FINANCIAL PERFORMANCE OF NEPALESE COMMERCIAL BANKS

(A Comparative Study on Nepal Arab Bank Limited. and Nepal Investment Bank Ltd)

A THESIS

Submitted By:
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Patandhoka, Lalitpur
March, 2010

VIVA-VOCE SHEET

We have conducted the viva-voce sheet examination of the thesis

Submitted by
Preeti Shrestha

Entitled
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(A Comparative Study on Nepal Arab Bank Limited. and Nepal Investment Bank Ltd)

and found the thesis to be the original work of the student and written in according to the prescribed format. We recommend the thesis to be accepted as partial fulfillment of the requirements for the Degree of Master's in Business Studies (MBS)

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This is certify that the thesis

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FINANCIAL PERFORMANCE OF NEPALESE COMMERCIAL BANKS
(A Comparative Study on Nepal Arab Bank Limited and Nepal Investment Bank Ltd)

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DECLARATION

I hereby declare that the work reported in this thesis entitled **Financial Performance of Nepalese Commercial Banks (A Comparative Study on Nepal Arab Bank Limited and Nepal Investment Bank Ltd.)** submitted to Patan Multiple Campus, Faculty of Management, Tribhuvan University, is my original work done in the form of partial fulfillment of the requirements of the Master's Degree of Business Study under the supervision of Mr. Yug Raj Bhandari of **Patan Multiple Campus**, Tribhuvan University.

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ABBREVIATIONS

A.D.	Anno Domino
C.B.	Commercial Bank
CRR	Cash Reserve Ratio
C.V.	Coefficient of Variation
Co	Company
DPS	Dividend per Share
Etc	Etcetera
F.Y	Fiscal Year
GDP	Gross Domestic Product
i.e	That is
IFIC	International Finance Investment and Commercial Bank Limited
IMF	International Monetary Fund
JVB	Joint Venture Bank
Ltd.	Limited
M/B	Market to Book
MVPS	Market Value per Share
NABIL	Nabil Bank Limited
N.B.	Nepal Bank Limited
NIBL	Nepal Invesment Bank Ltd.
NRB	Nepal Rastra Bank Limited
P.E	Probable Error
RBB	Rastriya Banijya Bank
ROA	Return on Assets
S.D.	Standard Deviation
T.U.	Tribhuvan University
US$	United States Dollar

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ANNEX A – 1

Calculation of Correlation between Total Deposits(x) and Loan and Advance(y):

For NABIL:

Fiscal Year	x	y	d1=x-a	d2=y-a	$d1^2$	$d2^2$	d1d2
2004/05	14856.61	10586.17	-8755.67	-4959.61	76661757.15	24597731.35	43424708.49
2005/06	19347.40	12922.54	-3994.88	-2623.24	15959066.21	6881388.09	10479529.01
2006/07	**23342.28**	**15545.78**	0	0	0	0	0
2007/08	31915.04	21365.05	8572.76	5819.27	73492214.02	33863903.33	49887205.09
2008/09	37348.25	27589.93	14005.97	12044.15	196167195.6	145061549.20	168690003.60
Total			**9028.18**	**10280.57**	**362280233**	**210404572**	**27248144**

$$r_{12} = \frac{n\sum d_1 d_2 - (\sum d_1)(\sum d_2}{\sqrt{n\sum {d_1}^2 - (\sum d_1)^2}\sqrt{n\sum d_{2^2} - (\sum d_2)^2}}$$

Where,

n=5

a= assumed mean

Karl's Pearson's Coefficient of Correlation

$$r_{12} = \frac{5x272481446.2 - (9028.18 \times 10280.57)}{\sqrt{5x362280233 - (9028.18)^2}\sqrt{5x210404572 - (10280.57)^2}}$$

$$r_{12} = \frac{1269592395}{41591.98 \times 30762.52}$$

$$= 0.99$$

$$r^2 = 0.9846$$

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

$$= 0.6745x\frac{1-0.9846}{\sqrt{5}}$$

$$= 0.0046$$

$$6xP.E(r) = 0.0279$$

ANNEX A – 2

Calculation of Correlation between Total Deposits(x) and Loan and Advance(y):

For NIBL:

Fiscal Year	x	y	d1=x-a	d2=y-a	$d1^2$	$d2^2$	d1d2
2004/05	14254.58	10126.06	-10234.28	-7160.37	104740487.10	51270898.54	73281231.48
2005/06	18927.31	12776.21	-5561.55	-4510.22	30930838.4	20342084.045	25083814.04
2006/07	**24488.86**	**17286.43**	0	0	0	0	0
2007/08	34451.53	26996.65	9962.67	9710.22	99254793.53	94288372.45	96739717.49
2008/09	46698.10	36241.20	22209.24	18954.77	493250341.4	359283305.8	420971036.10
Total			**16376.08**	**16994.4**	**728176460.4**	**525184661.20**	**616075799.10**

$$r_{12} = \frac{5x616075799.10 - (16376.08 \times 16994.40)}{\sqrt{5x728176460.40 - (16376.08)^2}\sqrt{5x525184661.20 - (16994.4)^2}}$$

$$= \frac{2802077342}{58075x48343.70}$$

$$= 0.99$$

$$r^2 = 0.9846$$

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

$$= 0.6745x\frac{1-0.9846}{\sqrt{5}}$$

$$= 0.0046$$

$$6xP.E(r) = 0.0279$$

ANNEX A – 3

Calculation of Correlation between Total Deposit and long-term Investment

For NABIL:

Fiscal Year	X	Y	d1=x-a	d2=y-a	$d1^2$	$d2^2$	d1d2
2004/05	14586.61	4275.53	-8755.67	-4669.78	76661757.15	21806845.25	40887052.65
2005/06	19347.40	6178.53	-3994.88	-2766.78	19959066.21	7655071.56	11052954.09
2006/07	23342.28	8945.31	0	0	73492214.02	0	0
2007/08	31915.04	9939.77	8572.76	994.46	0	988950.69	9884703.67
2008/09	37348.25	10826.38	14005.97	1881.07	196167195.60	3538424.34	26346209.99
			9828.18	**-4561.03**	**362280233**	**33989291.84**	**88170920.40**

$$r_{12} = \frac{5x88170920.4 - (9828.18 \times -4561.03)}{\sqrt{5x362280233 - (9828.18)^2}\sqrt{5x33989291.84 - (-4561.03)^2}}$$

$$= \frac{485681225.80}{41410.24x12212.43}$$

$$= 0.9603$$

$$r^2 = 0.9223$$

$$P.E(r) = 0.6745x\frac{1-0.9223}{\sqrt{5}}$$

$$= 0.0234$$

$$6xP.E(r) = 0.1406$$

ANNEX A – 4

Calculation of Correlation between Total Deposit and long-term Investment

For NIBL:

Fiscal Year	X	Y	d_1=x-a	d_2=y-a	d_1^2	d_2^2	d_1d_2
2004/05	14254.58	3934.19	-10234.28	-2571.49	104740487.10	6612560.82	26317348.68
2005/06	18927.31	5602.87	-5561.55	-902.81	30930838.40	81565.89	5021022.95
2006/07	24488.86	6505.68	0	0	0	0	0
2007/08	34451.73	6874.02	9962.87	368.34	99258778.64	135674.35	3669723.54
2008/09	46698.10	7399.81	22209.24	894.13	493250341.4	799468.46	19857947.76
Total			**16376.28**	**-2211.83**	**728180449.5**	**8362769.52**	**54866042.93**

$$r_{12} = \frac{5x54866042.93 - (16376.28 \times 2211.83)}{\sqrt{5x728180445.50 - (16376.28)^2}\, x \sqrt{5x8362769.52 - (-2211.83)^2}}$$

$$r_{12} = \frac{310551762}{58075.12 \times 6076.32}$$
$$= 0.9670$$

$$r^2 = 0.7744$$

$$P.E(r) = 0.6745x\frac{1-0.7744}{2.2361}$$

$$= 0.0680$$

$$6xP.E(r) = 0.408$$

ANNEX A – 5

Calculation of Correlation between long-term Investment and Net Profit

For NABIL:

Fiscal Year	X	Y	d1=x-a	d2=y-a	$d1^2$	$d2^2$	d1d2
2004/05	4275.53	520.11	-4669.78	-153.85	21806845.25	23669.82	718445.65
2005/06	6178.53	635.26	-2766.78	-38.7	7655071.57	1497.69	107074.38
2006/07	8945.31	673.96	0	0	0	0	0
2007/08	9939.77	746.47	994.46	72.51	988950.69	5257.70	72018.29
2008/09	10826.38	1031.05	1881.07	357.09	3538424.34	127513.27	671711.28
Total			**-4561.03**	**237.05**	**33989291.85**	**157938.48**	**1569249.61**

$$r_{12} = \frac{5x1569249.61 - (-4561.03) \times 237.05)}{\sqrt{5x33989291.85 - (-4561.03)^2}\sqrt{5x157938.48 - (237.05)^2}}$$

$$= \frac{8927440.212}{12212.43 \times 856.44}$$

$$= 0.8535$$

$$r^2 = 0.7284$$

$$P.E(r) = 0.6745x\frac{1-0.8535}{2.2361}$$

$$= 0.0441$$

$$6xP.E(r) = 0.2651$$

ANNEX A – 6

Calculation of Correlation between long-term Investment and Net Profit

For NIBL:

Fiscal Year	X	Y	d1=x-a	d2=y-a	$d1^2$	$d2^2$	d1d2
2004/05	3934.14	232.15	-2571.49	-269.25	6612560.82	72495.82	692373.68
2005/06	5602.87	350.54	-902.81	-150.86	815065.89	22758.74	136197.92
2006/07	6505.68	501.4	0	0	0	0	0
2007/08	6874.02	696.73	368.34	195.33	135674.35	38153.81	71947.85
2008/09	7399.81	894.13	984.13	399.22	799468.46	159376.61	356954.58
Total			**-2211.83**	**174.44**	**8362769.52**	**292784.72**	**1257474.03**

$$r_{12} = \frac{5x1257474.03 - (2211.83 \times 174.44)}{\sqrt{5x8362769.52 - (-2211.83)^2}.\sqrt{5x292784.72 - (174.44)^2}}$$

$$= \frac{6673201.77}{6076.32x1197.28}$$

$$= 0.91$$

$$r^2 = 0.8413$$

$$P.E(r) = 0.6745x\frac{1-0.8413}{2.2361}$$

$$= 0.0478$$

$$6xP.E(r) = 0.2872$$

ANNEX A – 7

Calculation of Correlation between Loan and Advances to Net Profit

For NABIL:

Fiscal Year	X	Y	d1=x-a	d2=y-a	$d1^2$	$d2^2$	d1d2
2004/05	10586.17	520.11	-4959.61	-153.85	24597731.35	23669.82	763035.99
2005/06	12922.54	635.26	-2623.24	-38.7	6881388.09	1497.69	101519.39
2006/07	15545.78	673.96	0	0	0	0	0
2007/08	21365.05	746.47	5819.27	72.51	33863903.33	5257.70	421955.27
2008/09	27589.93	1031.05	12044.15	357.09	145061549.20	127513.27	4300845.52
Total			**10280.57**	**237.05**	**210404572**	**157938.48**	**5587356.174**

$$r_{12} = \frac{5x5587356.174 - (10280.57 \times 237.05)}{\sqrt{5x210404572 - (10280.57)^2} \times \sqrt{5x157938.48 - (237.05)^2}}$$

$$= \frac{25499771.75}{30762.52x856.44}$$

$$= 0.96$$

$$r^2 = 0.9216$$

$$P.E(r) = 0.6745x\frac{1-0.9216}{2.2361}$$

$$= 0.0236$$

$$6xP.E(r) = 0.1418$$

ANNEX A – 8

Calculation of Correlation between Loan and Advances and Net Profit

For NIBL:

Fiscal Year	X	Y	d1=x-a	d2=y-a	$d1^2$	$d2^2$	d1d2
2003/04	10126.06	232.15	-7160.37	-269.25	51270898.54	72495.56	1927929.62
2004/05	12776.21	350.54	-150.86	-150.86	20342084.45	22758.74	680411.78
2005/06	17286.43	501.40	0	0	0	0	0
2006/07	26996.65	696.73	9710.22	94288372.45	94288372.45	38153.81	1896697.27
2007/08	36241.20	900.62	18954.77	359283305.80	359283305.80	159376.61	7567123.279
Total			**16994.4**	**525184661.20**	**525184661.20**	**292784.72**	**12072161.95**

$$r_{12} = \frac{5x12072161.95 - (16994.4 \times 174.44)}{\sqrt{5x525184661.20 - (16994.41)^2}\sqrt{5x292784.72 - (174.44)^2}}$$

$$= \frac{57396306.61}{48343.70x1197.28}$$

$$= 0.99$$

$$r^2 = 0.9846$$

$$P.E.(r) = 0.0046$$

$$6xP.E(r) = 0.0279$$

ANNEX A – 9

Trend Analysis of Total Deposit

For NABIL:

Where,

$$a = \frac{\sum y}{N} = \frac{126539.57}{5} = 25307.914$$

$$b = \frac{\sum xy}{\sum x2} = \frac{97940561.95}{2748573.31} = 35.63$$

Trend Line (Yc) = a + bx = 25307.914 + 35.63 x

Total Deposit in Year 2009/10 = 25307.914 + 35.63 × 4
= 25450.43

Total Deposit in Year 20010/11 = 25307.914 + 35.63 × 5
= 25486.064

Total Deposit in Year 2011/12 = 25307.914 + 35.63 × 6
= 25521.694

Total Deposit in Year 2012/13 = 25307.914 + 35.63 × 7
= 25557.32

ANNEX A – 10

Trend Analysis of Total Deposit

For NIBL:

Where,

$$a = \frac{\sum y}{N} = \frac{138820.58}{5} = 27764.116$$

$$b = \frac{\sum xy}{\sum x2} = \frac{88283491.06}{1724722.94} = 51.18$$

Trend Line (Yc) = a + bx = 27764.116+ 51.18x

Total Deposit in Year 2008/09 = a + bx
= 27764.116+ 51.18x (2007 – 2004)
= 27917.66

Total Deposit in Year 2009/10 = 27764.116+ 51.18x × 4
= 27968.84

Total Deposit in Year 2010/11 = 27764.116+ 51.18x × 5
=28020.016

Total Deposit in Year 2011/12 = 27764.116+ 51.18x × 6
= 28071.196

Total Deposit in Year 2012/13 = 27764.116+ 51.18x × 7
= 28122.38

ANNEX A – 11

Trend Analysis of Loan & Advance

For NABIL:

Where,

$$a = \frac{\sum y}{N} = \frac{88009.47}{5} = 17601.89$$

$$b = \frac{\sum xy}{\sum x2} = \frac{68587345.73}{2748573.32} = 24.95$$

Trend Line (Yc) = a + bx = 17601.89+ 24.95x

Total Deposit in Year 2008/09 = a + bx
= 17601.89+ 24.95x (2007 – 2004)
= 17676.74

Total Deposit in Year 2009/10 = 17601.89+ 24.95× 4
= 17701.69

Total Deposit in Year 2010/11 = 17601.89+ 24.95× 5
= 17725.75

Total Deposit in Year 2011/12 =17601.89+ 24.95 × 6
= 17751.59

Total Deposit in Year 2012/13 = 17601.89+ 24.95× 7
= 17776.54

ANNEX A – 12

Trend Analysis of Loan & Advance

For NIBL:

Where,

$$a = \frac{\sum y}{N} = \frac{103426.55}{5} = 20685.31$$

$$b = \frac{\sum xy}{\sum x2} = \frac{66945678.97}{1724722.94} = 38.81$$

Trend Line (Yc) = a + bx = 20685.31+ 38.81x

Total Deposit in Year 2008/09 = a + bx
= 20685.31+ 38.81 (2007 – 2004)
= 20801.74

Total Deposit in Year 2009/10 = 20685.31+ 38.81× 4
= 20840.55

Total Deposit in Year 2010/11 = 20685.31+ 38.81× 5
= 20879.36

Total Deposit in Year 2011/12 = 20685.31+ 38.81× 6
= 20918.17

Total Deposit in Year 2012/13 = 20685.31+ 38.81× 7
= 20956.98

ANNEX A – 13

Trend Analysis of Long-term Investment

For NABIL:

Where,

$$a = \frac{\sum y}{N} = \frac{40165.52}{5} = 8033.104$$

$$b = \frac{\sum xy}{\sum x2} = \frac{30759779.22}{2748573.32} = 11.19$$

Trend Line (Yc) = a + bx = 8033.104+ 11.19x

Total Deposit in Year 2008/09 = a + bx
= 8033.104+ 11.19 (2007 – 2004)
= 8066.67

Total Deposit in Year 2009/10 = 8033.104+ 11.19× 4
= 8077.864

Total Deposit in Year 2010/11 = 8033.104+ 11.19× 5
= 8089.05

Total Deposit in Year 2011/12 =8033.104+ 11.19× 6
= 8100.24

Total Deposit in Year 2012/13 = 8033.104+ 11.19× 7
= 8111.43

ANNEX A – 14

Trend Analysis of Long-term Investment

For NIBL:

Where,

$$a = \frac{\sum y}{N} = \frac{21610.46}{5} = 6063.31$$

$$b = \frac{\sum xy}{\sum x2} = \frac{17593053.04}{1724722.94} = 10.20$$

Trend Line (Yc) = a + bx = 6063.31+ 10.20x

Total Deposit in Year 2008/09 = a + bx
= 6063.31+ 10.20 (2007 – 2004)
= 6093.91

Total Deposit in Year 2009/10 = 6063.31+ 10.20× 4
= 9104.11

Total Deposit in Year 2010/11 = 6063.31+ 10.20× 5
= 6114.31

Total Deposit in Year 2011/12 = 6063.31+ 10.20× 6
= 6124.51

Total Deposit in Year 2012/13 = 6063.31+ 10.20× 7
= 6134.71

ANNEX A – 15

Regression Analysis between Net Profit and Total Deposit

For NABIL:

Fiscal Year	Net Profit(x)	Total Deposit(y)	x2	y2	xy
2003/04	520.11	14586.6	270514.41	212768899.6	7586636.53
2004/05	635.26	19347.40	403555.26	3743231886.8	12290629.32
2005/06	673.96	23342.28	454222.08	544862035.6	15731763.03
2006/07	746.47	31915.04	557217.446	1018569778	23823619.91
2007/08	1031.05	37348.25	1063064.10	1394891778	38507913.16
Total	**3606.85**	**126539.57**	**27448573.31**	**3545414378**	**97940561.95**

$5a + 1.7328\,b = 124.4$

$1.7328a + 0.6604b = 44.68$

}

$a = 15.82$

$b = 26.15$

$r = 0.88$

$$t = \frac{0.88}{\sqrt{1-(0.88)^2}} * \sqrt{5-2}$$

$$= \frac{0.88}{0.4749} * 1.73$$

$= 3.21$

ANNEX A – 16

Regression Analysis between Net Profit and Total Deposit

For NIBL:

Fiscal Year	Net Profit(x)	Total Deposit(y)	x2	y2	xy
2003/04	232.15	14254.58	53893.62	203193051	3309200.75
2004/05	350.57	18927.31	122878.29	358243063.8	6634779.25
2005/06	501.40	24488.86	251401.96	599704264.1	12278714.4
2006/07	696.73	34451.73	485432.69	1186921700	24003553.84
2007/08	900.62	46698.10	811116.38	2180712544	42057242.82
Total	**2681.44**	**138820.58**	**1724722.94**	**4528774623**	**88283491.06**

$5a+1.3535b=148.42$

$1.3535a + 0.4651b = 33.2348$

} a= 48.72, b= - 70.33, r = 0.99

$$t = \frac{0.99}{\sqrt{1-(0.99)2}} * \sqrt{5-2}$$

$$= \frac{0.99}{0.1411} * (1.73)$$

$=12.14$

ANNEX A – 17

Regression analysis between Net Profit and Loan and Advances

For NABIL:

Fiscal Year	Net Profit(x)	Loan & Adv.(y)	x2	y2	xy
2003/04	520.11	10586.17	270514.41	112066995.3	5505972.88
2004/05	635.26	12922.54	403555.27	166992040.10	8209172.76
2005/06	673.96	15545.78	454222.08	454222.08	10477233.89
2006/07	746.47	21365.05	557217.46	557217.46	15948368.87
2007/08	1031.05	27589.93	1063064.10	761204237.4	28446597.33
	3606.85	**88009.47**	**2748573.32**	**1738399910**	**68587345.73**

$5a + 1.7328\,b = 66$

$1.7328a + 0.6604b = 24.07$

}

$a = 6.29$

$b = 19.94$

$r = 0.91$

$$t = \frac{0.91}{\sqrt{1-(0.91)^2}} * \sqrt{5-2}$$

$$= \frac{0.91}{0.4146} * 1.73$$

$= 3.79$

ANNEX A – 18

Regression analysis between Net Profit and Loan and Advances

For NIBL:

Fiscal Year	Net Profit(x)	Loan & Adv.(y)	x2	y2	xy
2003/04	232.18	10126.06	53893.62	102537091.10	2350764.83
2004/05	350.54	12776.21	122878.29	163231542	4478572.65
2005/06	501.40	17286.43	251401.96	298820662.10	8667416.002
2006/07	696.73	26996.65	485432.69	728819111.20	18809375.95
2007/08	900.62	36241.20	811116.38	1313424577	32639549.54
	2681.44	**103426.55**	**1724722.94**	**2606832983**	

$5a + 1.3535b = 53.1$

$1.3535a + 0.4651b = 17.2625$

} $a = 2.69$, $b = 29.26$, $r = 0.99$

$$t = \frac{0.99}{\sqrt{1-(0.99)^2}} * \sqrt{5-2}$$

$$= \frac{0.99}{0.4146} * 1.73$$

$= 12.14$

ANNEX A – 19

Regression analysis between Net Profit and Long-term Investment

For NABIL:

Fiscal Year	Net Profit(x)	Long-term inv(y)	x2	y2	xy
2003/04	520.11	4275.53	270514.41	352482492.30	2223745.91
2004/05	635.26	6178.53	403555.27	18280156.78	3924972.97
2005/06	673.96	8945.31	454222.08	38174232.96	6028781.13
2006/07	746.47	9939.77	557217.46	80018571	7419740.11
2007/08	1031.05	10826.38	1063064.10	98799027.65	11162539.10
	3606.85	**40165.52**	**2748573.32**	**352482492.30**	**30759779.22**

$5a + 1.7328b = 53.86$

$1.7328a + 0.6604b = 18.9686$ }

$a = 9.02$

$b = 5.06$

$r = 0.58$

$$t = \frac{0.58}{\sqrt{1-(0.58)^2}}$$

$$= \frac{0.58}{0.8146} * 1.73$$

$= 1.23$

ANNEX A – 20

Regression analysis between Net Profit and Long-term Investment

For NIBL:

Fiscal Year	Net Profit(x)	Long-term inv(y)	x2	y2	xy
2003/04	232.15	3934.19	53893.62	15477850.96	913322.21
2004/05	350.54	5602.87	122878.29	31392152.24	1964030.05
2005/06	501.40	6505.68	251401.96	42323872.26	3261947.95
2006/07	696.73	6874.02	485432.69	47252150.96	4789335.95
2007/08	900.62	7399.81	811116.38	54757188.04	6664416.88
	2681.44	**30316.57**	**1724722.94**	**191203214.5**	**17593053.04**

$5a + 1.3535b = 21.61$

$1.3535a + 0.4651b = 6.9282$

} $a = 1.36$

$r = 0.93$

$b = 10.92$

$$t = \frac{0.93}{\sqrt{1-(0.93)^2}} * \sqrt{5-2}$$

$$= \frac{0.93}{0.3675} * 1.73$$

$= 4.38$