CHAPTER VI

LIABILITY MANAGEMENT

In an earlier analysis, we have concluded that the asset utilisation of the nationalised banks has improved during the period 1972-82. Thus their incomes have increased more than proportionately to the increase in their assets, still we find that their profitability has declined meaning thereby that their expenses have increased more than proportionately to their earnings or incomes. This more than proportionate increase in expenditure has not been supported by the general impression that there has been a more than proportionate increase in their expenditure on establishment as our analysis pertaining to the 'establishment utilisation' of these banks has clearly brought out that the 'establishment utilisation' in these banks has improved during the period. This leads us to the other important dimension of the problem which is concerned with the management of liabilities by these banks, mainly because the 'carrying cost of liabilities' is an important component of expenditure. We shall, therefore, analyse in this chapter this head of expenditure to ascertain if an increase in the carrying cost of liabilities has adversely affected the profitability of these banks. For the purpose, we shall examine the 'management of liabilities' by these banks during the period 1972-82.

> "The carrying cost of liabilities, changes proportionately, in the same direction, in which the size of liabilities changes."

In order to test this hypothesis, we shall first of all analyse the changes in the size of liabilities of these banks and then relate these changes with their carrying costs.

<u>Changes in the Size of Liabilities</u>

In order to analyse the changes in the size of liabilities of the nationalised banks, we have taken 'Equity Multiplier' (EM) as an appropriate measure of change as it takes the size of the liabilities into consideration in relation to the respective equity base of the banks. The 'Equity Multiplier' (EM) is given by

$$EM = \frac{TL}{E}$$

Whereas,

EM = Equity Multiplier
TL = Total Liabilities
E = Paid up share capital + Reserves.

The EM of the banks, calculated for the years 1972 and 1982 are given in Table 1. The table reveals that the total liabilities of all the banks taken together were 70.06 times their equity base in 1972. The same has increased to 159.06 times their equity base in 1982.

The Punjab National Bank, Bank of Baroda, Canara Bank, Syndicate Bank, Union Bank of India, Dena Bank and Indian Bank were above the average equity multiplier in 1972. While Central Bank of India, Bank of India, United Commercial Bank, United Bank of India, Allahabad Bank and Indian Overseas Bank were below the average equity multiplier in 1972.

The Central Bank of India, Punjab National Bank, United Commercial Bank, Canara Bank, United Bank of India, Union Bank of India, Dena Bank, Allahabad Bank and Bank of Maharashtra had their equity multiplier above the average in 1982. While Bank of India, Bank of Baroda, Syndicate Bank, Indian Bank and Indian Overseas Bank were below the average equity multiplier in 1982.

The Bank of Baroda and Indian Bank which were above the average equity multiplier in 1972 came below the average equity multiplier in 1982.

The Central Bank of India, United Commercial Bank, United Bank of India and Allahabad Bank which were below the average equity multiplier in 1972, came above the average equity multiplier in 1982.

TABLE VI.1

Equity Multiplier

(Rs. Lakhs)

Banks	1972			1982		
	Equity	Total Liabi-lities	EM(X)	Equity	Total Liabi-lities	EM(X)
Central	1372	85484	62.30	2787	458245	164.42
India	1227	73191	59.65	3668	515578	140.56
PNB	875	65622	74.99	2587	501695	193.92
Baroda	719	64295	89.42	3779	502778	133.04
UCO	841	45165	53.70	1700	299168	175.98
Canara	444	38928	87.67	2000	370718	185.35
United	452	30730	67.98	730	197912	271.11
Syndicate	360	29918	83.10	2500	301191	120.47
Union	296	27887	94.21	1146	237613	207.34
Dena	340	24129	70.96	513	123900	241.52
Allahabad	296	19061	64.39	609	139213	228.59
Indian	229	18140	79.21	1319	180263	136.66
IOB	241	16782	69.63	2672	290446	108.69
MAHA	226	15429	68.26	690	128433	186.13
Total	7918	554761	70.06	26700	4247153	159.06

$$EM = \frac{TL}{E}$$

Whereas,

EM = Equity Multiplier

TL = Total Liabilities

E = Equity + Reserves

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

Carrying Cost of Liabilities

In order to examine the impact of expansion in the size of liabilities on the carrying cost of liabilities, we have used a 'Liability Cost Indicator' (LCI). The Liability Cost Indicator (LCI) is derived by

$$LCI = \frac{IE}{TL} \times 100$$

Where,

LCI = Liability Cost Indicator
IE = Interest Expenses
TL = Total Liabilities.

Table 2 reveals that the liability cost indicator of all the banks taken together has increased from 3.55 per cent in 1972 to 5.40 per cent in 1982. The Central Bank of India, Bank of India, Punjab National Bank, Bank of Baroda, Allahabad Bank, Indian Bank and Indian Overseas Bank had liability cost indicator above the average in 1972. While Bank of India, Punjab National Bank, United Bank of India, Syndicate Bank, Dena Bank, Indian Bank, Indian Overseas Bank and Bank of Maharashtra had liability cost indicator above the average in 1982.

The Central Bank of India, Punjab National Bank and Allahabad Bank were above the average LCI in 1972 but the same banks came below the average LCI in 1982.

TABLE VI.2

Liability Cost Indicator

(Rs.Lakhs)

Banks	1972			1982		
	Interest Expenses	Total Liabi-lities	Liabi-lity Cost Indi-cator	Interest Expenses	Total Liabi-lities	Liabi-lity Cost Indi-cator
Central	3058	85484	3.58	22838	458245	4.98
India	2708	73191	3.70	29154	515578	5.65
PNB	2451	65622	3.74	26801	501695	5.34
Baroda	2382	64295	3.70	29491	502778	5.87
UCO	1452	45165	3.21	16017	299168	5.35
Canara	1292	38928	3.32	17230	370718	4.65
United	1046	30730	3.40	10991	197912	5.55
Syndicate	1036	29918	3.46	16476	301191	5.47
Union	829	27887	2.97	11568	237613	4.87
Dena	848	24129	3.51	7097	123900	5.73
Allahabad	764	19061	4.01	7391	139213	5.31
Indian	634	18140	3.50	10681	180263	5.93
IOB	611	16782	3.64	16515	290446	5.69
MAHA	600	15421	3.89	7055	128433	5.49
Total	19712	554761	3.55	229305	4247153	5.40

$$LCI = \frac{IE}{TL} \times 100$$

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

The United Bank of India, Syndicate Bank and Dena Bank were below the LCI in 1972 but these banks came above the average LCI in 1982. Thus, the average carrying costs of liabilities of the banks have increased during 1972-82.

We will now examine the relationship between equity multiplier (EM) and liability cost indicator (LCI) of the banks for the period 1972-82. Table 3 shows the equity multiplier (EM) and the liability cost indicator (LCI) of the banks for the period 1972-82. The table reveals that the equity multiplier (EM) of all the banks taken together has increased from 70.06 in 1972 to 159.06 in 1982. The liability cost indicator (LCI) has also increased from 3.55 per cent in 1972 to 5.40 per cent in 1982 of all the banks taken together. In the case of individual banks also, we find more or less a similar behaviour of both the equity multiplier and the liability cost indicator. Thus, it can be inferred that the liability cost indicator of these banks has increased due to an increase in their equity multiplier. The main reasoning behind this conclusion could be that the proportion of interest cost bearing liabilities has substantially increased and the equity base of these banks has significantly declined resulting in an increase in the carrying cost of liabilities more than proportionately to the increase in their total size.

TABLE VI.3

Equity Multiplier and Liability Cost Indicator

Banks	1972		1982	
	Equity Multiplier (EM)	Liability Cost Indicator (LCI)	Equity Multiplier (EM)	Liability Cost Indicator (LCI)
Central	62.30	3.58	164.42	4.98
India	59.65	3.70	140.56	5.65
PNB	74.99	3.74	193.92	5.34
Baroda	89.42	3.70	133.04	5.87
UCO	53.70	3.21	175.98	5.35
Canara	87.67	3.32	185.35	4.65
United	67.98	3.40	271.11	5.55
Syndicate	83.10	3.46	120.47	5.47
Union	94.21	2.97	207.34	4.87
Dena	70.96	3.51	241.52	5.73
Allahabad	64.39	4.01	228.59	5.31
Indian	79.21	3.50	136.66	5.93
IOB	69.63	3.64	108.69	5.69
MAHA	68.26	3.89	186.13	5.49
Total	70.06	3.55	159.06	5.40

$$EM = \frac{TL}{E}$$

$$LCI = \frac{IE}{TL} \times 100$$

Our analysis of equity multiplier has shown that the size of liabilities of the banks has increased. The liability cost indicator (LCI) has revealed the impact of the expansion in the size of liability on the cost of liabilities of the banks. Now, we will examine the effect of an increase in the carrying cost of liabilities of the banks on profitability, through Profit Margin (PM).

Equity Multiplier (EM) and Profit Margin (PM)

In order to examine the relationship between the changes in the size of liabilities of the banks and their profit margin (PM), we propose to test the following hypothesis,

> "The 'Equity Multiplier' and Profit Margin have a negative correlation".

Table 4 reveals that the 'equity multiplier' of all the banks taken together has increased from 70.06 in 1972 to 159.06 in 1982. This substantial increase in the equity multiplier of the banks has adversely affected the profit margin of the banks. The profit margin (PM) of all the banks taken together has declined from 1.95 per cent in 1972 to 1.57 per cent in 1982. This inverse relationship between Equity Multiplier (EM) and Profit Margin (PM) is observed in case of most of

TABLE VI.4

Equity Multiplier and Profit Margin

Banks	1972 Equity Multiplier (EM)	1972 Profit Margin (PM)	1982 Equity Multiplier (EM)	1982 Profit Margin (PM)
Central	62.30	0.67	164.42	1.14
India	59.65	2.96	140.56	1.27
PNB	74.99	2.44	193.92	2.16
Baroda	89.42	2.27	133.04	1.98
UCO	53.70	3.10	175.98	1.49
Canara	87.67	1.15	185.35	1.70
United	67.98	1.72	271.11	0.86
Syndicate	83.10	2.25	120.47	1.64
Union	94.21	1.98	207.34	1.53
Dena	70.96	1.81	241.52	0.93
Allahabad	64.39	1.61	228.59	1.46
Indian	79.21	1.84	136.66	0.87
IOB	69.63	0.72	108.69	2.04
MAHA	68.26	0.53	186.13	2.03
Total	70.06	1.95	159.06	1.57

$$EM = \frac{TL}{E}$$

$$PM = \frac{NP}{IE} \times 100$$

the most banks. Only Central Bank of India, Indian Overseas Bank and Bank of Maharashtra had experienced an increase in their profit margin with an increase in their equity multiplier. Thus, there is an inverse relationship between the equity multiplier and the profit margin.

Liability Cost Indicator (LCI) and Profit Margin (PM)

The preceding analysis reveals that the size of the liabilities of nationalised banks has multiplied many times as indicated by the 'equity multiplier' and as a result of this change, the 'profit margin' of these banks has declined. We have also been able to infer that the changes in the 'equity multiplier' have a relationship with the changes in the 'liability cost indicator'. We would now like to know if the increase in the liability cost indicator has any relationship with the changes in the 'profit margin' and if yes, in what direction? For this purpose, we would like to test the following hypothesis,

> "Other things remaining the same, an increase in the 'liability cost indicator' causes a decrease in the 'profit margin' of banks"

For testing the hypothesis, data pertaining to 'liability cost indicator' and 'profit margin' have been tabulated for the years 1972 and 1982 as per table .5

Table 5 reveals that the liability cost indicator (LCI) of all the banks taken together has increased from 3.55 per cent in 1972 to 5.40 per cent in 1982. This increase in the cost of liabilities of the banks has adversely affected the profit margin of the banks. The profit margin (PM) of the banks has declined from 1.95 per cent in 1972 to 1.57 per cent in 1982. Thus, we find that except in the case of Central Bank of India, Indian Overseas Bank and Bank of Maharashtra there is an inverse relationship between 'liability cost indicator' and 'profit margin'. We can, therefore, conclude that the hypothesis is sustained and that the increase in the liability cost indicator is one of the main factors responsible for the decline in the profit margin of nationalised banks during 1972-82.

Thus, we find that the equity multiplier (EM) and profit margin (PM) as well as liability cost indicator (LCI) and profit margin (PM) are inversely related. The increase in the cost of liabilities of the banks has adversely affected their profitability. The increase in the liabilities cost of the banks is mainly due to an increase in the interest expenses of the banks because

TABLE VI.5

Liability Cost Indicator and Profit Margin

Banks	1972		1982	
	Liability Cost Indicator	Profit Margin	Liability Cost Indicator	Profit Margin
Central	3.58	0.67	4.98	1.14
India	3.70	2.96	5.65	1.27
P NB	3.74	2.44	5.34	2.16
Baroda	3.70	2.27	5.87	1.98
United	3.21	3.10	5.35	1.49
Canara	3.32	1.25	4.65	1.70
United	3.40	1.72	5.55	0.86
Syndicate	3.46	2.25	5.47	1.64
Union	2.97	1.98	4.87	1.53
Dena	3.51	1.81	5.73	0.93
Allahabad	4.01	1.61	5.31	1.46
Indian	3.50	1.84	5.93	0.87
IOB	3.64	0.72	5.69	2.04
MAHA	3.89	0.53	5.49	2.03
Total	3.55	1.95	5.40	1.57

$$LCI = \frac{IE}{TL} \times 100$$

$$PM = \frac{NP}{IE} \times 100$$

deposits constitute approximately more than 80 per cent of the total liabilities of the banks. So, it is imperative to analyse the interest expenses in relation to total deposits, during 1972-82.

Table 6 reveals that the interest expenses as percentage to total deposits of all the banks taken together have increased from 3.81 per cent in 1972 to 6.54 per cent in 1982. The United Commercial Bank, Canara Bank, United Bank of India and Union Bank were below the average in 1972 and in 1982 while the Allahabad Bank which was above the average in 1972 came down below the average in 1982. So, majority of the banks had interest expenses as percentage to total deposits above the average during 1972-82. Thus, the increase in the cost of liabilities of the banks was due to an increase in the interest expenses of the banks during 1972-82.

In the preceding analysis, we have seen that the liability cost indicator (LCI) has increased, which means that the carrying cost of liabilities of the banks has increased and it has adversely affected the profit margin of the nationalised banks. The liability cost indicator (LCI) of all the banks taken together has increased from 3.55 per cent in 1972 to 5.40 per cent in 1982. In order to ascertain the principal causative

TABLE VI.6

Interest Expenses as Percentage to Total Deposits

(Rs.Lakhs)

Banks	1972			1982		
	Interest Expenses	Total Deposits	Interest Expenses as % to total Deposits	Interest Expenses	Total Deposits	Interest Expenses as % to total Deposits
Central	3058	80478	3.80	22838	386164	5.91
India	2708	68550	3.95	29154	407178	7.16
PNB	2451	62081	3.95	26801	393815	6.81
Baroda	2382	59518	4.00	29491	425147	6.94
UCO	1452	41783	3.48	16017	247621	6.47
Canara	1292	36530	3.54	17230	303693	5.67
United	1046	29471	3.55	10991	171988	6.39
Syndicate	1036	27114	3.82	16476	243670	6.76
Union	829	25342	3.27	11568	201970	5.73
Dena	848	22015	3.85	7097	108405	6.55
Allahabad	764	18129	4.21	7391	121021	6.11
Indian	634	16486	3.85	10681	149655	7.14
IOB	611	15944	3.83	16515	238365	6.93
MAHA	600	14555	4.12	7055	107380	6.57
Total	19712	517997	3.81	229305	3506072	6.54

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

factor responsible for this change in the liability cost indicator we would test the following hypothesis.

> "Other things being equal, a change in the deposit-mix of the banks resulted into a change in the carrying cost of liabilities of the banks."

For testing the above hypothesis, data of deposit-mix of the fourteen nationalised banks have been tabulated for the years 1972 and 1982 as per table 7.

The table reveals that the deposit-mix of the banks during the period 1972-82 has changed significantly. It shows that the current deposits as percentage to total deposits of all the banks taken together have declined from 22.57 per cent in 1972 to 19.29 per cent in 1982. The savings deposits as percentage to total deposits have also declined from 27.03 per cent in 1972 to 26.86 per cent in 1982. As against this, the fixed deposits, as percentage to total deposits, have increased from 50.40 per cent in 1972 to 53.85 per cent in 1982, of all the banks taken together. Thus, the share of low costs carrying current and saving deposits in total deposits of the banks has declined. While the proportion of high cost carrying fixed deposits has increased in the total deposits of the banks.

TABLE VI.7

Structure of Deposits

Current Deposits as Percentage to Total Deposits

Banks	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982
Central	22.20	21.56	21.48	20.82	23.01	19.43	21.87	17.09	17.82	19.11	17.82
India	24.37	25.61	23.71	23.55	23.46	19.57	19.91	19.92	19.47	19.56	19.47
Baroda	25.35	23.15	22.13	21.87	20.26	22.65	22.09	20.86	22.28	22.08	22.28
PNB	19.19	19.41	19.08	19.48	19.69	18.42	17.13	17.91	19.08	18.72	19.08
Canara	23.00	20.70	22.49	21.59	18.36	15.58	15.77	11.95	17.81	19.29	17.81
UCO	27.00	26.74	25.74	26.44	24.38	25.36	25.79	26.61	25.30	26.97	25.30
United	20.87	20.03	21.11	25.02	20.36	18.88	19.01	19.96	16.41	16.26	16.41
Syndicate	15.91	15.59	17.22	16.62	15.03	15.06	13.83	13.28	15.74	15.65	15.74
Union	31.64	29.59	32.15	30.65	29.24	27.63	26.41	25.21	24.03	23.52	24.03
Indian	20.29	18.06	18.73	20.07	17.03	15.79	19.25	16.72	15.86	15.06	15.86
Dena	17.81	18.46	17.30	17.71	16.45	15.97	15.88	16.64	16.93	18.57	16.93
IOB	22.13	22.24	21.48	19.64	16.85	18.69	16.66	16.61	15.94	17.19	15.98
Allahabad	19.12	19.17	18.32	19.44	18.21	17.15	18.07	18.26	20.01	19.99	20.01
MAHA	16.87	15.23	15.73	17.77	18.55	17.68	16.47	17.91	20.21	21.08	20.21
Total	22.57	21.88	21.73	21.89	20.80	19.60	19.55	18.67	19.01	19.27	19.29

contd...

TABLE VI.7 (contd.)

Savings Deposits as Percentage to Total Deposits

Banks	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982
Central	25.93	26.65	27.13	26.92	24.62	25.98	26.54	26.88	27.90	28.03	27.90
India	24.68	24.99	25.61	24.83	22.75	22.34	22.26	22.96	23.08	22.45	23.08
Baroda	24.97	24.35	25.55	24.87	23.40	22.24	23.44	23.40	22.32	21.61	22.32
PNB	34.65	33.90	33.30	32.59	29.83	30.37	30.80	30.20	29.91	30.20	29.91
Canara	25.25	26.84	25.60	24.50	23.70	24.19	26.21	27.51	25.30	26.95	25.30
UCO	22.03	22.82	23.57	24.05	22.74	22.15	22.39	22.75	22.20	22.39	22.20
United	37.13	35.52	33.45	30.67	29.89	29.38	29.92	29.10	29.88	29.64	29.88
Syndicate	23.90	24.64	25.35	24.65	26.86	25.64	26.01	26.70	26.45	25.49	27.45
Union	22.08	21.50	22.58	21.76	20.70	21.00	23.40	24.45	25.55	26.23	25.55
Indian	21.82	21.81	22.33	22.31	20.93	20.74	21.67	21.03	20.53	22.23	20.53
Dena	33.51	32.28	33.32	32.56	30.91	29.45	30.72	30.60	31.15	31.72	31.15
IOB	21.52	21.19	22.48	22.98	21.71	21.09	22.92	20.39	20.43	19.89	20.43
Allahabad	25.89	26.23	28.00	26.74	26.44	26.99	27.60	27.25	28.58	29.22	28.58
MAHA	36.48	36.90	35.64	33.00	30.04	28.79	31.36	31.94	30.91	32.17	30.91
Total	27.03	27.04	27.30	26.49	24.98	24.77	25.65	25.75	26.97	27.36	26.86

contd....

TABLE VI.7 (contd.)

Fixed Deposits as the Percentage to Total Deposits

Banks	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982
Central	51.87	51.79	51.39	52.26	52.35	54.58	51.59	56.04	54.28	52.86	54.28
India	50.94	49.40	50.68	51.26	53.78	55.03	57.81	57.13	56.64	57.92	56.64
Baroda	49.68	52.50	52.32	52.26	56.33	55.10	54.47	55.74	54.35	56.16	54.35
PNB	45.44	46.70	47.62	47.64	50.46	51.20	52.07	51.89	50.96	51.03	50.96
Canara	51.75	52.46	51.91	53.91	57.93	60.22	58.02	60.54	56.90	53.76	56.90
UCO	50.97	50.44	50.69	49.51	52.87	52.48	51.82	50.64	51.25	49.86	51.25
United	42.00	44.45	45.44	44.31	49.73	51.72	51.06	50.95	51.38	53.34	51.38
Syndicate	60.19	59.77	47.43	58.73	58.09	59.28	60.16	60.02	57.81	58.63	57.81
Union	46.28	48.92	45.27	47.60	50.04	31.35	50.19	50.34	50.42	50.25	50.42
Indian	57.89	60.12	58.94	57.62	62.03	63.46	69.84	62.26	60.64	62.40	60.64
Dena	48.68	49.26	49.38	49.73	52.63	54.57	53.40	52.76	50.67	49.71	50.67
IOB	56.36	56.58	56.03	57.38	61.43	60.21	60.42	63.00	63.27	62.85	63.27
Allahabad	54.99	54.60	53.69	53.83	55.34	55.84	54.33	54.48	50.30	50.13	50.30
MAHA	46.65	48.07	48.63	49.83	51.39	53.31	52.17	50.15	46.86	46.06	46.86
Total	50.40	51.09	50.98	51.62	54.20	55.61	54.79	55.58	54.02	53.37	53.85

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

The change in favour of high cost carrying fixed deposits has been responsible for a substantial increase in the interest expenses of the banks and has resultantly increased the carrying cost of the liabilities in the banks. Thus, it can be concluded that the hypothesis is sustained and that the main causative factor responsible for increased liability cost indicator and declined profit margin is a change in the liability-mix of these banks during the period 1972-82.

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