Liquidity Management of Nepal Development Bank Ltd. and Development Credit Bank Ltd.

A thesis

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Lastly, due to lack of perfect knowledge and experience, I hearty sorry for my any mistake and take a responsible for all comments.

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RECOMMENDATION

This is to certify that the thesis

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Liquidity Management of Nepal Development Bank Ltd. and Development Credit Bank Ltd.

has been prepared as approved by this Department in the prescribed format of the Faculty of Management. This Thesis is forwarded for examination.

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VIVA- VOCE SHEET

We have conducted the viva –voce examination of the thesis

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And found the thesis as the original work of the student written accounting to the prescribed format. We recommend the thesis to be accepted as partial fulfillment of the requirement for the Degree of Master of Business Studies (M. B. S.)

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Date :…….

DECLARATION

I, hereby, declare that the work reported in this thesis entitled "**Liquidity Management of Nepal Development Bank Ltd. and Development Credit Bank Ltd"**. submitted to Shanker Dev Campus, Faculty of Management, Tribhuvan University, is my original work done in the form of partial fulfillment of the requirement for the Degree of Master of Business Studies (M. B.S.) under the supervision of Mr. Yamesh Man Singh, Associate Professor of Shanker Dev Campus.

Milan Raj Gadtaula
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ABBREVIATIONS

AD	:	Anno Dominie
ATM	:	Automatic Teller Machine
BS	:	Bikram Sambat
CAs	:	Current Assets
CB	:	Cash and Bank Balance
CL	:	Current Liability
CRR	:	Cash Reserve Ratio
CV	:	Coefficient of Variance
DCBL	:	Development Credit Bank
DDC	:	Dairy Development Corporation
DR	:	Debt Ratio
EBIT	:	Earning Before Interest and Tax
EBL	:	Everest Bank Ltd.
EPF	:	Employee Provident Fund
FSRP	:	Financial Sector Reform Program
FY	:	Fiscal year
HCCL	:	Himal cement Company Ltd.
IDBI	:	Industrial Development Bank of
JVB	:	Joint Venture Bank
KTM	:	Kathmandu
MSS	:	Mean sum of square
NABIL	:	Nepal Arab Bank Ltd.
NBBL	:	Nepal Bangladesh Bank Ltd.
NBCL	:	Nepal Battery Company Ltd.
NBL	:	Nepal Bank Ltd.
NDBL	:	Nepal Development Bank
NEPSE	:	Nepal Stock Exchange
NIBL	:	Nepal Investment Bank Ltd
NLL	:	Nepal Lever Ltd.
NPAT	:	Net Profit after Tax

NRB	:	Nepal Rastra Bank
NSCL	:	Nepal Co-operative Society Ltd.
NTC	:	Nepal Telecommunication
NTDC	:	Nepal Tea Development
PEs	:	Public Enterprises
QA	:	Quick Assets
QR	:	Quick Ratio
RBS	:	Rastriya Beema Sansthan
ROA	:	Return on Assets
ROE	:	Return on Equity
S.E.	:	Standard Error
SD	:	Standard Deviation
SDR	:	Saving Deposit Ratio
Ss	:	Sum of squares
TAs	:	Total Assets
Td	:	Total debt
TD	:	Total Deposit
TU	:	Tribhuban University
WC	:	Working Capital

Annex-I

The simple correlation analysis of NDBL between different variables

S.N	Variables	r	Relation	(r^2)	P.E	6 P.E	Sig/insig
1	Cash and bank Balance and NRB Bal.	-0.3169	Negative	0.1004	0.2714	1.6282	insing.
2	Cash and bank Balance and Saving Dep.	0.3938	Positive	0.1551	0.1046	0.6276	Not con
3	Cash and bank Balance and Total Dep.	-0.0833	Negative	0.0069	0.2996	1.7973	insing.
4	Cash and bank Balance and Net Profit	-0.0274	Negative	0.0008	0.3014	1.8085	insing.
5	Cash and bank Balance & Loan and Adv.	-0.3099	Negative	0.0960	0.2727	1.6360	insing.
6	Loan and Advances and Total Deposit	0.9422	Positive	0.8877	0.0339	0.2032	Sig
7	Cash and bank Balance and Current Liab.	-0.1741	Negative	0.0303	0.2925	1.7550	insing.
8	Loan and Advances and Net Profit	0.1122	Positive	0.0126	0.2978	1.7871	insing.
9	Quick Assets and Current Liability	0.1354	Positive	0.0183	0.2961	1.7767	insing.
10	Working Capital and Total Assets	-0.8715	Negative	0.7595	0.0726	0.4353	insing.
11	Working Capital and Total Debt	-0.8717	Negative	0.7598	0.0725	0.4348	insing.
12	Total Debt and Total Deposit	0.9755	Positive	0.9516	0.0146	0.0877	Sig
13	Total Deposit and investment	0.9149	Positive	0.8370	0.0492	0.2949	Sig

The simple correlation analysis of DCBL between different variables

S.N	Variables	r	Relation	(r2)	P.E	6 P.E	Sig/insig
1	Cash & bank Balance and NRB Balance	0.7961	Positive	0.6337	0.4275	2.5647	Not con.
2	Cash and bank Balance and Saving Dep.	0.9117	Positive	0.8313	0.0509	0.3054	Sig
3	Cash and bank Balance and Total Dep.	0.9357	Positive	0.8755	0.0376	0.2254	Sig
4	Cash and bank Balance and Net Profit	0.7161	Positive	0.5129	0.1469	0.8816	Not con.
5	Cash and bank Balance & Loan and Adv.	0.9200	Positive	0.8464	0.0463	0.2780	Sig
6	Loan and Advances and Total Deposit	0.9919	Positive	0.9838	0.0049	0.0293	Sig
7	Cash and bank Balance and Current Liab.	0.9232	Positive	0.8523	0.0445	0.2673	Sig
8	Loan and Advances and Net Profit	0.7850	Positive	0.6163	0.1158	0.6945	Sig
9	Quick Assets and Current Liability	0.9527	Positive	0.9077	0.0278	0.1670	Sig
10	Working Capital and Total Assets	-0.9925	Negative	0.9851	0.0045	0.0270	insing.
11	Working Capital and Total Debt	-0.9895	Negative	0.9792	0.0063	0.0377	insing.
12	Total Debt and Total Deposit	0.9955	Positive	0.9910	0.0027	0.0164	Sig
13	Total Deposit and investment	-0.6715	Negative	0.4510	0.1656	0.9937	insing.

The correlation coefficient are calculated using computer excel programmed. The P.E is calculated using the following formula:

P.E of Cash and Bank Balance & NRB Balance of NDBL

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

$$= \frac{0.6745x\ 1- 0.100394}{\sqrt{5}}$$

$$= \frac{0.6745x\ 0.8996059}{2.236068}$$

$$= 0.271362$$

Correlation between Cash and bank Balance & NRB Balance of NDBL & DCBL

Fiscal Year	**Cash and Bank Balance**		**NRB Balance**	
	NDBL	DCBL	NDBL	DCBL
2058/059	260.62	218.87	50.8300	3.2500
2059/060	527.14	421.69	23.5800	19.7400
2060/061	292.09	387.53	26.1600	14.5300
2061/062	295.48	406.69	36.4200	27.1400
2062/063	506	533.72	43.1400	121.9500
Correlation(r)			(0.3169)	0.7961
r^2			0.1004	0.6337
$1- r^2$			0.8996	0.3663
$\sqrt{n}$			2.2361	2.2361
S.E			0.4023	0.1638
P.E			0.2714	0.1105

Note: And other calculation are done accordingly

Annex-II
Simple Regression Analysis

I. Cash and Bank Balance (CB) on Current Liability (CL) of NDBL

Regression

Variables Entered/Removed[b]

Model	Variables Entered	Variables Removed	Method
1	CL[a]	.	Enter

a. All requested variables entered.

b. Dependent Variable: CB

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.174[a]	.030	-.293	146.69833

a. Predictors: (Constant), CL

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	2018.651	1	2018.651	.094	.779[a]
	Residual	64561.198	3	21520.399		
	Total	66579.849	4			

a. Predictors: (Constant), CL

b. Dependent Variable: CB

I. Cash and Bank Balance (CB) on Current Liability (CL) of DCBL

Regression

Variables Entered/Removed[b]

Model	Variables Entered	Variables Removed	Method
1	CL[a]	.	Enter

a. All requested variables entered.

b. Dependent Variable: CB

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.923[a]	.852	.803	50.18495

a. Predictors: (Constant), CL

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	43605.790	1	43605.790	17.314	.025[a]
	Residual	7555.588	3	2518.529		
	Total	51161.378	4			

a. Predictors: (Constant), CL

b. Dependent Variable: CB

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	59.545	83.384		.714	.527
	CL	.218	.052	.923	4.161	.025

a. Dependent Variable: CB

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	555.936	590.293		.942	.416
	CL	-.095	.309	-.174	-.306	.779

a. Dependent Variable: CB

Note: the simple regression coefficient of the different variables are calculated using SPSS 12 program, and other calculation are done accordingly

Annex-III
Multiple Regression Analysis

I. Cash and Bank Balance (CB) on Total Deposit (TD) and Net Profit (NP) of NDBL

Regression

Variables Entered/Removed[b]

Model	Variables Entered	Variables Removed	Method
1	TD, NP[a]	.	Enter

a. All requested variables entered.

b. Dependent Variable: CB

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.086[a]	.007	-.985	181.78016

a. Predictors: (Constant), TD, NP

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	491.794	2	245.897	.007	.993[a]
	Residual	66088.055	2	33044.027		
	Total	66579.849	4			

a. Predictors: (Constant), TD, NP

b. Dependent Variable: CB

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	474.274	867.662		.547	.639
	NP	-.018	.592	-.021	-.030	.979
	TD	-.056	.483	-.082	-.116	.919

a. Dependent Variable: CB

I. Cash and Bank Balance (CB) on Total Deposit (TD) and Net Profit (NP) of DCBL

Regression

Variables Entered/Removed[b]

Model	Variables Entered	Variables Removed	Method
1	TD, NP[a]	.	Enter

a. All requested variables entered.

b. Dependent Variable: CB

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.936[a]	.876	.752	56.37655

a. Predictors: (Constant), TD, NP

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	44804.747	2	22402.374	7.049	.124[a]
	Residual	6356.631	2	3178.315		
	Total	51161.378	4			

a. Predictors: (Constant), TD, NP

b. Dependent Variable: CB

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	37.166	99.689		.373	.745
	NP	.259	3.752	.026	.069	.951
	TD	.242	.100	.916	2.417	.137

a. Dependent Variable: CB

Model

Mode	R	R	Adjuste R	Std. Error the
1	1.000[a]	1.000	1.000	.

a. Predictors: (Constant), TD, INV, NP,

Note: The multiple regression coefficients of the different variables are calculated using SPSS 12 program and other calculation are done accordingly.

Annex-IV
Hypothesis Test

a. t-test: Test of significance of correlation coefficient between two variables has been done in simple correlation analysis by using SPSS 12 statistical software.
b. F-test: in this test one-way ANOVA table are used.

One-way ANOVA Test

Test of Average value of cash & bank balance to total deposit ratio between two selected banks.

NDBL (c_1)	DCBL (c_2)	c_1^2	c_2^2
13.69485825	23.81765948	187.5491426	567.280903
26.54493816	32.23905016	704.633742	1039.356355
15.82714711	27.40722929	250.4985858	751.1562174
18.11349439	27.49633215	328.0986792	756.048282
74.18043792	25.37427676	5502.737371	643.8539212
$\sum c_1$= 148.3609	**$\sum c_2$= 136.3345**	**$\sum c_1^2$= 6973.5175**	**$\sum c_2^2$= 3757.6957**

I. Calculation of sum of individual items:

$\sum T=\sum c_1+\sum c_2$
$= 148.3609+136.3345$
$=284.6954237$

ii. Calculation of correction factor (c.f)

$$c.f = \frac{(\sum T)^2}{n}$$
$= 284.6954237/10$
$=8105.148427$

iii. Calculation of sum of square due to total (SST):

$SST=\sum c_1^2+\sum c_2^2-c.f$
$=6973.51752+3757.695679-8105.148427$
$=2626.064772$

iv. Calculation of sum of square due to column (SSC)

$$SSC=\frac{(\sum c_1)^2+(\sum c_2)^2}{n}$$
$$=\frac{(148.3608758)^2+(136.3345478)^2}{5}-8105.148 =14.46$$

V. Calculation of sum of square due to Error (SSE)

$SSE=SST-SSC$
$=2626.064-14.4632 =2611.601515$

vi. Calculation of Mean sum of square due to column (MSC)

$$MSC=\frac{SSE}{d.f}=\frac{SSE}{C-1}=\frac{14.4632}{2-1}=14.4632$$

vii. Calculation of Mean sum of square due to Error (MSE)

$$MSE=\frac{SSE}{d.f}=\frac{SSE}{N-C}=\frac{2611.6015}{10-2}=326.45018$$

viii. $$F=\frac{MSC}{MSE}=\frac{14.4632}{326.45018}=0.044304635$$

Note: Other calculations are done accordingly.