Annexure-1

Sample Calculation of Growth Ratio

Calculation of Growth Ratio of Total Deposit

Year	Total Deposit
2005/06	39402.27
2006/07	40866.77
2007/08	43016.06
2008/09	46195.48
2009/10	50464.13

Calculation of Growth Ratio

$D_n = D_o (1 + g)^{n-1}$

Where,

D_n = Total Deposit in nth year

D_o = Total Deposit in initial year

g = Growth Ratio of Department during the study period

n = Total number of period

Here,

$D_{2008/09} = 5046.13$

$D_{2004/05} = 39402.27$

n = 5 yrs.

So, $D_n = D_o (1 + g)^{n-1}$

or, $50461.13 = 39402.27 (1 + g)^{5-1}$

or $\dfrac{50464.13}{39402.27} = (1 + g)^4$

or, $1.2807 = (1 + g)^4$

$1 + g = (1.28807)^{1/4}$

$g = 1.0638 - 1$

$= 0.0638$ or 6.38%

Annexure-2

Calculation of Growth Ratio of Total Loan and Advance

Year	Total Deposit
2005/06	11679.49
2006/07	10831.08
2007/08	13430.93
2008/09	14633.54
2009/10	17006.46

Calculation of Growth Ratio

$Dn = Do (1 + g)^{n-1}$

Where,

Dn = Total Loans and Advances in nth year

Do = Total Loans and Advances in initial year

g = Growth Ratio Loans and Advances of during the study period

n = Total number of period

Here,

$D_{2008/09} = 17006.66$

$D_{2004/05} = 11679.49$

n = 5 yrs.

So, $Dn = Do (1 + g)^{n-1}$

or, $17006.46 = 11679.49 (1+g)^{5-1}$

or $\dfrac{17006.46}{11679.49} = (1 + g)^4$

or, $1.4561 = (1 + g)^4$

$1 + g = (1.4561)^{1/4}$

$g = 1.0984 - 1$

$= 0.0984 = 9.84\%$

Annexure-3

Calculation of Growth Ratio of Total Investment

Year	Total Deposit
2005/06	4623.13
2006/07	3117.03
2007/08	8415.88
2008/09	11555.36
2009/10	12650.15

Calculation of Growth Ratio

$Dn = Do (1 + g)^{n-1}$

Where,

Dn = Total Investment in nth year

Do = Total Investment in initial year

g = Growth Ratio Investment of during the study period

n = Total number of period

Here,

$D_{2008/09} = 12650.15$

$D_{2004/05} = 4623.13$

$n = 5$ yrs.

So, $Dn = Do (1 + g)^{n-1}$

or, $12650.15 = 4623.13 (1+g)^{5-1}$

or $\dfrac{12650.15}{4623.13} = (1 + g)^4$

or, $2.7363 = (1 + g)^4$

$1 + g = (2.7363)^{1/4}$

$g = 1.2861 - 1$

$= 0.2861 = 28.61\%$

Annexure-4

Calculation of Growth Ratio of Total Net Profit (Loss)

Year	Total Deposit
2005/06	4623.13
2006/07	3117.03
2007/08	8415.88
2008/09	11555.36
2009/10	12650.15

Calculation of Growth Ratio

$Dn = Do (1 + g)^{n-1}$

Where,

Dn = Total Net Profit (Loss) in nth year

Do = Total Net Profit (Loss) in initial year

g = Growth Ratio Net Profit (Loss) of during the study period

n = Total number of period

Here,

$D_{2008/09} = 1697.09$

$D_{2004/05} = (4839.78)$

n = 5 yrs.

So, $Dn = Do (1 + g)^{n-1}$

or, $1697.09 = (4839.78) (1+g)^{5-1}$

or $\dfrac{1697.09}{(4839.78)} = (1 + g)^4$

or, $(0.3506) = (1 + g)^4$

$1 + g = (0.3506)^{1/4}$

$g = -0.7695 - 1$

$= (0.0177) = (1.77\%)$

Coefficient of Correlation Analysis

Year	Deposit (x)	Loans & Advances (y)	$X = x - \bar{x}$	$Y = y - \bar{y}$	X2	Y2	XY
2005/06	39402.27	11679.49	-4586.67	-1836.81	2103754.69	3373870.98	8424841.32
2006/07	40866.77	10831.08	-3122.17	-2685.22	9747945.51	7210406.45	8383713.33
2007/08	43016.06	13430.93	-972..88	-85.37	94645.49	7288.04	83054.76
2008/09	46195.48	14633.54	2206.54	1117.24	4868818.77	1248225.22	2465234.75
2009/10	50464.13	17006.46	6475.19	3490.16	41928085.54	12181216.83	22599449.13
	$\Sigma X =$ 219944.71	$\Sigma Y =$ 67581.5			$\Sigma X^2 =$ 7852887	$\Sigma Y^2 =$ 24021007.52	$\Sigma XY =$ 41956293.3

From the above table calculation we have,

$$\bar{X} = \frac{\sum X}{n} \qquad = \frac{219944.71}{5} \qquad = 43988.94$$

$$\bar{Y} = \frac{\sum Y}{n} \qquad = \frac{67581.50}{5} \qquad = 135116.30$$

Now, we have

Correlation of Coefficient (r) = $\dfrac{\sum XY}{\sqrt{\sum X - \sum Y^2}}$

$$= \frac{41956293.30}{\sqrt{78528887 \times 2402100.52}}$$

$$= 0.97$$

Correlation of Coefficient (r^2) = 0.94

Calculation of Error (P.Er.) $= 0.6745 \times \dfrac{1 - r^2}{\sqrt{N}}$

$$= 0.6754 \times \frac{1 - 0.94}{\sqrt{5}}$$

$$= 0.20$$

$$6 \text{ (P.Er.)} = 6 \times 0.02 = 0.12$$

Coefficient of Correlation Analysis

(i) Calculation of Coefficient of Correlation between Total Deposit and Total Investment

Year	Deposit (x)	Loans & Advances (y)	$X = x - \bar{x}$	$Y = y - \bar{y}$	X2	Y2	XY
2005/06	39402.27	4623.13	-4586.67	-3449.18	2103754.69	11896842.67	15820250.43
2006/07	40866.77	3117.03	-3122.17	-4955.28	9747945.51	24554799.88	15471226.56
2007/08	43016.06	8415.88	-972..88	343.57	94645.49	118040.34	-334252.38
2008/09	46195.48	1555.36	2206.54	3483.05	4868818.77	12131637.3	7685489.15
2009/10	50464.13	12650.15	6475.19	4577.84	41928085.54	20956619.07	29642383.79
	$\Sigma X =$ 219944.71	$\Sigma Y =$ 40361.55			$\Sigma X^2 =$ 7852887	$\Sigma Y^2 =$ 69657939.26	$\Sigma XY =$ 68285097.55

From the above table calculation we have,

$$\bar{X} = \frac{\sum X}{n} \qquad = \frac{219944.71}{5} \qquad = 43988.94$$

$$\bar{Y} = \frac{\sum Y}{n} \qquad = \frac{40361.55}{5} \qquad = 8072.31$$

Now, we have

$$\text{Correlation of Coefficient (r)} = \frac{\sum XY}{\sqrt{\sum X - \sum Y^2}}$$

$$= \frac{68285097.55}{\sqrt{78528887 \times 69657939.26}}$$

$$= 0.92$$

Correlation of Coefficient (r^2) = 0.84

$$\text{Calculation of Error (P.Er.)} = 0.6745 \times \frac{1 - r^2}{\sqrt{N}}$$

$$= 0.6754 \times \frac{1 - 0.94}{\sqrt{5}}$$

$$= 0.05$$

$$6 \text{ (P.Er.)} = 6 \times 0.05 = 0.3$$

Coefficient of Correlation Analysis

(i)   Calculation of Coefficient of Correlation between Loans & Advances and Total Net Profit (Loss)

Year	Deposit (x)	Loans & Advances (y)	$X = x - \bar{x}$	$Y = y - \bar{y}$	X2	Y2	XY
2005/06	114679.49	(4839.78)	-1836.81	-5002.14	3373870.98	25021404.58	9187980.77
2006/07	10831.08	1040.10	-2685.22	8777.74	7210406.45	770427.51	-2356925
2007/08	13430.93	1322.89	-85.37	1160.53	7288.04	1346829.88	-99074.45
2008/09	14633.54	1591.49	1117.24	1429.13	1248225.22	2042412.56	1596681.20
2009/10	17006.46	1697.09	3490.16	1534.73	12181216.83	2355396.17	5356453.26
	ΣX = 67581.5	ΣY = 811.79			ΣX^2 = 240221007.52	ΣY^2 = 31536470.7	ΣXY = 13685115.78

From the above table calculation we have,

$$\bar{X} = \frac{\sum X}{n} \qquad = \frac{67581.50}{5} \qquad = 13516.30$$

$$\bar{Y} = \frac{\sum Y}{n} \qquad = \frac{811.79}{5} \qquad = 162.36$$

Now, we have

Correlation of Coefficient (r) = $\dfrac{\sum XY}{\sqrt{\sum X - \sum Y^2}}$

$$= \frac{13685115.78}{\sqrt{24021007 \times 31536470.70}}$$

$$= 0.50$$

Correlation of Coefficient (r^2) = 0.25

Calculation of Error (P.Er.)   = 0.6745 x $\dfrac{1 - r^2}{\sqrt{N}}$

$$= 0.6754 \text{ x } \frac{1 - 0.94}{\sqrt{5}}$$

$$= 0.23$$

6 (P.Er.) = 6 x 0.23 = 1.38

Annexure-8

Coefficient of Correlation Analysis

(i)   Calculation of Coefficient of Correlation between Loans & Advances and Total Net Profit (Loss)

Year	Deposit (x)	Loans & Advances (y)	$X = x - \bar{x}$	$Y = y - \bar{y}$	X2	Y2	XY
2005/06	4623.13	(4839.78)	-3449.18	-5002.14	1189682.67	25021404.58	172532281.25
2006/07	3117.03	1040.10	-4955.28	8777.74	24554799.88	770427.51	-4349447.47
2007/08	8415.88	1322.89	343.57	1160.53	118040.34	1346829.88	398723.99
2008/09	11555.36	1591.49	3483.05	1429.13	12131637.3	2042412.56	4977731.25
2009/10	12650.15	1697.09	4577.84	1534.73	2095661.07	2355396.17	7025748.38
	$\Sigma X =$ 67581.5	$\Sigma Y = 811.79$			$\Sigma X^2 =$ 240221007.52	$\Sigma Y^2 =$ 31536470.7	$\Sigma XY =$ 13685115.78

From the above table calculation we have,

$$\bar{X} = \frac{\sum X}{n} \qquad = \frac{40361.55}{5} \qquad = 8072.31$$

$$\bar{Y} = \frac{\sum Y}{n} \qquad = \frac{811.79}{5} \qquad = 162.36$$

Now, we have

Correlation of Coefficient (r) = $\dfrac{\sum XY}{\sqrt{\sum X - \sum Y^2}}$

$$= \frac{253060.70}{\sqrt{696557939.26 \times 15536470.70}}$$

$$= 0.54$$

Correlation of Coefficient (r^2) = 0.29

Calculation of Error (P.Er.)   = 0.6745 x $\dfrac{1 - r^2}{\sqrt{N}}$

$$= 0.6754 \text{ x } \frac{1 - 0.94}{\sqrt{5}}$$

$$= 0.21$$

6 (P.Er.) = 6 x 0.21 = 1.26

Annexure-9

Calculation of Trend   Analysis

Let the liner trend equation between 'y' and 'x' be given by
Yc = a + bx .... (1)

Calculation of trend analysis of Total Deposit

Year	Total Deposit (y)	t -2006(x)	x²	xy	XY
2005/06	39402.27	-2	4	-78804.54	33007.96
2006/07	40866.77	-1	1	-40866.77	38498.45
2007/08	43016.06	0	0	0	43988.94
2008/09	46195.48	1	1	46195.48	49479.43
2009/10	50464.13	2	4	100928.26	54969.92
	$\Sigma Y = 219944.71$	$\Sigma X = 0$	$\Sigma X^2 = 10$	ΣXY =27452.43	

From the above table calculation we have,

$$a = \frac{\sum y}{n} \qquad = \frac{219944.71}{5} \qquad = 43988.94$$

$$b = \frac{\sum xy}{n} \qquad = \frac{27452.43}{5} \qquad = 5490.49$$

Now, we have

Substituting the values of 'a' and 'b' in equation (I) the least square Total Deposit trend line is given by

Yc = a + bx .... (2)

Trend Value of Total Deposits

Year	t-2006 = (x)	Yc = a + bx
2010/11	3	60460.41
2011/12	4	65950.9
2012/13	5	71441.39
2013/14	6	76931.88
2014/15	7	82422.37

Calculation of Trend   Analysis

Let the liner trend equation between 'y' and 'x' be given by
$Yc = a + bx$ .... (1)

Calculation of trend analysis of Total Deposit

Year	Total Loans & advances (y)	t -2006(x)	x^2	xy	Yc = a + bx
2005/06	11679.49	-2	4	-23358.98	7733.74
2006/07	108308	-1	1	-10831.08	10625.02
2007/08	13430.93	0	0	0	13516.3
2008/09	14633.54	1	1	14633.54	16407.38
2009/10	17006.46	2	4	34012.92	19298.86
	$\Sigma Y = 67581.5$	$\Sigma X = 0$	$\Sigma X^2 = 10$	$\Sigma XY = 14456.4$	

From the above table calculation we have,

$$a = \frac{\sum y}{n} \qquad = \frac{67581.5}{5} \qquad = 135163.3$$

$$b = \frac{\sum xy}{n} \qquad = \frac{14456.4}{5} \qquad = 2891.28$$

Now, we have

Substituting the values of 'a' and 'b' in equation (1) the least square Total Deposit trend line is given by

$Yc = a + bx$ .... (2)

Trend Value of Total Loan & Advance

Year	t-2005 = (x)	Yc = a + bx
2010/11	3	22190.14
2011/12	4	25081.42
2012/13	5	27972.7
2013/14	6	30863.98
2014/15	7	33755.26

Calculation of Trend Analysis

Let the liner trend equation between 'y' and 'x' be given by
$Yc = a + bx$ .... (1)

Year (rt)	Total Loans & advances (y)	t -2006(x)	x^{24}	xy	Yc = a + bx
2005/06	4623.13	-2	4	-9246.26	-1724.63
2006/07	3117.03	-1	1	-3117.03	3173.84
2007/08	8415.88	0	0	0	8072.31
2008/09	11555.36	1	1	11555.36	12970.78
2009/10	12650.15	2	4	25300.3	17869.25
	$\Sigma Y = 67581.5$	$\Sigma X = 0$	$\Sigma X^2 = 10$	$\Sigma XY = 24492.37$	

Calculation of trend analysis of Total Investment

From the above table calculation we have,

$$a = \frac{\Sigma y}{n} \qquad = \frac{40361.55}{5} \qquad = 8072.31$$

$$b = \frac{\Sigma xy}{n} \qquad = \frac{24492.37}{5} \qquad = 4898.47$$

Now, we have

Substituting the values of 'a' and 'b' in equation (1) the least square Total Deposit trend line is given by

$$Yc = a + bx \quad .... (2)$$

Trend Value of Total Investment

Year	t-2005 = (x)	Yc = a + bx
2010/11	3	22767.72
2011/12	4	27666.19
2012/13	5	32564.66
2013/14	6	37463.13
2014/15	7	42361.6

Calculation of Trend   Analysis

Let the liner trend equation between 'y' and 'x' be given by
Yc = a + bx .... (1)
Calculation of trend analysis of Total Net Profit (Loss)

Year	Total Loans & advances (y)	t -2006(x)	x^{24}	xy	Yc = a + bx
2005/06	(4839.78)	-2	4	9679.56	(5287.7)
2006/07	1040.10	-1	1	-1040.10	(2562.67)
2007/08	1322.89	0	0	0	162.36
2008/09	1591.49	1	1	1591.49	2887.39
2009/10	1697.09	2	4	3394.18	5612.42
	$\Sigma Y = 811.79$	$\Sigma X = 0$	$\Sigma X^2 = 10$	$\Sigma XY = 13625.13$	

From the above table calculation we have,

$$a = \frac{\sum y}{n} \qquad = \frac{811.79}{5} \qquad = 162.36$$

$$b = \frac{\sum xy}{n} \qquad = \frac{13625.13}{5} \qquad = 2725.03$$

Now, we have

Substituting the values of 'a' and 'b' in equation (1) the least square Total Deposit trend line is given by

Yc = a + bx .... (2)

Trend Value of Total Investment

Year	t-2005 = (x)	Yc = a + bx
2010/11	3	8337.45
2011/12	4	11062.48
2012/13	5	13787.51
2013/14	6	16512.54
2014/15	7	19237.57