

CHAPTER II

TRENDS IN BANKS' PROFITABILITY

In order to understand the profitability behaviour of the nationalised banks both at the aggregative level as well as at the level of individual banks over a time span covered by the study and also at a point of time, certain key factors affecting the profitability of banks have been identified, mainly to develop appropriate "relationship identities of profit." Data pertaining to these 'key factors' have been drawn from the annual financial statements of the concerned banks and analysis has been done mainly with a view to understand the impact of each of these key factors on the profitability of these banks. Exhibit 1 depicts the 'key profit factors' and their 'relationship identities'.

The key profit factors and their relationship identities can be more specifically understood in the form given in table 1.

EXHIBIT - II.1 KEY PROFIT FACTORS AND RELATIONSHIP IDENTITIES

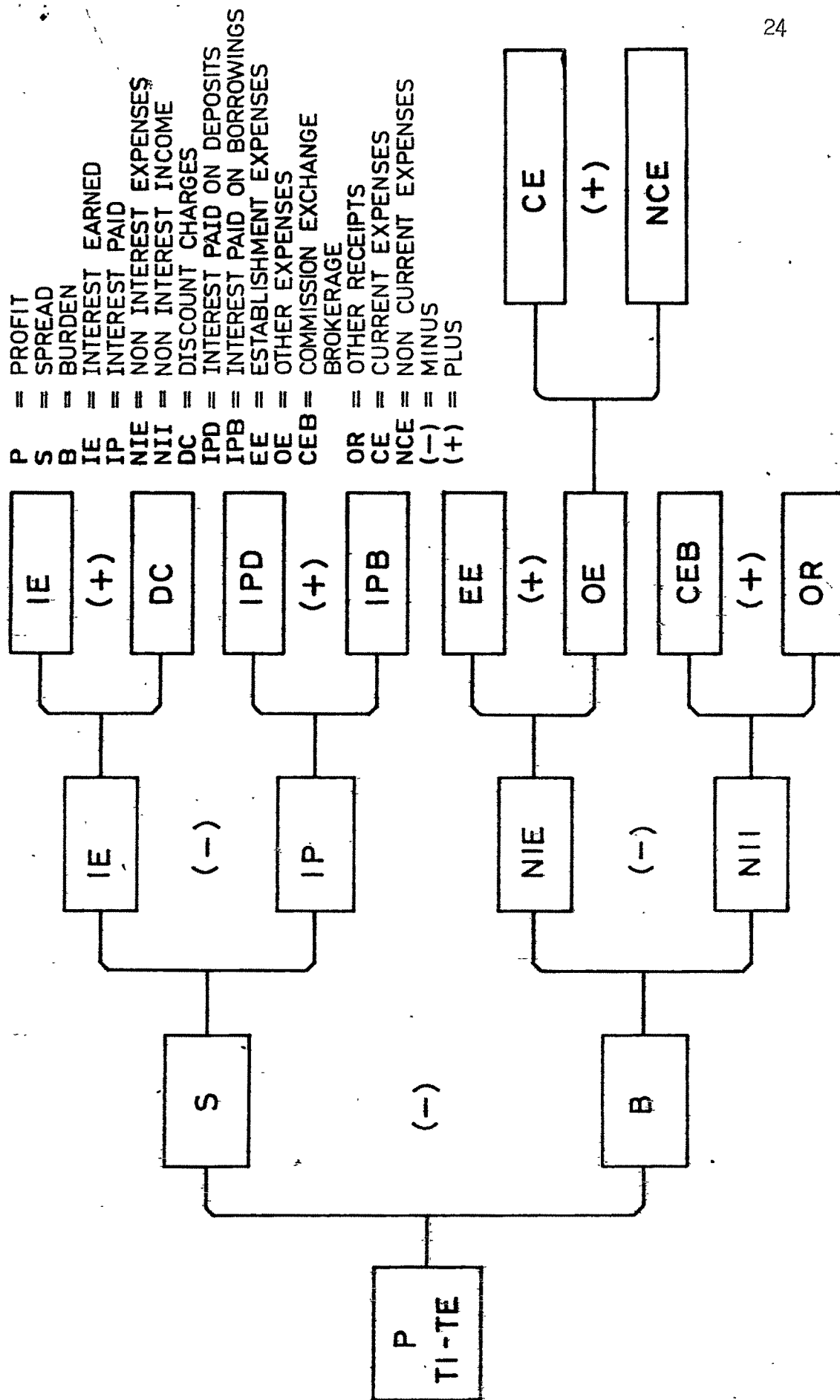


Table II.1 : Inter Factor Relationships of Profit.

Relation- ship identity	Income	Expenditure	Difference	Identity symbols
I	A. Interest earned	D. Interest paid	Spread (A-D)	S
II	B. Non- interest income	E. Non- interest expenses	Burden (E-B)	B
III	C. Total income	F. Total expenses.	Net profit (C-F) or (S-B)	P

Table II.1 contains three profitability identities. Identity I deals with interest earned and interest paid. The difference between interest earned and interest paid is the 'spread' symbolically represented by S. Interest earned is the total of interest earned plus discount charges. The interest paid is the sum total of interest paid on deposits and interest paid on borrowings.

Identity II shows the non-interest income and non-interest expenses. The difference between non-interest expenses and non-interest income is known as 'burden'. The burden is denoted by symbol 'B'. The non-interest expenses means establishment expenses plus other expenses. While non-interest income is the total of commission, exchange and other receipts.

Identity III deals with total income and total expenses. The difference between total income and total expenses is the net profit or spread minus burden is the net profit. The net profit is denoted by symbol 'P'.

In the above framework the spread and burden play key roles. They determine the profitability of the banks. The profitability can be increased by increasing the spread and by reducing the burden. A further division of the components of spread and burden provide the following profit equation:

$$P = (A-D) - (M+O) - B$$

Where;

- A = Total interest income
- D = Total interest expenses
- M = Total manpower expenses
- O = Total other expenses
- B = Total non-interest income.

Each of the above factors is related to the volume of business. The volume of business is denoted by 'V'. The coefficients of each of the factors given above are represented by

$$p = P/V$$

$$d = D/V$$

$$m = M/V$$

$$o = O/V$$

$$b = B/V$$

We have,

$$p = (a-d) - [m + o - b]$$

The performance of S and B is influenced by the performance of the following ratios.

a, d, m, b.

In order to understand the profitability of the nationalised banks at the aggregate level, an arithmetic average of the fourteen nationalised banks has been calculated. The data relating to the fourteen nationalised banks is analysed for the period of ten years i.e. 1972 to 1982.

Average Profitability Behaviour

Behaviour of profitability ratio of the nationalised banks has been analysed in the following part of the chapter. The profitability ratio (p) is obtained by profit (P) divided by the volume of business (V). Table 2 shows variations in the behaviour of average

TABLE II.2

Profitability Ratio

Banks	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982
Central	0.0008	0.0008	0.0015	0.0015	0.0013	0.0013	0.0010	0.0010	0.0023	0.0019	0.0017
India	0.0032	0.0027	0.0029	0.0039	0.0032	0.0030	0.0026	0.0028	0.0023	0.0023	0.0020
Baroda	0.0027	0.0013	0.0023	0.0044	0.0036	0.0036	0.0027	0.0030	0.0035	0.0030	0.0033
PNB	0.0033	0.0017	0.0028	0.0051	0.0041	0.0038	0.0033	0.0029	0.0026	0.0024	0.0034
Canara	0.0025	0.0011	0.0032	0.0040	0.0035	0.0039	0.0037	0.0037	0.0036	0.0031	0.0026
UCO	0.0037	0.0024	0.0024	0.0048	0.0039	0.0029	0.0026	0.0024	0.0020	0.0017	0.0022
United	0.0020	0.0004	0.0026	0.0033	0.0024	0.0019	0.0019	0.0019	0.0017	0.0016	0.0014
Syndicate	0.0026	0.0020	0.0031	0.0040	0.0036	0.0034	0.0031	0.0031	0.0014	0.0024	0.0024
Union	0.0022	0.0011	0.0034	0.0038	0.0028	0.0029	0.0027	0.0027	0.0029	0.0024	0.0024
Indian	0.0020	0.0021	0.0031	0.0050	0.0066	0.0032	0.0034	0.0028	0.0023	0.0015	0.0014
Dena	0.0025	0.0033	0.0014	0.0024	0.0021	0.0019	0.0017	0.0016	0.0017	0.0013	0.0016
IOB	0.0010	0.0024	0.0068	0.0072	0.0093	0.0085	0.0068	0.0055	0.0046	0.0034	0.0028
Allahabad	0.0015	0.0008	0.0044	0.0044	0.0036	0.0025	0.0026	0.0035	0.0031	0.0027	0.0024
MAHA	0.0005	0.0009	0.0011	0.0008	0.0008	0.0007	0.0006	0.0014	0.0024	0.0022	0.0034
Total	0.0024	0.0016	0.0027	0.0038	0.0034	0.0031	0.0027	0.0037	0.0026	0.0024	0.0025

Profitability Ratio = $\frac{\text{Profit}}{\text{Volume of Business}}$ Source: Financial Analysis of Banks 1972-82
Indian Banks' Association,
Bombay.

profitability ratio for the period under study. The average profitability ratio has declined from 0.0024 in 1972 to 0.0016 in 1973. But, in the years 1974 and 1975, it has increased from 0.0027 to 0.0038 respectively. Again, it has recorded a fall from 0.0027 in 1978 to 0.0025 in 1982.

Behaviour of Spread

As already pointed out, spread is one of the key determinants of bank profitability. It has, therefore, been decided to understand the behaviour of spread of the nationalised banks during the period of the study. In order to understand the behaviour of spread the spread ratio has been calculated. From table 3 it is clear that the spread ratio did not behave consistently. The spread ratio has declined from 0.046 in 1972 to 0.044 in 1982. The spread ratio during the years 1974 and 1975 has remained constant. But, it has declined from 0.043 in 1975 to 0.034 in 1978. Again, it went up to 0.044 in 1982.

TABLE II.3

Spread Ratio

Banks	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982
Central	0.051	0.046	0.049	0.047	0.036	0.034	0.034	0.038	0.041	0.039	0.037
India	0.036	0.030	0.034	0.035	0.025	0.027	0.026	0.027	0.026	0.026	0.030
Baroda	0.041	0.040	0.039	0.040	0.027	0.027	0.032	0.033	0.034	0.033	0.033
PNB	0.048	0.042	0.044	0.040	0.030	0.032	0.032	0.033	0.035	0.035	0.034
Canara	0.048	0.047	0.047	0.046	0.037	0.042	0.041	0.042	0.045	0.045	0.045
UCO	0.046	0.042	0.045	0.047	0.035	0.033	0.031	0.035	0.034	0.035	0.039
United	0.050	0.043	0.045	0.041	0.035	0.037	0.037	0.035	0.041	0.044	0.042
Syndicate	0.045	0.045	0.050	0.048	0.038	0.039	0.040	0.045	0.040	0.036	0.039
Union	0.046	0.041	0.046	0.046	0.032	0.038	0.040	0.046	0.046	0.046	0.043
Indian	0.037	0.040	0.041	0.039	0.032	0.033	0.036	0.033	0.037	0.036	0.037
Dena	0.059	0.046	0.050	0.053	0.041	0.040	0.041	0.042	0.048	0.047	0.049
IOB	0.046	0.036	0.041	0.040	0.034	0.034	0.031	0.030	0.031	0.025	0.026
Allahabad	0.051	0.047	0.052	0.060	0.048	0.042	0.043	0.047	0.043	0.044	0.048
MAHA	0.046	0.043	0.042	0.037	0.028	0.031	0.035	0.037	0.042	0.040	0.043
Total	0.046	0.041	0.044	0.043	0.033	0.034	0.034	0.036	0.037	0.036	0.044

Spread Ratio = $\frac{\text{Spread}}{\text{Volume of Business}}$

Source: Financial Analysis of Banks 1972-1982
Indian Banks' Association, Bombay.

Behaviour of Burden

In order to further understand the factors responsible for changes in the burden ratio an attempt has been made to analyse the factors influencing the burden ratio. Table 4 indicates the behaviour of the burden ratio. The burden ratio has recorded a fall from 0.043 in 1972 to 0.029 in 1976. Again, it has increased from 0.031 in 1977 to 0.042 in 1982.

By comparing the behaviour of 'burden ratio' with the behaviour of 'spread ratio', we can explain the behaviour of the profitability ratio.

In the year 1972, the spread ratio was 0.046 and burden ratio was 0.043, so the profitability ratio was 0.003. But in the year 1973 the spread ratio was 0.041 and the burden ratio was 0.040, making profitability ratio fall to 0.001. In the year 1974 spread ratio was 0.044 and burden ratio was 0.041, thereby, the profitability ratio went up to 0.003. In 1976, the spread ratio was 0.033 and the burden ratio was 0.029, hence the profitability ratio further increased to 0.004. And in 1977, the spread ratio was 0.034 and burden ratio was 0.031, so the profitability ratio declined to 0.003. Again in 1978, spread ratio was 0.034 and the burden ratio was 0.032, so the profitability ratio declined to

TABLE II.4

Burden Ratio

Banks	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982
Central	0.050	0.045	0.048	0.046	0.035	0.033	0.033	0.037	0.038	0.037	0.035
India	0.033	0.027	0.031	0.031	0.021	0.024	0.024	0.024	0.024	0.024	0.028
Baroda	0.038	0.38	0.037	0.036	0.023	0.024	0.029	0.030	0.030	0.030	0.029
PNB	0.044	0.040	0.041	0.035	0.026	0.028	0.029	0.031	0.032	0.032	0.031
Canara	0.046	0.046	0.044	0.042	0.034	0.038	0.037	0.038	0.041	0.042	0.042
UGO	0.042	0.039	0.042	0.042	0.031	0.030	0.028	0.032	0.032	0.033	0.037
United	0.048	0.043	0.043	0.038	0.033	0.035	0.035	0.033	0.040	0.043	0.041
Syndicate	0.042	0.043	0.047	0.044	0.035	0.036	0.037	0.011	0.039	0.034	0.036
Union	0.044	0.039	0.043	0.042	0.029	0.035	0.037	0.043	0.043	0.043	0.040
Indian	0.033	0.038	0.038	0.034	0.026	0.030	0.032	0.030	0.034	0.034	0.036
Dena	0.057	0.043	0.049	0.050	0.038	0.038	0.039	0.040	0.046	0.046	0.047
IOB	0.046	0.033	0.034	0.033	0.024	0.026	0.024	0.024	0.026	0.022	0.023
Allahabad	0.050	0.047	0.047	0.056	0.045	0.039	0.041	0.044	0.040	0.042	0.045
MAHA	0.046	0.044	0.041	0.036	0.027	0.030	0.034	0.035	0.039	0.038	0.040
Total	0.043	0.040	0.041	0.040	0.029	0.031	0.032	0.033	0.034	0.034	0.042

Burden Ratio = $\frac{\text{Burden}}{\text{Volume of Business}}$ Source: Financial Analysis of Banks 1972-1982
Indian Banks' Association, Bombay.

0.002. In 1979, the spread ratio was 0.036 and the burden ratio was 0.033, as a consequence thereby profitability ratio was 0.003. But in 1980, the spread ratio and burden ratio both have recorded rise at the same rate, therefore, there was no change in the profitability ratio. In 1981 the spread ratio declined to 0.036 but the burden ratio remained the same i.e. 0.034, as a result, the profitability ratio declined to 0.002. Finally, the spread ratio and the burden ratio, both have increased at the same rate, so the profitability ratio remained at the same level i.e. 0.002.

Analysis of Burden Ratio

The critical factors determining the burden ratio are,

- (i) Non-Interest Expense Ratio (NIER)
- (ii) Non-Interest Income Ratio (NIIR)

Non-interest expense ratio arrived at by dividing the non-interest expenses by the volume of business is symbolically presented by

$$\text{NIER} = \frac{\text{N.I.E.}}{V}$$

Similarly, non-interest income ratio arrived at by dividing the non-interest income by the volume of

business, is symbolically presented by

$$NIIR = \frac{N.I.I.}{V}$$

Table 5 reveals the further split up of burden ratio. In 1972, the non-interest expenses ratio was 0.058 and the non-interest income ratio was 0.014. As a result, the burden ratio was 0.043. Further, in the years 1973 and 1974 the non-interest expenses ratio increased from 0.054 to 0.058 and the non-interest income ratio also increased from 0.014 to 0.016. As a consequence, the burden ratio increased from 0.040 to 0.042. During the years 1975 to 1978 non-interest expense ratio declined from 0.055 to 0.045 and non-interest income ratio also recorded a fall from 0.015 to 0.013. As a result, the burden ratio declined from 0.040 to 0.032. In the years 1979 and 1980, the non-interest expense ratio recorded a rise from 0.047 to 0.048 but the non-interest income ratio remained constant i.e. 0.013. Due to this the burden ratio increased from 0.034 to 0.035. During the last two years i.e. 1981 to 1982, the non-interest expense ratio declined from 0.046 to 0.045 and the non-interest income ratio also recorded a fall from 0.012 to 0.011. As a consequence, the burden ratio remained constant at 0.034.

TABLE II.5
Non-Interest Expense Ratio and Non-Interest Income Ratio

Banks	Non-Interest Expense Ratio											
	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	
Central	0.065	0.059	0.065	0.063	0.049	0.048	0.047	0.050	0.051	0.048	0.048	
India	0.046	0.041	0.047	0.046	0.040	0.040	0.040	0.041	0.040	0.040	0.040	
Baroda	0.063	0.055	0.059	0.053	0.042	0.042	0.045	0.046	0.046	0.044	0.043	
PNB	0.053	0.054	0.057	0.050	0.038	0.040	0.040	0.042	0.042	0.042	0.040	
Canara	0.058	0.064	0.064	0.057	0.045	0.051	0.050	0.051	0.053	0.053	0.053	
UCO	0.062	0.053	0.057	0.057	0.046	0.043	0.042	0.044	0.043	0.042	0.045	
United	0.059	0.053	0.052	0.047	0.042	0.044	0.044	0.042	0.048	0.051	0.048	
Syndicate	0.063	0.057	0.062	0.060	0.047	0.054	0.053	0.128	0.053	0.045	0.045	
Union	0.067	0.053	0.055	0.051	0.041	0.045	0.046	0.059	0.059	0.058	0.054	
Indian	0.080	0.053	0.062	0.064	0.052	0.051	0.051	0.044	0.049	0.046	0.049	
Dena	0.055	0.054	0.057	0.054	0.043	0.042	0.040	0.052	0.058	0.058	0.010	
IOB	0.053	0.060	0.063	0.071	0.056	0.052	0.052	0.040	0.038	0.035	0.034	
Allahabad	0.056	0.053	0.053	0.048	0.039	0.039	0.042	0.057	0.053	0.055	0.057	
MAHA	0.058	0.054	0.058	0.055	0.044	0.045	0.045	0.043	0.048	0.047	0.049	
Total	0.058	0.054	0.058	0.055	0.044	0.044	0.044	0.047	0.048	0.046	0.045	

Source: Financial Analysis of Banks 1972-82, Indian Banks' Association, Bombay.

Contd.....

TABLE II.5 (contd.)

		Non-Interest Income Ratio										
Banks		1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982
Central		0.015	0.013	0.017	0.016	0.014	0.015	0.013	0.012	0.012	0.011	0.011
India		0.011	0.013	0.015	0.015	0.018	0.016	0.016	0.016	0.016	0.015	0.011
Baroda		0.018	0.016	0.022	0.016	0.018	0.018	0.016	0.015	0.015	0.014	0.013
PNB		0.014	0.013	0.016	0.014	0.012	0.012	0.011	0.011	0.009	0.009	0.009
Canara		0.015	0.017	0.020	0.014	0.011	0.012	0.012	0.012	0.012	0.011	0.010
UGO		0.016	0.013	0.015	0.015	0.014	0.013	0.013	0.012	0.011	0.009	0.007
United		0.010	0.009	0.009	0.009	0.008	0.009	0.009	0.008	0.008	0.008	0.007
Syndicate		0.013	0.013	0.015	0.012	0.013	0.015	0.011	0.012	0.014	0.010	0.008
Union		0.018	0.018	0.019	0.017	0.017	0.018	0.015	0.016	0.015	0.014	0.013
Indian		0.020	0.014	0.017	0.016	0.015	0.014	0.013	0.014	0.014	0.011	0.013
Dena		0.014	0.010	0.013	0.013	0.013	0.012	0.011	0.011	0.011	0.011	0.012
IOB		0.019	0.020	0.022	0.021	0.018	0.016	0.016	0.015	0.012	0.013	0.011
Allahabad		0.013	0.013	0.015	0.015	0.011	0.013	0.011	0.013	0.012	0.013	0.011
MAHA		0.010	0.008	0.011	0.011	0.012	0.009	0.007	0.007	0.008	0.009	0.009
Total		0.014	0.014	0.016	0.015	0.014	0.014	0.013	0.013	0.013	0.012	0.011

Source: Financial Analysis of Banks 1972-82, Indian Banks' Association, Bombay.

Conclusion

The above analysis reveals that the profitability of the nationalised banks has been declining over the last ten years. The quantified analysis has been divided into five different phases. Also there are different causes for declining profitability during these phases in terms of the key indicators selected for this study.

During the first phase 1972 to 1973, both spread and burden ratios recorded increase but the increase in burden ratio was much higher than the increase in the spread ratio. As a result of this the profitability ratio declined.

In the second phase, 1974 to 1975 the rate of increase in the spread ratio and the burden ratio was same, hence the profitability ratio remained constant.

In the third phase, 1976 to 1978 the spread ratio was constant but the burden ratio recorded a rise. This resulted into a fall in the profitability ratio.

In the fourth phase, 1979 to 1980, the rate of change in the spread ratio and burden ratio was same. Therefore, there was no change in the profitability ratio.

During fifth phase 1981 to 1982, the spread and burden ratios, both have increased but the increase in the burden ratio was greater than the increase in the

spread ratio. As a consequence, the profitability ratio declined in 1982.

The analysis of profitability ratio reveals that the banks have to increase their spread ratio and reduce the burden ratio in order to increase the overall profitability. The spread ratio can be increased by way of increasing the interest income or by controlling the interest expenses. The burden ratio can be reduced by way of increasing the non-interest income and reducing the non-interest expenses.

With the help of profitability ratio (PR) we have shown that the profitability of the fourteen nationalised banks has declined during the period 1972-1982. Further an attempt has been made below to varify the declining trend in profitability of the nationalised banks with the help of return over investment (ROI) approach. The findings of the return on investment approach may further confirm our previous conclusion of declining trend in profitability of the nationalised banks.

Table 6 shows the profitability of the fourteen nationalised banks during the period 1972-1982 arrived at through the ROI approach.

TABLE II.6
Net Profit to Working Fund Ratio (ROI)

Banks	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982
Central	0.04	0.07	0.09	0.09	0.20	0.07	0.06	0.05	0.12	0.11	0.10
India	0.18	0.16	0.18	0.23	0.20	0.18	0.15	0.15	0.13	0.13	0.12
Baroda	0.16	0.12	0.13	0.26	0.21	0.20	0.15	0.16	0.18	0.16	0.19
PNB	0.16	0.12	0.15	0.15	0.18	0.22	0.18	0.13	0.13	0.12	0.20
Ganara	0.14	0.11	0.12	0.25	0.22	0.22	0.21	0.21	0.19	0.16	0.15
UCO	0.20	0.15	0.15	0.30	0.18	0.17	0.15	0.13	0.11	0.10	0.14
United	0.11	0.01	0.15	0.21	0.15	0.03	0.03	0.10	0.08	0.08	0.08
Syndicate	0.15	0.12	0.13	0.24	0.23	0.19	0.17	0.17	0.16	0.14	0.17
Union	0.13	0.10	0.12	0.23	0.18	0.16	0.15	0.14	0.13	0.13	0.14
Indian	0.12	0.09	0.14	0.30	0.41	0.18	0.19	0.15	0.13	0.09	0.09
Dena	0.13	0.04	0.05	0.15	0.14	0.11	0.10	0.08	0.09	0.07	0.09
IOB	0.05	0.10	0.22	0.42	0.56	0.49	0.36	0.31	0.26	0.20	0.19
Allahabad	0.09	0.04	0.08	0.25	0.22	0.14	0.14	0.17	0.13	0.14	0.14
MAHA	0.02	0.03	0.06	0.05	0.05	0.04	0.04	0.08	0.13	0.12	0.20

Source: Data analysed is based on the published annual financial statements of the concerned banks.

Net Profit to Working Funds

Table 6 gives an analysis of the Net Profit to Working Funds (ROI) ratio both bank-wise and year-wise for the fourteen nationalised banks from 1972 to 1982.

The ROI trend lacked consistency in its behaviour, during this period. The ROI fluctuated between 0.01 per cent and 0.056 per cent during the period. All the nationalised banks have made progress in the year 1974. But the performance of United Commercial Bank has remained constant during the years 1973 to 1974. Indian Overseas Bank and Canara Bank have made relatively better progress from 1977 to 1982. The ROI for Central Bank of India was in the range of 0.04 per cent to 0.20 per cent, for Punjab National Bank 0.12 per cent to 0.22 per cent, for Syndicate Bank 0.12 per cent to 0.24 per cent and for United Commercial Bank 0.10 per cent to 0.30 per cent. Thus, ROI approach also confirms that the profitability of the nationalised banks has declined during the period 1972-1982.

To conclude, we can say that the profitability of the nationalised banks measured through profitability ratio (Net Profit/Volume of Business) and through ROI (Net Profit/Working Fund) has declined during the period covered by the study. In the subsequent part of the thesis therefore, an attempt has been made to empirically

examine the impact of various operational factors on the profitability of these banks, especially with a view to find out the factors which affect profitability of the banks, directly and strongly. The operational factors identified for the purpose are given below:

- (i) Asset Utilisation,
- (ii) Profit Margin,
- (iii) Establishment Utilisation,
- (iv) Liability Management, and
- (v) Branch Expansion.

Each one of these factors has been examined in detail and empirically, wherever possible, in the subsequent chapters. For the analysis of the asset utilisation, therefore, we now proceed to the next chapter.

.