Annex: 1(a)

Loan loss provisioning of Lumbini Bank Ltd

Types of loan	Requirement as per directives	Loan loss provision by the bank				
		2063/64	2064/65	2065/66	2066/67	2067/68
Pass loan	1% of pass loan	1.47	1.68	1.36	2.03	1.01
Sub-standard loan	25% of sub-standard loan	30.76	28.33	23.56	23.65	24.20
Doubtful loan	50% of doubtful loan	50.29	52.67	51.19	47.72	48.94
Bad loan	100% of bad loan	96.89	100.00	99.21	99.00	99.76

Annex: 1(b)

Loan loss provisioning of Everest Bank Ltd

Types of loan	Requirement as per directives	Loan loss provision by the bank				
		2063/64	2064/65	2065/66	2066/67	2067/68
Pass loan	1% of pass loan	1.72	1.63	2.26	1.00	1.00
Sub-standard loan	25% of sub-standard loan	25.00	25.00	25.00	25.00	25.00
Doubtful loan	50% of doubtful loan	50.00	50.00	50.00	50.00	50.00
Bad loan	100% of bad loan	123.78	100.00	100.00	100.00	100.00

Annex: 1(c)

Loan loss provisioning of Nepal SBI Bank Ltd

Types of loan	Requirement as per directives	Loan loss provision by the bank				
		2063/64	2064/65	2065/66	2066/67	2067/68
Pass loan	1% of pass loan	1.19	1.19	0.94	0.95	0.96
Sub-standard loan	25% of sub-standard loan	26.11	22.41	13.39	20.94	17.71
Doubtfulloan	50%ofdoubtfulloan	50.00	52.17	48.39	15.67	29.18
Bad loan	100% of bad loan	100.22	89.22	95.83	98.00	99.13

Loan loss provisioning of Himalayan Bank Ltd

Types of loan	Requirement as per directives	Loan loss provision by the bank				
		2063/64	2064/65	2065/66	2066/67	2067/68
Pass loan	1% of pass loan	0.99	1.00	1.00	1.00	1.01
Sub-standard loan	25% of sub-standard loan	24.29	27.92	26.08	60.20	57.78
Doubtfulloan	50%ofdoubtfulloan	48.22	49.13	50.71	47.23	68.16
Bad loan	100% of bad loan	94.50	96.60	97.79	99.54	100.26

Annex: 1(e)

Loan loss provisioning of Nabil Bank Ltd

Types of loan	Requirement as per directives	Loan loss provision by the bank				
		2063/64	2064/65	2065/66	2066/67	2067/68
Pass loan	1% of pass loan	1.95	1.60	1.55	2.18	1.64
Sub-standard loan	25% of sub-standard loan	24.08	24.01	23.22	31.10	67.94
Doubtful loan	50% of doubtful loan	49.55	48.95	49.40	73.21	47.00
Bad loan	100% of bad loan	69.95	85.14	97.19	97.05	94.55

Annex 2 (a)

Lumbini Bank Limited

Year	Performing Assets				Non Performing Assets							
	Pass loan		Restructed Loan		Sub-standard Loan		Doubtful loan		Bad Loan		Total Loan	
2063/64	1,843,850,969	80.68	0	0.00	286,648,537	12.54	140,207,147	6.13	14,785,697	0.65	2,285,492,350	
2064/65	2,315,583,586	88.30	0	0.00	158,672,493	6.05	108,390,314	4.13	39,713,965	1.51	2,622,360,358	
2065/66	2,985,450,017	92.64	0	0.00	16,643,478	0.52	43,877,357	1.36	176,777,500	5.49	3,222,748,353	
2066/67	2,887,539,940	78.36	236,466,495	6.42	59,576,995	1.62	100,905,248	2.74	400,646,029	10.87	3,685,134,707	
2067/68	2,777,631,557	64.27	204,712,430	4.74	52,430,788	1.21	26,561,929	0.61	1,260,250,073	29.16	4,321,586,777	
Sum	12,810,056,069 404.24		441,178,925	11.15	573,972,291	21.94	419,941,995	14.98	1,892,173,264 47.68		16,137,322,545	
Average		80.85		5.58		4.39		3.00		9.54		

Annex 2 (b)

Everest Bank Limited

Year	Performing Assets				Non Performing Assets							
	Pass loan		Restructed Loan		Sub-standard Loan		Doubtful loan		Bad Loan		TotalLoan	
2063/64	4,001,840,315	98.95		0.00	15,732,509	0.39	13,328,276	0.33	13,327,331	0.33	4,044,228,431	
2064/65	4,938,390,206	97.80		0.00	41,954,709	0.83	38,055,772	0.75	31,180,622	0.62	5,049,581,309	
2065/66	5,991,085,718	98.28		0.00	110,822,572	1.82	40,494,733	0.66	53,178,064	0.87	6,095,841,087	
2066/67	7,453,205,999	94.34	318,076,527	4.03	4,408,738	0.06	1,977,471	0.03	122,421,536	1.55	7,900,090,271	
2067/68	9,757,195,136	96.26	249,823,522	2.46	10,669,326	0.11	683,784	0.01	117,882,680	1.16	10,136,254,448	
Sum	32,141,717,374 485.64		567,900,049	6.49	183,587,854	3.20	94,540,036	1.78	337,990,233	4.53	33,225,995,546	
Average		97.13		3.25		0.64		0.36		0.91		

Annex 2 (c)
Nepal SBI Bank Limited

Year	Performing Asset				Non Performing Asset						
	Pass loan		Restricted Loan		Sub-standard Loan		Doubtful loan		Loss Loan		Total Loan
2063/64	3,937,074,298	85.88	357,554,240	7.80	89,285,664	1.95	61,821,433	1.35	138,659,304	3.02	4,584,394,939
2064/65	4,144,846,125	86.43	224,044,020	4.67	121,498,598	2.53	166,868,350	3.48	138,580,134	2.89	4,795,837,227
2065/66	4,762,590,360	86.09	423,421,920	7.65	1,116,600	0.02	69,303,360	1.25	275,401,498	4.98	5,531,833,738
2066/67	5,886,791,147	87.35	411,539,060	6.11	11,912,170	0.18	6,515,490	0.10	422,589,350	6.27	6,739,347,217
2067/68	7,393,297,710	89.71	342,821,915	4.16	1,797,016	0.02	3,842,595	0.05	499,697,308	6.06	8,241,456,544
Sum	26,124,599,640 435.46		1,759,381,155	30.39	225,610,048	4.70	308,351,228	6.22	1,474,927,594	23.23	29,892,869,665
		87.09		6.08		0.94		1.24		4.65	

Annex 2 (d)

Himalayan Bank Limited

Year	Performing Asset				Non Performing Asset						
	Pass loan		Restructed Loan		Sub-standard Loan		Doubtful loan		Bad Loan		Total Loan
2063/64	8,401,096,542	87.90	358,431,428	3.75	246,746,162	2.58	140,455,627	1.47	410,408,245	4.29	9,557,138,004
2064/65	9,566,445,731	88.21	185,313,770	1.71	224,318,058	2.07	375,017,864	3.46	493,503,565	4.55	10,844,598,988
2065/66	11,275,992,182	87.28	496,176,174	3.84	423,163,354	3.28	54,474,884	0.42	669,824,400	5.18	12,919,630,994
2066/67	11,821,694,843	87.89	628,126,104	4.67	69,549,654	0.52	242,116,379	1.80	689,681,290	5.13	13,451,168,267
2067/68	14,055,103,815	89.17	666,114,444	4.23	107,227,888	0.68	228,498,188	1.45	705,031,747	4.47	15,761,976,082
Sum	55,120,333,113 440.45		2,334,161,920	18.20	1,071,005,116	9.12	1,040,562,942	8.60	2,968,449,247	23.63	62,534,512,335
Average		88.09		3.64		1.82		1.72		4.73	

Annex 2 (e)

Nabil Bank Limited

Year	Performing Asset				Non Performing Asset								
	Pass loan		Restructed Loan		Sub-standard Loan		Doubtful loan		Bad Loan		Total Loan
2063/64	7,244,970,881	92.86		0.00	260,277,239	3.34	230,936,540	2.96	65,663,903	0.84	7,801,848,563
2064/65	7,664,053,458	94.46		0.00	76,311,974	0.94	279,117,410	3.44	94,201,379	1.16	8,113,684,221
2065/66	8,261,978,118	96.65		0.00	22,139,923	0.26	65,552,224	0.77	198,986,773	2.33	8,548,657,038
2066/67	10,668,029,166	97.45	134,200,518	1.23	22,072,562	0.20	1,934,092	0.02	120,500,239	1.10	10,946,736,577
2067/68	13,010,864,147	97.98	85,293,632	0.64	62,665,914	0.47	29,565,952	0.22	90,392,614	0.68	13,278,782,259
Sum	46,849,895,770 479.40		219,494,150	1.87	443,467,612	5.21	607,106,218	7.41	569,744,908	6.11	48,689,708,658
Average		95.88		0.93		1.04		1.48		1.22	

Annex 3 (a)

Calculation of Karl person's correlation coefficient between ROA and NPA of Lumbini Bank Limited

X = Net Profit to Total Assets (ROA)

Y = NPA to Total Lending (NPA)

Fiscal Year	X	Y	X2	Y2	XY
2063/64	-3.2	19.32	10.24	373.2624	-61.824
2064/65	2.59	11.7	6.7081	136.89	30.303
2065/66	0.43	7.36	0.1849	54.1696	3.1648
2066/67	-4.38	15.23	19.1844	231.9529	-66.707
2067/68	-18.92	30.99	357.966	960.3801	-586.33
Sum	X = -23.48	Y = 84.6	X^2 = 394.284	Y$_2$ = 1756.655	XY = -681.39

Karl Person's correlation coefficient (r)

$$r = \frac{N\Sigma XY - \Sigma X\Sigma Y}{\sqrt{N\Sigma X^2 - (\Sigma X)^2}\ \sqrt{N\Sigma Y^2 - (\Sigma Y)^2}}$$

$$= \frac{5 \times -681.39 - (-23.48 \times 84.6)}{\sqrt{5 \times 394.284 - (-23.48)^2}\ \sqrt{5 \times 1756.655 - (84.6)^2}}$$

$$= -0.93$$

Probable error (P.E.)

$$P.E. = \frac{0.6745\ (1-r^2)}{\sqrt{n}}$$

$$= \frac{0.67.45 \times 1 - (-0.93)^2}{\sqrt{5}}$$

$$= 0.04$$

Calculation of Karl person's correlation coefficient between ROA and

NPA of Everest Bank Limited

X = Net Profit to Total Assets (ROA)

Y = NPA to Total Lending (NPA)

Fiscal Year	X	Y	X2	Y2	XY
2063/64	1.29	1.04	1.6641	1.0816	1.3416
2064/65	1.17	2.2	1.3689	4.84	2.574
2065/66	1.49	1.7	2.2201	2.89	2.533
2066/67	1.45	1.6	2.1025	2.56	2.32
2067/68	1.5	1.27	2.25	1.6129	1.905
Sum	X = 6.9	Y = 7.81	X$_2$ = 9.6056	Y$_2$ = 12.9845	XY = 10.6736

Karl Person's correlation coefficient   (r)

$$r = \frac{N\Sigma XY - \Sigma X\Sigma Y}{\sqrt{N\Sigma X^2 - (\Sigma X)^2} \sqrt{N\Sigma Y^2 - (\Sigma Y)^2}}$$

$$= \frac{5 \times 10.6736 - 6.9 \times 7.81}{\sqrt{5\times 9.6056 - (6.9)^2} \sqrt{5\times 12.98455 - (7.81)^2}}$$

$$= -0.41$$

Probable error (P.E.)

$$P.E. = \frac{0.6745 \ (1-r^2)}{\sqrt{n}}$$

$$= \frac{0.67.45 \times 1 - (-0.41)^2}{\sqrt{5}}$$

$$= 0.25$$

Calculation of Karl person's correlation coefficient between ROA and NPA of Nepal SBI Bank Limited

X = Net Profit to Total Assets (ROA)

Y = NPA to Total Lending (NPA)

Fiscal Year	X	Y	X2	Y2	XY
2063/64	0.58	6.32	0.3364	39.9424	3.6656
2064/65	0.64	8.9	0.4096	79.21	5.696
2065/66	0.72	6.25	0.5184	39.0625	4.5
2066/67	0.55	6.54	0.3025	42.7716	3.597
2067/68	0.9	6.13	0.81	37.5769	5.517
Sum	X = 3.39	Y = 34.14	X_2 = 2.3769	Y_2 = 238.5634	XY =22.9756

Karl Person's correlation coefficient (r)

$$r = \frac{N\Sigma XY - \Sigma X\Sigma Y}{\sqrt{N\Sigma X^2 - (\Sigma X)^2}\ \sqrt{N\Sigma Y^2 - (\Sigma Y)^2}}$$

$$= \frac{5 \times 22.9756 - 3.39 \times 34.19}{\sqrt{5\times 2.3769 - (3.39)^2}\ \sqrt{5\times 238.5634 - (34.19)^2}}$$

$$= -0.26$$

Probable error (P.E.)

$$P.E. = \frac{0.6745\ (1\text{-}r^2)}{\sqrt{n}}$$

$$= \frac{0.67.45 \times 1 - (-0.26)^2}{\sqrt{5}}$$

$$= 0.28$$

Annex 3 (d)

Calculation of Karl person's correlation coefficient between ROA and NPA of Himalayan Bank Limited

X = Net Profit to Total Assets (ROA)

Y = NPA to Total Lending (NPA)

Fiscal Year	X	Y	X2	Y2	XY
2063/64	1.14	12.1	1.2996	146.41	13.794
2064/65	0.91	10.08	0.8281	101.6064	9.1728
2065/66	1.06	8.88	1.1236	78.8544	9.4128
2066/67	1.11	7.44	1.2321	55.3536	8.2584
2067/68	1.55	6.6	2.4025	43.56	10.23
Sum	X = 5.77	Y = 45.1	X_2 = 6.8859	Y_2 = 425.7844	XY 50.868

Karl Person's correlation coefficient (r)

$$r = \frac{N\Sigma XY - \Sigma X \Sigma Y}{\sqrt{N\Sigma X^2 - (\Sigma X)^2} \sqrt{N\Sigma Y^2 - (\Sigma Y)^2}}$$

$$= \frac{5 \times 50.868 - 5.77 \times 45.1}{\sqrt{5 \times 6.8859 - (5.77)^2} \sqrt{5 \times 425.7849 - (45.1)^2}}$$

$$= -0.57$$

Probable error (P.E.)

$$P.E. = \frac{0.6745 \, (1-r^2)}{\sqrt{n}}$$

$$= \frac{0.67.45 \times 1 - (-0.57)^2}{\sqrt{5}}$$

$$= 0.20$$

Calculation of Karl person's correlation coefficient between ROA and NPA of Nabil Bank Limited

X = Net Profit to Total Assets (ROA)

Y = NPA to Total Lending (NPA)

Fiscal Year	X	Y	X2	Y2	XY
2063/64	1.53	7.14	2.3409	50.9796	10.9242
2064/65	2.43	5.54	5.9049	30.6916	13.4622
2065/66	2.73	3.35	7.4529	11.2225	9.1455
2066/67	3.06	1.32	9.3636	1.7424	4.0392
2067/68	3.23	1.38	10.4329	1.9044	4.4574
Sum	X = 12.98	Y = 18.73	X2 = 35.4952	Y2 = 96.5405	XY = 42.0285

Karl Person's correlation coefficient   (r)

$$r = \frac{N\Sigma XY - \Sigma X \Sigma Y}{\sqrt{N\Sigma X^2 - (\Sigma X)^2} \ \sqrt{N\Sigma Y^2 - (\Sigma Y)^2}}$$

$$= \frac{5 \times 42.0285 - 12.98 \times 18.73}{\sqrt{5 \times 35.4952 - (12.98)^2} \ \sqrt{5 \times 96.5405 - (18.73)^2}}$$

$$= -0.96$$

Probable error (P.E.)

$$P.E. = \frac{0.6745 \ (1-r^2)}{\sqrt{n}}$$

$$= \frac{0.67.45 \times 1 - (-0.96)^2}{\sqrt{5}}$$

$$= 0.025$$

Calculation of Karl person's correlation coefficient between Total Lending and Total NPA of Lumbini Bank Limited

X = Total lending of Bank

Y = Total NPA of Bank   Amount in 100 million

Fiscal Year	X	Y	X2	Y2	XY
2063/64	22.85	4.42	522.1225	19.5364	100.997
2064/65	26.22	3.07	687.4884	9.4249	80.4954
2065/66	32.22	2.37	1038.1284	5.6169	76.3614
2066/67	36.85	5.61	1357.9225	31.4721	206.7285
2067/68	43.21	13.39	1867.1041	179.292	578.5819
Sum	X = 161.35	Y = 28.86	X2 = 5472.7659	Y2 = 245.342	XY = 1043.1642

Karl Person's correlation coefficient   (r)

$$r = \frac{N\Sigma XY - \Sigma X\Sigma Y}{\sqrt{N\Sigma X^2 - (\Sigma X)^2}\ \sqrt{N\Sigma Y^2 - (\Sigma Y)^2}}$$

$$= \frac{5 \times 1043.1642 - 161.35 \times 28.86}{\sqrt{5 \times 5472.7659 - (161.35)^2}\ \sqrt{5 \times 245.342 - (28.86)^2}}$$

$$=\ 0.77$$

Probable error (P.E.)

$$P.E. = \frac{0.6745\ (1 - r^2)}{\sqrt{n}}$$

$$= \frac{0.67.45 \times 1 - (0.60)^2}{\sqrt{5}}$$

$$= 0.12$$

ANNEX 4 (b)

Calculation of Karl person's correlation coefficient between Total Lending and Total NPA of Everest Bank Limited

X = Total lending of Bank

Y = Total NPA of Bank   Amount in 10 million

Fiscal Year	X	Y	X2	Y2	XY
2063/64	404.42	4.24	163555.54	17.98	1714.74
2064/65	504.96	11.12	254984.60	123.65	5615.16
2065/66	609.58	10.48	371587.78	109.83	6388.40
2066/67	790.01	12.88	624115.80	165.89	10175.33
2067/68	1036.62	12.92	1074581.02	166.93	13393.13
Sum	X = 3345.59	Y = 51.64	X_2 =2488824.74	Y_2 =584.28	XY = 37286.75

Karl Person's correlation coefficient   (r)

$$r = \frac{N\Sigma XY - \Sigma X\Sigma Y}{\sqrt{N\Sigma X^2 - (\Sigma X)^2} \ \sqrt{N\Sigma Y^2 - (\Sigma Y)^2}}$$

$$= \frac{5 \times 37286.75 - 3345.59 \times 51.64}{\sqrt{5 \times 2488829.79 - (3345.59)^2} \ \sqrt{5 \times 584.28 - (51.64)^2}}$$

$$= 0.77$$

Probable error (P.E.)

$$P.E. = \frac{0.6745 \ (1 - r^2)}{\sqrt{n}}$$

$$= \frac{0.67.45 \times 1 - (0.77)^2}{\sqrt{5}}$$

$$= 0.12$$

ANNEX 4 (c)

Calculation of Karl person's correlation coefficient between Total Lending and Total NPA of Nepal SBI Bank Limited

X = Total lending of Bank

Y = Total NPA of Bank   Amount in 100 million

Fiscal Year	X	Y	X2	Y2	XY
2063/64	45.84	2.9	2101.31	8.41	132.936
2064/65	47.96	4.27	2300.16	18.2329	204.789
2065/66	55.32	3.46	3060.3	11.9716	191.407
2066/67	67.39	4.41	4541.41	19.4481	297.19
2067/68	82.41	5.05	6791.41	25.5025	416.171
Sum	X = 298.92	Y = 20.09	X2 = 18794.6	Y2 = 83.56	XY = 1242.49

Karl Person's correlation coefficient   (r)

$$r = \frac{N\Sigma XY - \Sigma X\Sigma Y}{\sqrt{N\Sigma X^2 - (\Sigma X)^2}\ \sqrt{N\Sigma Y^2 - (\Sigma Y)^2}}$$

$$= \frac{5 \times 1242.49 - 298.92 \times 20.09}{\sqrt{5\times 18794.6 - (298.92)^2}\ \sqrt{5\times 83.56 - (20.09)^2}}$$

$$=\ 0.10$$

Probable error (P.E.)

$$P.E. = \frac{0.6745\ (1\text{-}r^2)}{\sqrt{n}}$$

$$= \frac{0.67.45 \times 1 - (0.10)^2}{\sqrt{5}}$$

$$= 0.17$$

Calculation of Karl person's correlation coefficient between Total Lending and Total NPA of Himalayan Bank Limited

X = Total lending of Bank

Y = Total NPA of Bank

Amount 100 in million

Fiscal Year	X	Y	X2	Y2	XY
2063/64	95.57	11.56	9133.6249	133.634	1104.7892
2064/65	108.44	10.93	11759.2336	119.465	1185.2492
2065/66	129.2	11.47	16692.64	131.561	1481.924
2066/67	134.51	10.01	18092.9401	100.2	1346.4451
2067/68	157.62	10.4	24844.0644	108.16	1639.248
Sum	X = 625.34	Y = 54.37	X₂ ⁼80522.503	Y₂ ⁼593.02	XY = 6757.6555

Karl Person's correlation coefficient   (r)

$$r = \frac{N\Sigma XY - \Sigma X \Sigma Y}{\sqrt{N\Sigma X^2 - (\Sigma X)^2} \sqrt{N\Sigma Y^2 - (\Sigma Y)^2}}$$

$$= \frac{5 \times 6757.6565 - 625.34 \times 54.37}{\sqrt{5 \times 80522.503 - (625.34)^2} \sqrt{5 \times 593.02 - (54.37)^2}}$$

$$= \textbf{-} 0.66$$

Probable error (P.E.)

$$P.E. = \frac{0.6745 (1 - r^2)}{\sqrt{n}}$$

$$= \frac{0.67.45 \times 1 - (-0.66)^2}{\sqrt{5}}$$

$$= 0.17$$

Calculation of Karl person's correlation coefficient between Total Lending and Total NPA of Nabil Bank Limited

X = Total lending of Bank

Y = Total NPA of Bank   Amount 100 in million

Fiscal Year	X	Y	X2	Y2	XY
2063/64	78.02	5.56	6087.12	30.9136	433.7912
2064/65	81.14	4.5	6583.7	20.25	365.13
2065/66	85.49	2.87	7308.54	8.2369	245.3563
2066/67	109.47	1.45	11983.68	2.1025	158.7315
2067/68	132.79	1.82	17633.18	3.3124	241.6778
Sum	X = 486.91	Y = 16.2	X$_2$ = 49596.23	Y$_2$ = 64.8154	XY = 1444.687

Karl Person's correlation coefficient   (r)

$$r = \frac{N\Sigma XY - \Sigma X \Sigma Y}{\sqrt{N\Sigma X^2 - (\Sigma X)^2} \ \sqrt{N\Sigma Y^2 - (\Sigma Y)^2}}$$

$$= \frac{5 \times 1444.687 - 486.91 \times 16.2}{\sqrt{5 \times 49596.23 - (486.91)^2} \ \sqrt{5 \times 64.8154 - (16.2)^2}}$$

$$= -0.81$$

Probable error (P.E.)

$$P.E. = \frac{0.6745 \ (1 - r^2)}{\sqrt{n}}$$

$$= \frac{0.67.45 \times 1 - (-0.81)^2}{\sqrt{5}}$$

$$= 0.3439$$