |
+-----+-----+
| AXIS | 20.39 |
+-----+-----+
1 row in set (0.01 sec)

mysql> select bank_name, price_to_earnings from valuation_ratios
-> inner join performance_ratios on performance_ratios.bank_id = valuation_ratios.bank_id where price_to_earnings in (select min(price_to_earnings) from valuation_ratios);
+-----+-----+
| bank_name | price_to_earnings |
+-----+-----+
| CANARA | 4.58 |
+-----+-----+
1 row in set (0.00 sec)

```

The price-to-earnings (P/E) ratio relates a company's share price to its earnings per share.

AXIS bank has A high P/E ratio could mean that a bank's stock is overvalued, or that investors are expecting high growth rates in the future.

If the share price falls much faster than earnings, the PE ratio becomes low. CANARA bank has A low PE ratio means that a stock is cheap and its price may rise in the future.

```

mysql> select bank_name, price_to_book from valuation_ratios
-> inner join performance_ratios on performance_ratios.bank_id = valuation_ratios.bank_id where price_to_book in (select max(price_to_book) from valuation_ratios);
+-----+-----+
| bank_name | price_to_book |
+-----+-----+
| CANARA | 6.5 |
+-----+-----+
1 row in set (0.01 sec)

mysql> select bank_name, price_to_book from valuation_ratios
-> inner join performance_ratios on performance_ratios.bank_id = valuation_ratios.bank_id where price_to_book in (select min(price_to_book) from valuation_ratios);
+-----+-----+
| bank_name | price_to_book |
+-----+-----+
| BANK OF BARODA | 0.83 |
+-----+-----+
1 row in set (0.00 sec)

```

Price-to-book value (P/B) is the ratio of the market value of a company's shares (share price) over its book value of equity. The book value of equity, in turn, is the value of a company's assets expressed on the balance sheet. The book value is defined as the difference between the book value of assets and the book value of liabilities.

CANARA bank has a higher ratio indicates that the bank is overvalued.

BANK OF BARODA has a lower P/B ratio, indicates that bank's stock is being

```

mysql> select bank_name, eps from valuation_ratios
-> inner join performance_ratios on performance_ratios.bank_id = valuation_ratios.bank_id where eps in (select max(eps) from valuation_ratios);
+-----+-----+
| bank_name | eps |
+-----+-----+
| INDUSIND BANK LTD | 96.01 |
+-----+-----+
1 row in set (0.00 sec)

mysql> select bank_name, eps from valuation_ratios
-> inner join performance_ratios on performance_ratios.bank_id = valuation_ratios.bank_id where eps in (select min(eps) from valuation_ratios);
+-----+-----+
| bank_name | eps |
+-----+-----+
| PUNJAB NATIONAL BANK | 1.94 |
+-----+-----+
1 row in set (0.00 sec)

```

Earnings per share or EPS, indicates the profitability of a company. It is calculated by dividing the company's net income with its total number of outstanding shares.

INDUSIND bank have a higher EPS, indicates a more profitable bank, which may lead to a higher dividend payout.

PUNJAB NATIONAL BANK (OR PUNJAB & SIND BANK) have lowest eps among the top 10 banks of India .

```

mysql> select bank_name, gross from npa_in_percentage
-> inner join performance_ratios on performance_ratios.bank_id = npa_in_percentage.bank_id where gross in (select max(gross) from npa_in_percentage);
+-----+-----+
| bank_name | gross |
+-----+-----+
| PUNJAB NATIONAL BANK | 6.8 |
+-----+-----+
1 row in set (0.01 sec)

mysql> select bank_name, gross from npa_in_percentage
-> inner join performance_ratios on performance_ratios.bank_id = npa_in_percentage.bank_id where gross in (select min(gross) from npa_in_percentage);
+-----+-----+
| bank_name | gross |
+-----+-----+
| HDFC BANK | 1.17 |
+-----+-----+
1 row in set (0.00 sec)

```

Gross npa

NPAs indicate how much of a bank's loans are in danger of not being repaid. If interest is not received for 3 months, a loan turns into NPA.

PUNJAB NATIONAL BANK (OR PUNJAB & SIND BANK) have high gross NPA ratio means the bank's asset quality is in very poor shape.

HDFC bank has low gross npa.

```

mysql> select bank_name, net from npa_in_percentage
-> inner join performance_ratios on performance_ratios.bank_id = npa_in_percentage.bank_id where net in (select max(net) from npa_in_percentage);
+-----+-----+
| bank_name | net |
+-----+-----+
| PUNJAB NATIONAL BANK | 1.95 |
+-----+-----+
1 row in set (0.00 sec)

mysql> select bank_name, net from npa_in_percentage
-> inner join performance_ratios on performance_ratios.bank_id = npa_in_percentage.bank_id where net in (select min(net) from npa_in_percentage);
+-----+-----+
| bank_name | net |
+-----+-----+
| HDFC BANK | 0.3 |
+-----+-----+
1 row in set (0.00 sec)

```

Net NPA

Banks provide for some loans going bad. The net NPA is that portion of bad loans which has not been provided for in the books.

PUNJAB NATIONAL BANK (OR PUNJAB & SIND BANK) have high net npa mean that bank have too many loans that have become non-functional or are not rendering any interest income to the bank.

HDFC bank have low net npa compared to other 9 banks.

Conclusion on the basis of above analysis:

Punjab national bank (or Punjab & Sind bank) needs to work on certain aspects as it is not doing well in comparison to other banks.

- It needs to lower its NPA both gross and net by curative & preventive management, Lok Adalats, etc.
- It needs to improve its EPS, ROA, ROI to improve the performance in future.