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Structural Changes of variables of Balance Sheet (During the Period 2001-2011)

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INTRODUCTION

An attempt is made to review the progress of Nationalised banks with regard to their balance sheet indicators and present the major trends observed in recent years. The purpose of this study is to identify empirically and explore the relationship between items of asset and items of liability of nationalised banks of India. We have taken five assets and liability items expressed as a proportion of total assets to eliminate the trend elements and make them comparable across the years.

The Nationalized banks of India as per the Working Group set up by RBI in consultation with GOI and M.S. Verma as its head, former chairman of SBI, stand grouped in five categories:

Category I: Oriental Bank of Commerce

Category II: Bank of Baroda, Canara Bank, Panjab National Bank, Corporation Bank

Category III: Andhra Bank, Bank of India, Bank of Maharastra, Dena Bank ,Syndicate Bank, Category IV: Allahabad Bank, Central Bank of India, Indian Overseas Bank, Punjab & Sind Bank, Union Bank of India, VIJAYA Bank

Category V: Indian Bank, United Bank, United Commercial Bank

Liability side of the Balance Sheet

Capital to Total Assets:

In the year 2000-01, Category I bank had 5.72% of the total assets consisted of total capital that got increased to 6.88 % in 2010-11; the Average of capital to assets ratio was 6.53% with 15.12% Coefficient of Variation In 2001. Category II banks had, in the year 2000-01, 5.15% of the total assets constituted total capital that increased to 5.62 % in 2010-11; however, in 2005-06 it had peaked to 6.77%. The Average of capital to assets ratio was 6.05% with 8.65% Coefficient of Variation. In the year 2000-01, Category III banks had 4.04% of the total assets comprised of total capital that increased to 5.15 % in 2011; however, in 2004 it had peaked to 11.63%. The Average of capital to assets ratio was 5.88% with 4.58% Coefficient of Variation. In the year 2000-01, for the Category IV banks 4.50% of the total assets constituted total capital that increased to 5.48 % in 2011; however, in 2006 it had peaked to 5.56%. The Average of capital to assets ratio was 5.02% with 9.56% Coefficient of Variation. In the year 2000-01, Category V banks had 9.87% of the total assets constituted total capital that decreased to 5.98% in 2011; however, in 2002 it had peaked to 10.42%. The Average of capital to assets ratio was 7.13% with 28.43% Coefficient of Variation.

Deposits to Assets Ratio:

The average of Deposits to Assets Ratio for Category I bank was 87.4% with 1.85% Coefficient of Variation, while it was 84.99% with 1.23% Coefficient of Variation for Category II banks; the same for Category III banks was 86.59% with 1.06% Coefficient of Variation. The Category IV banks compared with that of Category I Bank as it was 87.6% with 2.03% Coefficient of Variation. For Category V Banks the ratio was 82.08 in 2001 which peaked to 88.24% in 2010; this is why the average of Deposits to Assets Ratio for this Category banks was 86.05% with 2.32% Coefficient of Variation. Except for the Category I Bank, the difference between Long term deposits and Short term deposits had ranged between 25% and 27% for other categories of banks. The average of Long term Deposits to Assets Ratio was more than 63% with 4.85% Coefficient of Variation while the average of Short term Deposits to Assets Ratio was more than 23% with 9.28% Coefficient of Variation.

Borrowing to Assets Ratio

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Borrowing portfolio showed a significant increase for all categories of banks during this period. For category I it was 0.84% in the year 2000-01 which increased to 3.56% in 2009-10 and came down to 3.50% in 2010-11. For category II it was 1.94% in the year 2000-01 which went up to 5.65% in 2008-09 & 2009-10 and peaked to 7.49% in the year 2010-11. For category III it was 1.74% in the year 2000-01 which increased to 6.01% in 2009-10 and came down to 5.16% in the year 2010-11. In the year 2000-01 for category IV it was 0.70% which increased to 4.27% in 2007-08 and peaked to 5.65% in the year 2010-11. For category V it was 0.92% in the year 2000-01 which rose to 2.61% in the year 2006-07 and peaked to 2.76% in 2010-11.

Similarly, other liabilities settled on an average at 4% for Category I bank, while for all other Category banks, the average was more than 5% with Coefficient of Variation ranging between 25% and 30%. Asset side of the Balance Sheet

Cash and Bank:

The cash and bank items averaged 10.40% with 16% C.V. for Category I bank, while the same figures for category V banks were less than by 2%. For Category II to IV banks, the cash and bank items averaged 11% with less than 20% C.V.

Investment in Government Securities:

Investment in government securities for all categories of banks ranged between 27% and 34% till the year 2004-05; after that it ranged between 21% and 23%. It means that the nationalised banks started taking risks and invested more in term loans so that profit of such banks could increase tremendously. *Term loans*:

Term loans constituted just 13.6% of the total assets in the year 2000-01 for category I bank; this percentage went on increasing since the year 2002 and it peaked at 37.6% in the year 2009-10. For category II banks, the ratio of Term loans to assets constituted less than 20% till the year 2004-05 and for the rest of the period it averaged 30%. For category III banks, the ratio of Term loans to assets averaged 15% till the year 2004-05 and for the rest of the period it ranged between 24% and 31%. Term loans constituted just 15% of the total assets in the year 2001-02 for category IV banks; this percentage went on increasing since 2003 and it peaked at 35.51% in the year 2010-11. Term loans constituted just 12.5% of the total assets in the year 2001-02 for category V banks; this percentage went on increasing since 2003 and it peaked at 39.8% in 2008-09 & 2010-11. Detailed information is given in Table 1 (i) to Table 1 (v).

Table 1(i) Category I Bank											
Liabilities Capital (Cap. +	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Reserves) [CAP]	5.72	5.02	6.21	6.53	6.15	8.77	7.57	6.37	6.58	5.99	6.88
Deposits [DEP]	91.16	88.30	87.71	86.99	88.50	85.17	86.56	85.83	87.37	87.50	86.19
Long Term Deposits [LT DEP]	67.83	66.12	62.68	62.15	63.49	57.36	60.33	61.89	66.63	65.66	65.02
Short Term Deposits [ST DEP]	23.34	22.18	25.03	24.84	25.01	27.81	26.23	23.95	20.75	21.85	21.16
Borrowing [BORR] Other Liabilities	0.84	1.91	2.25	1.71	1.35	1.49	0.84	2.03	2.64	3.56	3.50
[OTH. LIA]	2.28	4.77	3.83	4.77	4.00	4.57	5.03	5.77	3.41	2.95	3.44
Assets											
Cash & Bank [CB] Investment in	9.79	10.33	7.43	8.78	13.95	9.38	10.16	11.26	10.86	10.62	11.83
Government Securities [G. SEC] Other Securities	27.20	26.51	29.84	30.36	26.91	23.09	22.30	22.70	22.14	23.83	22.68
[OTH. SEC]	18.23	16.03	13.65	10.59	7.01	5.44	4.48	3.71	3.17	2.21	3.39

3.63	18.35	20.69	26.04	28.03	34.95	36.16	35.43	36.34	37.59	34.03
	10.00	20.05	20.0.	20.00	0, 0	20.10	000		0,10,	<i>v</i>
3.39	2.81	2.53	1.88	4.63	4.47	2.85	1.75	1.76	1.57	1.78
										3.63 18.35 20.69 26.04 28.03 34.95 36.16 35.43 36.34 37.59 39 2.81 2.53 1.88 4.63 4.47 2.85 1.75 1.76 1.57

Table 1(ii)											
Category II Banks											
Liabilities	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Capital (Cap. + Reserves)		- 00									
[CAP]	5.15	5.88	6.12	6.42	6.74	6.77	6.46	6.13	5.70	5.53	5.62
Danasita [DED]	86.7	85.9	86.3	84.4	83.9	83.5	84.8	84.2	85.0	85.6	84.1
Deposits [DEP]	2 56.5	9 56.3	3 55.1	8 52.7	2 52.2	2 51.3	8 54.1	1 54.6	0 57.4	0 58.2	9 58.6
Long Term Deposits [LT DEP]	30.3 1	30.3 4	6	52.7 5	52.2 6	1	0	34.0 1	0	30.2	38.0 7
Short Term Deposits [ST	30.1	29.6	31.1	31.7	31.6	32.2	30.7	29.6	27.6	27.3	25.5
DEP]	4	4	7	4	5	1	8	0	1	8	2
Borrowing [BORR]	1.94	2.44	1.19	1.56	1.56	3.24	2.17	2.38	5.65	5.65	- 7.49
Other Liabilities [OTH.	1.94	2.44	1.19	1.50	1.50	3.24	2.17	2.30	5.05	5.05	7.49
LIA]	6.19	5.69	6.35	7.53	7.78	6.47	6.49	7.28	3.65	3.21	2.71
-	0.17	2.07	0.55	7.55	7.70	0.17	0.15	7.20	2.02	3.21	2.71
Assets	16.3	13.0				12.1	11.2	11.2			
Cash & Bank [CB]	0	2	9.23	9.74	9.24	7	5	9	9.75	9.44	9.54
Investment in	Ü	_	7.23	2.71	7.21	,	3		7.75	<i>7</i>	7.51
Government Securities	23.1	23.6	29.3	30.6	28.2	22.5	17.1	21.4	21.6	21.4	19.5
[G. SEC]	3	2	7	2	6	1	9	6	8	8	8
Other Securities [OTH.	11.3	11.0									
SEC]	8	3	9.80	8.99	7.75	5.83	9.52	4.52	4.27	4.87	5.48
	15.7	17.2	18.2	20.4	24.2	26.0	29.5	30.0	29.2	29.7	29.9
Term Loans [T. LOAN]	9	4	0	8	2	7	8	7	2	4	0
Other Assets [OTH.	4.00	1.61	2.60	2.02	2.20	2.62	2.62	2.16	2.22	1.07	1.00
ASST.]	4.89	4.64	3.69	3.93	3.20	2.62	2.62	2.16	2.23	1.87	1.89
Table 1(iii)											
Category III Banks											
Liabilities 2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	ı
Capital (Cap. +	2002	2003	2004	2003	2000	2007	2008	2009	2010	2011	L
Reserves)											
[CAP] 4.04	4.23	4.52	11.63	10.88	5.26	4.82	4.81	4.78	4.53	5.15	
Deposits [DEP] 88.24		85.85	84.74	86.14	86.01	86.98	86.93	87.44	86.3		
Long Term	80.87	03.03	04.74	00.14	80.01	60.96	60.93	07.44	80.5	9 00.0	7
Deposits [LT											
	56.75	55.96	54.55	54.63	52.24	54.77	56.22	60.08	58.4	3 58.7	7
Short Term											
Deposits [ST											
DEP] 29.52	30.12	29.89	30.19	31.51	33.77	32.21	30.71	27.36	27.9	6 28.1	2
Borrowing											
[BORR] 1.74	1.85	2.38	2.35	2.70	1.65	1.94	1.54	4.56	6.01	5.16	
Other Liabilities	7 05	7. 2. 5	1.0=	0.00	= 00			2.55	a n=	• • •	
[OTH. LIA] 5.98	7.05	7.25	1.27	0.28	7.08	6.26	6.72	3.22	3.07	2.81	
Assets											
Cash & Bank	0.05			o == =	0.7-	0.==	10				
[CB] 11.81	9.08	8.12	11.50	8.75	9.69	9.78	10.02	9.49	10.2	4 8.16	

Investment in											
Government											
Securities [G.	20.66	20.01	22.00	21.05	20.04	25.22	22.00	21.70	22.00	22.22	21.04
SEC]	30.66	30.01	32.08	31.85	30.94	25.23	23.00	21.79	22.00	22.33	21.04
Other Securities	40.00		o - /					• • •			• • •
[OTH. SEC]	10.00	9.21	8.76	7.22	6.31	5.45	5.35	3.81	3.67	3.38	3.96
Term Loans [T.											
LOAN]	14.29	14.06	15.30	16.14	19.47	24.29	27.39	27.85	30.83	31.31	26.95
Other Assets											
[OTH. ASST.]	3.87	5.43	4.17	3.70	3.20	3.08	2.42	2.75	2.39	2.04	2.44
Table 1(iv)											
Category IV Bank	S										
Liabilities	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
	2001	2002	2003	2004	2003	2000	2007	2008	2009	2010	2011
Capital (Cap. +	4.50	4 17	4.20	4.00	5 10	5 5 6	E 25	<i>5</i> 40	5 22	5.07	5 40
Reserves) [CAP]	4.50	4.17	4.38	4.88	5.12	5.56	5.25	5.49	5.32	5.07	5.48
Deposits [DEP]	89.41	90.37	89.61	88.58	88.13	86.96	86.71	84.58	86.00	87.08	86.08
Long Term											
Deposits [LT											
DEP]	56.65	57.52	56.59	54.92	53.89	51.23	54.02	55.81	60.18	60.55	60.32
Short Term											
Deposits [ST											
DEP]	32.75	32.86	28.97	33.66	34.24	35.73	32.70	28.77	25.83	26.54	25.76
Borrowing											
[BORR]	0.70	0.38	0.67	0.88	1.11	1.31	1.71	4.27	5.16	4.89	5.65
Other Liabilities	0.70	0.50	0.07	0.00		1.01	1.,1		5.10	1.05	5.05
[OTH. LIA]	5.39	5.08	5.35	5.66	5.64	6.17	6.34	5.66	3.52	2.96	2.79
	3.39	3.00	3.33	3.00	3.04	0.17	0.54	3.00	3.32	2.90	2.19
Assets											
Cash & Bank											
[CB]	17.00	15.86	11.02	10.11	11.89	10.37	15.20	16.08	12.88	13.71	11.39
Investment in											
Government											
Securities [G.											
SEC]	28.01	24.73	32.99	34.31	32.47	27.56	23.41	22.84	24.08	24.79	22.16
Other Securities											
[OTH. SEC]	11.40	16.36	10.73	9.97	7.88	6.41	5.38	4.79	4.32	4.79	5.25
Term Loans [T.	11.10	10.50	10.75	<i>7.71</i>	7.00	0.11	2.20	1.77	2	,,	0.20
LOAN]	16.59	15.50	17.47	19.95	22.65	27.73	31.52	32.82	34.33	33.71	35.15
Other Assets	10.57	13.30	1/.7/	17.75	22.03	21.13	31.32	32.02	57.55	33.71	33.13
	5.38	4.68	3.60	3.52	3.11	3.32	2.61	2.33	2.07	1.93	2.37
[OTH. ASST.]	3.36	4.00	3.00	3.32	3.11	3.32	2.01	2.33	2.07	1.93	2.31
TD 11 4()											
Table 1(v)											
Category V Banks		2002	2002	2004	2005	2006	2005	2000	2000	2010	2011
Liabilities	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Capital (Cap. +											
Reserves) [CAP]	9.87	10.42	8.68	8.60	8.02	4.90	5.42	5.16	5.66	5.67	5.98
Deposits [DEP]	82.08	83.70	84.27	85.14	85.70	87.28	87.32	87.35	88.00	88.24	87.43
Long Term	22.00	22.70	- /		22.70	220	27.02	27.00	20.00	· - ·	
Deposits [LT											
	52 61	52.02	52 25	52 61	54.12	55.05	56 22	50.20	60.61	60.22	60.10
DEP]	53.61	53.92	53.25	53.61	54.12	55.05	56.33	59.29	60.61	60.32	60.19
Short Term											
Deposits [ST	20.47	20.70	21.02	21.50	21.50	20.22	20.00	20.07	27.20	07.01	27.25
DEP]	28.47	29.78	31.02	31.53	31.58	32.23	30.99	28.07	27.39	27.91	27.25
Borrowing	0.92	0.96	0.89	0.59	0.76	2.35	2.61	1.96	2.11	2.23	2.76
-											

[BORR]											
Other Liabilities [OTH. LIA]	7.13	4.93	6.16	5.67	5.52	5.47	4.65	5.53	4.22	3.86	3.83
Assets Cash & Bank											
[CB]	8.90	7.22	8.55	8.60	8.37	7.95	9.12	9.81	9.33	7.40	8.52
Investment in Government											
Securities [G.											
SEC]	30.69	32.54	34.53	36.73	34.88	32.12	26.08	23.06	23.79	23.58	21.36
Other Securities											
[OTH. SEC]	12.67	11.26	10.31	8.84	6.88	5.94	6.88	7.67	3.65	7.57	6.65
Term Loans [T.											
LOAN]	10.97	12.52	15.13	18.68	23.24	28.58	34.51	35.63	39.79	38.00	39.79
Other Assets											
[OTH. ASST.]	13.35	12.18	8.73	6.93	5.15	1.65	0.64	2.26	2.17	1.71	1.96

Source: Self computed based on data provided in Statistical Tables Relating to Banks of India (Various Issues) issued by the Reserve Bank of India.

Table 2 Summarised Statistics of the Components of Balance Sheet.										
	Category	I	Category	II	Category	III	Category	IV	Category	\mathbf{V}
Liabilities Capital (Cap. + Reserves)	Average	C.V.								
[CAP] Deposits	6.53	15.12	6.05	8.65	5.88	45.76	5.02	9.56	7.13	28.43
[DEP] Long Term Deposits [LT	87.39	1.85	84.99	1.23	86.59	1.06	87.59	2.03	86.05	2.35
DEP] Short Term Deposits [ST	63.56	4.85	55.21	4.45	56.47	4.17	56.52	5.29	56.39	5.45
DEP] Borrowing	23.83	9.28	29.77	7.12	30.12	6.36	30.71	11.81	29.66	6.34
[BORR] Other Liabilities	2.01	46.14	3.21	65.15	2.90	54.42	2.43	85.83	1.65	49.96
[Oth. Liab.]	4.07	25.04	5.76	30.74	4.64	55.19	4.96	25.46	5.18	19.47
Assets	Average	C.V.								
Cash & Bank [CB] Investment in Government	10.40	16.27	11.00	19.83	9.70	11.75	13.23	18.75	8.53	9.19
Securities [G. SEC] Other	25.23	12.12	23.54	17.81	26.45	16.62	27.03	16.24	29.03	19.14
Securities [OTH. SEC]	7.99	71.26	7.59	35.39	6.10	37.43	7.94	47.79	8.03	32.06
Term Loans [T. LOAN]	29.20	28.83	24.59	23.10	29.81	88.22	26.13	29.94	26.98	41.80

Other Assets										
[OTH. ASST.]	2.67	40.89	3.07	35.26	3.23	29.55	3.17	34.40	5.16	87.69

Source: Self computed based on Table 1 (i) to Table 1 (v) given above

Interrelationship of Components of Balance Sheet

Detailed correlations between various components of the balance sheet have been computed, the results of which are given in Table 3(i) to Table 3 (v).

Table 3(i)	CATEGORY I: 0	CORRELATIO	NS Marked corre	lation is significa	nt at P<0.05 N= 11	Category 1
Variables	C&B	G.Sec	Oth. Sec	T. Loan	Oth. Asst	
CAP	-0.1232	-0.4435	-0.5215*	0.5879*	0.2885	
DEP	0.0249	0.4855	0.7161*	-0.7695*	0.2011	
BORR	0.1103	-0.2598	-0.4728	0.4168	-0.6610*	
LT. DEP	0.2208	0.1174	0.3208	-0.4011	-0.3558	
ST. DEP	-0.2896	0.1906	0.0754	-0.0024	0.6429*	
OTH. LIA	-0.0206	-0.1031	-0.1991	0.2702	0.0034	

Table 3(ii)
CATEGORY II: CORRELATIONS Marked correlation is significant at P<0.05 N= 11

Variables	C&B	G.Sec	Oth. Sec	T. Loan	Oth. Asst
CAP	-0.3590	0.3017	-0.0312	0.1311	-0.1065
DEP	0.4173	0.0973	0.5966*	-0.6162*	0.5801*
BORR	-0.2918	-0.5592*	-0.6726*	0.6234*	-0.6740*
LT. DEP	0.0006	-0.4249	-0.1726	0.1516	-0.1940
ST. DEP	0.1972	0.5406*	0.4897	-0.4747	0.5055*
OTH. LIA	0.2034	0.5131*	0.4499	-0.4097	0.4835

Table 3(iii)	Category III
CATEGORY III: CORRELATIONS Marked correlation is significant at P<0.05 N= 11	

Variables	C&B	G.Sec	Oth. Sec	T. Loan	Oth. Asst
CAP	0.1601	0.4527	0.0494	-0.1849	0.0409
DEP	0.0879	-0.3545	0.0151	0.3149	-0.1090
BORR	-0.2345	-0.5045*	-0.5961*	0.4513	-0.5741*
LT. DEP	0.0085	-0.3264	-0.1536	0.5077*	-0.1848
ST. DEP	0.0318	0.2313	0.1960	-0.4734	0.1749
OTH. LIA	-0.0553	-0.0375	0.3101	-0.1970	0.3501

Table 3(iv)						Category IV
CATEGORY IV	: CORRELAT	ΓΙΟΝS Marked o	correlation is sign	ificant at P<0.05	N= 11	
Variables	C&B	G.Sec	Oth. Sec	T. Loan	Oth. Asst	
CAP	-0.2668	-0.4073	-0.9012*	0.8598*	-0.7556*	
DEP	0.0110	0.5912*	0.9100*	-0.9250*	0.8180*	
BORR	-0.0013	-0.6653*	-0.7555*	0.8854*	-0.7936*	
LT. DEP	0.1791	-0.4325	-0.1188	0.3191	-0.2893	
ST. DEP	-0.0427	0.4949	0.4620	-0.5931*	0.5964*	
OTH. LIA	0.0877	0.4204	0.3080	-0.4855	0.4452	
Table 3(v)						Category V
	CORRELAT	IONS Marked co	orrelation is signi	ficant at P<0.05	N= 11	
Variables	C&B	G.Sec	Oth. Sec	T. Loan	Oth. Asst	
CAP	-0.3173	0.6706*	0.8260*	-0.9119*	0.9608*	
DEP	0.1471	-0.6611*	-0.8930*	0.9536*	-0.9712*	
BORR	0.1439	-0.8255*	-0.6455*	0.8646*	-0.8060*	
LT. DEP	0.2343	-0.9320*	-0.6501*	0.9160*	-0.7054*	
ST. DEP	-0.2248	0.8129*	0.1036	-0.4729	0.1099	
OTH. LIA	0.2253	0.6509*	0.6561*	-0.7838*	0.6729*	

Table 4. Marked Correlations (Summarised).							
	Category	G Sec.	Oth.Sec.	T. Loan	Oth. Asst		
Capital	I		-0.5215	0.5879			
	IV		-0.901	0.8598	-0.7556		
	V	0.6706	0.826	-0.9119	0.9608		
Deposits	I		0.7161	-0.7695			
	II		0.5966	-0.6162	0.5801		
	IV	0.5912	0.91	-0.925	0.818		
	V	0.6611	-0.893	0.9536	-0.9712		
Borrowings	I				-0.661		
	II	0.5592	-0.6726	0.6234	-0.674		
	III	0.5045	-0.5901	0.4513	-0.5741		
	IV	0.6653	-0.7555	0.8854	-0.7936		
	V	0.8255	-0.6455	0.8646	-0.806		
LT Deposits	III			0.5077			
	V	-0.932	-0.6501	0.916	-0.7054		
CITE D	Ŧ				0.6420		
ST Deposits	I				0.6429		
	II	0.5406			0.5055		
	III			-0.4734			

	IV			-0.5931	0.5964
	V	0.8129			
Oth. Liab	П	0.5131			
	V	0.6509	0.6561	-0.7838	0.6729

Source: Self computed based on Tables 1 (i) to Table (v) given above

Observations

The Cash and Bank items of various categories of banks in general are negligibly associated with the total Deposits. Very little correlation was found in other variables. In case of Category I & IV banks, Capital is negatively associated with other securities and other assets; they were positively associated with Term loan. However, for Category V banks there was the reverse pattern. As regards Deposits, there was positive correlation with investment in Other Securities for Category I, II &IV banks, and Other Assets for Category II and IV banks. Also for category IV banks it was positively related with investment in Government Securities. In case of investment in Other Securities for Category V banks it was negatively associated. However, for Category I II and IV banks it was highly negatively associated with Term Loans. It is observed that there is perceptible change in the pattern of investment for various categories of banks. Total borrowings for all categories of banks were highly negatively associated with investment in Other Securities and Other Assets; there was significant positive correlation with investment in Government Securities and Term Loans as regards to Category II to Category V banks.

On the whole, the balance sheet items of almost all the categories of the nationalised banks of India show proper matching behavior in terms of management of maturity structure of assets and liabilities and hedging activities in the management of risk portfolio. It implies that the process of reform in the banking sector has made a significant dent on this aspect.

To analyse how are the liabilities especially Deposits, Borrowings and Other liabilities hedged, linear regression equations taking asset side variables as dependent, and aforesaid liability side variables individually as independent variables have been computed. The summarised results are given in Table 5(i) to Table 5(v).

Table 5(i) Category I: Regression Summary Independent variables								
		Regressio	Regression Coefficients					
Dependent variables Cash & Bank	Intercept 22.211	Deposit	Borrowings -0.705	Oth.Liab. -0.284	R^2 0.069	F(3,7 df) 0.172	P- Level 3.123	
G. Sec.	-110.088	1.482	0.315	1.264	0.312	0.426	1.755	
Oth. Sec.	-280.168	3.219	-0.592	1.981	0.628	0.061	1.284	
Term Loan Table 5(ii) Category II: Re								
cutegery 11. 10	egression sur	•	ent variables					
		•	n Coefficients					
Dependent variables	Intercept	Deposit	Borrowings	Oth.Liab.	\mathbb{R}^2	F (3,7 df)	P- Level	
Cash & Bank	-425.382	4.634	4.196	5.591	0.578	3.202	0.453	
G. Sec.	122.184	-0.966	-2.416	-1.525	0.319	1.094	3.009	
Oth. Sec.	-47.79	0.759	-1.418	-0.798	0.682	5.016	2.746	
Term Loan	353.035	-3.758	0.066	-1.606	0.647	4.283	2.476	

Table 5(iii)

Category III: Regression Summary

Independent variables

Regression Coefficients

Dependent variables	Intercept	Deposit	Borrowings	Oth.Liab.	\mathbb{R}^2	F (3,7 df)	P- Level
Cash & Bank	2.108	0.153	-0.649	-0.12	0.327	1.133	2.528
G. Sec.	130.917	-1.11	-1.946	-0.577	0.426	1.734	1.386
Oth. Sec.	-3.209	0.141	-0.938	-0.035	0.358	1.3	2.911
Term Loan	-844.912	9.936	6.704	-1.083	0.297	0.986	1.92

Table 5(iv)

Category IV: Regression Summary

Independent variables

Regression Coefficients

Dependent variables	Intercept	Deposit	Borrowings	Oth.Liab.	R^2	F (3,7 df)	P- Level
Cash & Bank	-720.074	7.562	9.531	10.265	0.475	2.115	0.245
G. Sec.	399.357	-3.729	-6.714	-5.923	0.512	2.445	1.579
Oth. Sec.	-443.636	4.803	3.9	4.312	0.873	15.997	0.496
Term Loan	639.55	-6.581	-3.764	-5.611	0.936	34.119	0.074

Table 5(v)

Category V: Regression Summary

Independent variables

Regression Coefficients

Dependent						F (3,7	P-
variables	Intercept	Deposit	Borrowings	Oth.Liab.	\mathbb{R}^2	df)	Level
Cash & Bank	199.722	-2.13	-0.431	-0.392	0.951	45.295	1.119
G. Sec.	-2.441	0.395	-5.329	1.205	0.699	5.427	2.316
Oth. Sec.	129.451	-1.409	0.574	-0.214	0.814	10.214	1.311
Term Loan	-310.64	3.888	3.707	-0.58	0.938	35.512	0.897

Source: Self computed based on Table 1 (i) to Table 1 (v) given above.

Observations:

It is found that R^2 is significantly high in almost every set of regression, though 'F' ratio is not statistically significant in some of the cases at 5 per cent level of significance. The analysis reveals the presence of multicollinearity among the variables. Though it cannot be avoided from this type of time series data, but inferences about the trend of matching of assets and liabilities can be drawn.

The cash and bank balance found to be negatively and statistically significant with other liabilities. This implies that during the period 2001-2011, the period of post reform period. The nationalised banks have emphasised on sufficient liquidity and became cautious against other liabilities. The borrowings and other liabilities have positive and significant effect on other securities in most of the categories of nationalised banks. It implies that in the changed environment, the nationalised banks have emphasised on the interest sensitive securities over the years to strengthen their bottom lines for achieving competitiveness. Thus, it may be well argued that, the long term assets have adequately covered the long term liabilities during the post reform period.