

# APPENDICES

## Appendix 1. Calculation of Liquidity Ratio

### 1. Current Ratio

|   |
|---|
| $\text{Current Ratio} = \frac{\text{Current Assets}}{\text{Current Liabilities}}$ |
|---|

a. Current Ratio of 1996 =  $(1,167,384 : 240,843) \times 100\%$

$$= 4.8471 \times 100\%$$

$$= 484.71\%$$

b. Current Ratio of 1997 =  $(1,233,944 : 493,024) \times 100\%$

$$= 2.5028 \times 100\%$$

$$= 250.28\%$$

c. Current Ratio of 1998 =  $(2,324,138 : 875,342) \times 100\%$

$$= 2.6551 \times 100\%$$

$$= 265.51\%$$

d. Current Ratio of 1999 =  $(2,732,108 : 745,588) \times 100\%$

$$= 3.6644 \times 100\%$$

$$= 366.44\%$$

### e. Changes in Current Assets

- Changes in 1997 =  $[(1,233,944 - 1,167,384) : 1,167,384] \times 100\%$

$$= (66,560 : 1,167,384) \times 100\%$$

$$= 0.0570 \times 100\%$$

$$= 5.70\%$$

- Changes in 1998 =  $[(2,324,138 - 1,233,944) : 1,233,944] \times 100\%$   
 $= (1,090,194 : 1,233,944) \times 100\%$   
 $= 0.8835 \times 100\%$   
 $= 88.35\%$
- Changes in 1999 =  $[(2,732,108 - 2,324,138) : 2,324,138] \times 100\%$   
 $= (407,970 : 2,324,138) \times 100\%$   
 $= 0.1755 \times 100\%$   
 $= 17.55\%$

f. Changes in Current Liabilities

- Changes in 1997 =  $[(493,024 - 240,843) : 240,843] \times 100\%$   
 $= (252,181 : 240,843) \times 100\%$   
 $= 1.0471 \times 100\%$   
 $= 104.71\%$
- Changes in 1998 =  $[(875,342 - 493,024) : 493,024] \times 100\%$   
 $= (382,318 : 493,024) \times 100\%$   
 $= 0.7754 \times 100\%$   
 $= 77.54\%$
- Changes in 1999 =  $[(745,588 - 875,342) : 875,342] \times 100\%$   
 $= [(129,754) : 875,342] \times 100\%$   
 $= (0.1482) \times 100\%$   
 $= (14.82\%)$

## g. Changes in Current Ratio

- Changes in 1997 =  $[(250.28 - 484.71) : 484.71] \times 100\%$   
 $= [(234.43) : 484.71] \times 100\%$   
 $= (0.4836) \times 100\%$   
 $= (48.36\%)$
- Changes in 1998 =  $[(265.51 - 250.28) : 250.28] \times 100\%$   
 $= (15.23 : 250.28) \times 100\%$   
 $= 0.0608 \times 100\%$   
 $= 6.08\%$
- Changes in 1999 =  $[(366.44 - 265.51) : 265.51] \times 100\%$   
 $= (100.93 : 265.51) \times 100\%$   
 $= 0.3801 \times 100\%$   
 $= 38.01\%$

## 2. Quick Ratio

$$\text{Quick Ratio} = \frac{\text{Cash + Account Receivables}}{\text{Current Liabilities}}$$

- a. Quick Ratio of 1996 =  $[(42,744 + 444,425) : 240,843] \times 100\%$   
 $= (487,169 : 240,843) \times 100\%$   
 $= 2.0228 \times 100\%$   
 $= 202.28\%$

$$\begin{aligned}
 \text{b. Quick Ratio of 1997} &= [(511,359 + 658,920) : 493,024] \times 100\% \\
 &= (1,170,279 : 493,024) \times 100\% \\
 &= 2.3737 \times 100\% \\
 &= 237.37\%
 \end{aligned}$$

$$\begin{aligned}
 \text{c. Quick Ratio of 1998} &= [(1,410,607 + 890,352) : 875,342] \times 100\% \\
 &= (2,300,959 : 875,342) \times 100\% \\
 &= 2.6286 \times 100\% \\
 &= 262.86\%
 \end{aligned}$$

$$\begin{aligned}
 \text{d. Quick Ratio of 1999} &= [(1,784,556 + 926,429) : 745,588] \times 100\% \\
 &= (2,710,985 : 745,588) \times 100\% \\
 &= 3.6360\% \\
 &= 363.60\%
 \end{aligned}$$

e. Changes in Quick Ratio

- Changes in 1997 =  $[(237.37 - 202.28) : 202.28] \times 100\%$ 

$$\begin{aligned}
 &= (35.09 : 202.28) \times 100\% \\
 &= 0.1735 \times 100\% \\
 &= 17.35\%
 \end{aligned}$$

- Changes in 1998 =  $[(262.86 - 237.37) : 237.37] \times 100\%$ 

$$\begin{aligned}
 &= (25.49 : 237.37) \times 100\% \\
 &= 0.1074 \times 100\% \\
 &= 10.74\%
 \end{aligned}$$

- Changes in 1999 =  $[(363.60 - 262.86) : 262.86] \times 100\%$ 

$$\begin{aligned}
 &= (100.74 : 262.86) \times 100\% \\
 &= 0.3832 \times 100\% \\
 &= 38.32\%
 \end{aligned}$$

## 3. Cash Ratio

$$\text{Cash Ratio} = \frac{\text{Cash}}{\text{Current Liabilities}}$$

$$\begin{aligned} \text{a. Cash Ratio of 1996} &= (42,744 : 240,843) \times 100\% \\ &= 0.1775 \times 100\% \\ &= 17.75\% \end{aligned}$$

$$\begin{aligned} \text{b. Cash Ratio of 1997} &= (511,359 : 493,024) \times 100\% \\ &= 1.0372 \times 100\% \\ &= 103.72\% \end{aligned}$$

$$\begin{aligned} \text{c. Cash Ratio of 1998} &= (1,410,607 : 875,342) \times 100\% \\ &= 1.6215 \times 100\% \\ &= 162.15\% \end{aligned}$$

$$\begin{aligned} \text{d. Cash Ratio of 1999} &= (1,784,556 : 745,588) \times 100\% \\ &= 2.3935 \times 100\% \\ &= 239.35\% \end{aligned}$$

## Appendix 2. Calculation of Debt Ratio

### 1. Total Debt to Equity Ratio

$$\text{Debt to Equity} = \frac{\text{Total Debt}}{\text{Total Equity}}$$

a. Debt to Equity Ratio of 1996 =  $(282,017 : 2,557,423) \times 100\%$

$$= 0.1103 \times 100\%$$

$$= 11.03\%$$

b. Debt to Equity Ratio of 1997 =  $(524,405 : 2,999,087) \times 100\%$

$$= 0.1748 \times 100\%$$

$$= 17.48\%$$

c. Debt to Equity Ratio of 1998 =  $(1,052,764 : 3,817,394) \times 100\%$

$$= 0.2758 \times 100\%$$

$$= 27.58\%$$

d. Debt to Equity Ratio of 1999 =  $(988,898 : 4,759,346) \times 100\%$

$$= 0.2078 \times 100\%$$

$$= 20.78\%$$

### e. Changes in Total Debt

- Changes in 1997 =  $[(524,405 - 282,017) : 282,017] \times 100\%$

$$= (242,388 : 282,017) \times 100\%$$

$$= 0.8595 \times 100\%$$

$$= 85.95\%$$

- Changes in 1998 =  $[(1,052,764 - 524,405) : 524,405] \times 100\%$   
 $= (528,359 : 524,405) \times 100\%$   
 $= 1.0075 \times 100\%$   
 $= 100.75\%$
- Changes in 1999 =  $[(988,898 - 1,052,764) : 1,052,764] \times 100\%$   
 $= [(63,866) : 1,052,764] \times 100\%$   
 $= (0.0607) \times 100\%$   
 $= (6.07\%)$

#### f. Changes in Total Equity

- Changes in 1997 =  $[(2,999,087 - 2,557,423) : 2,557,423] \times 100\%$   
 $= (441,664 : 2,557,423) \times 100\%$   
 $= 0.1727 \times 100\%$   
 $= 17.27\%$
- Changes in 1998 =  $[(3,817,394 - 2,999,087) : 2,999,087] \times 100\%$   
 $= (818,307 : 2,999,087) \times 100\%$   
 $= 0.2728 \times 100\%$   
 $= 27.28\%$
- Changes in 1999 =  $[(4,759,346 - 3,817,394) : 3,817,394] \times 100\%$   
 $= (941,952 : 3,817,394) \times 100\%$   
 $= 0.2467 \times 100\%$   
 $= 24.67\%$

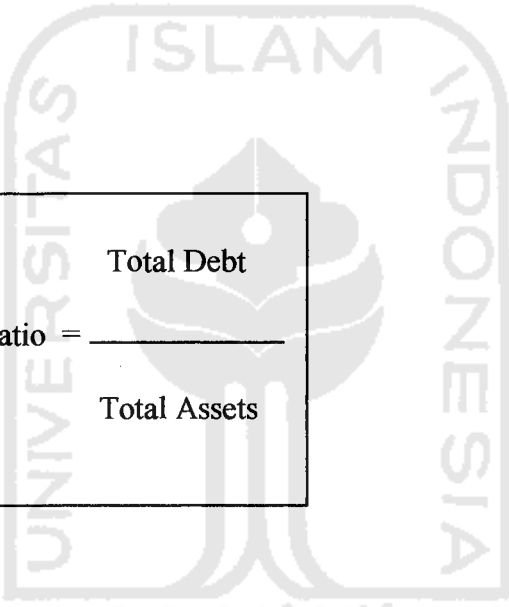
#### g. Changes in Debt to Equity

- Changes in 1997 =  $[(17.48 - 11.03) : 11.03] \times 100\%$   
 $= 0.5848 \times 100\%$   
 $= 58.48\%$



- Changes in 1998 =  $[(27.58 - 17.48) : 17.48] \times 100\%$   
 $= (10.1 : 17.48) \times 100\%$   
 $= 0.5778 \times 100\%$   
 $= 57.78\%$
- Changes in 1999 =  $[(20.78 - 27.58) : 27.58] \times 100\%$   
 $= [(6.8) : 27.58] \times 100\%$   
 $= (0.2465) \times 100\%$   
 $= (24.65\%)$

## 2. Debt to Asset Ratio



$$\text{Debt to Asset Ratio} = \frac{\text{Total Debt}}{\text{Total Assets}}$$

- a. Debt to Asset Ratio of 1996 =  $(282,017 : 2,843,927) \times 100\%$   
 $= 0.0992 \times 100\%$   
 $= 9.92\%$
- b. Debt to Asset Ratio of 1997 =  $(524,405 : 3,532,466) \times 100\%$   
 $= 0.1484 \times 100\%$   
 $= 14.84\%$

c. Debt to Asset Ratio of 1998 =  $(1,052,764 : 4,879,041) \times 100\%$

$$= 0.2158 \times 100\%$$

$$= 21.58\%$$

d. Debt to Asset Ratio of 1999 =  $(988,898 : 5,755,420) \times 100\%$

$$= 0.1718 \times 100\%$$

$$= 17.18\%$$

e. Changes in Total Assets

- Changes in 1997 =  $[(3,532,466 - 2,843,927) : 2,843,927] \times 100\%$

$$= (688,539 : 2,843,927) \times 100\%$$

$$= 0.2421 \times 100\%$$

$$= 24.21\%$$

- Changes in 1998 =  $[(4,879,041 - 3,532,466) : 3,532,466] \times 100\%$

$$= (1,346,575 : 3,532,466) \times 100\%$$

$$= 0.3812 \times 100\%$$

$$= 38.12\%$$

- Changes in 1999 =  $[(5,755,420 - 4,879,041) : 4,879,041] \times 100\%$

$$= (876,379 : 4,879,041) \times 100\%$$

$$= 0.1796 \times 100\%$$

$$= 17.96\%$$

f. Changes in Debt to Asset Ratio

- Changes in 1997 =  $[(14.84 - 9.92) : 9.92] \times 100\%$

$$= (4.92 : 9.92) \times 100\%$$

$$= 0.4960 \times 100\%$$

$$= 49.60\%$$

- Changes in 1998 =  $[(21.58 - 14.84) : 14.84] \times 100\%$   
=  $(6.74 : 14.84) \times 100\%$   
=  $0.4542 \times 100\%$   
= 45.42%
- Changes in 1999 =  $[(17.18 - 21.58) : 21.58] \times 100\%$   
=  $[(4.4) : 21.58] \times 100\%$   
=  $(0.2039) \times 100\%$   
= (20.39%)



### Appendix 3. Calculation of Profitability Ratio

#### 1. Gross profit Margin Ratio

|   |
|---|
| $\text{Gross Profit Margin} = \frac{\text{Gross Profit}}{\text{Sales}}$ |
|---|

a. Gross Profit Margin Ratio of 1996 =  $(703,873 : 1,223,247) \times 100\%$

$$= 0.5754 \times 100\%$$

$$= 57.54\%$$

b. Gross Profit Margin Ratio of 1997 =  $(872,820 : 1,456,806) \times 100\%$

$$= 0.5991 \times 100\%$$

$$= 59.91\%$$

c. Gross Profit Margin Ratio of 1998 =  $(1,533,844 : 2,108,245) \times 100\%$

$$= 0.7275 \times 100\%$$

$$= 72.75\%$$

d. Gross Profit Margin Ratio of 1999 =  $(1,860,156 : 2,738,813) \times 100\%$

$$= 0.6792 \times 100\%$$

$$= 67.92\%$$

#### e. Changes in Gross Profit

- Changes in 1997 =  $[(872,820 - 703,873) : 703,873] \times 100\%$

$$= (168,947 : 703,873) \times 100\%$$

$$= 0.2400 \times 100\%$$

$$= 24\%$$

- Changes in 1998 =  $[(1,533,844 - 872,820) : 872,820] \times 100\%$   
 $= (661,024 : 872,820) \times 100\%$   
 $= 0.7573 \times 100\%$   
 $= 75.73\%$
- Changes in 1999 =  $[(1,860,156 - 1,533,844) : 1,533,844] \times 100\%$   
 $= (326,312 : 1,533,844) \times 100\%$   
 $= 0.2127 \times 100\%$   
 $= 21.27\%$

#### f. Changes in Sales

- Changes in 1997 =  $[(1,456,806 - 1,223,247) : 1,223,247] \times 100\%$   
 $= (233,559 : 1,223,247) \times 100\%$   
 $= 0.1909 \times 100\%$   
 $= 19.09\%$
- Changes in 1998 =  $[(2,108,245 - 1,456,806) : 1,456,806] \times 100\%$   
 $= (651,439 : 1,456,806) \times 100\%$   
 $= 0.4472 \times 100\%$   
 $= 44.72\%$
- Changes in 1999 =  $[(2,738,813 - 2,108,245) : 2,108,245] \times 100\%$   
 $= [630,568 : 2,108,245] \times 100\%$   
 $= 0.2991 \times 100\%$   
 $= 29.91\%$

## g. Changes in Gross Profit Margin Ratio

- Changes in 1997 =  $[(59.91 - 57.54) : 57.54] \times 100\%$   
 $= (2.37 : 57.54) \times 100\%$   
 $= 0.0412 \times 100\%$   
 $= 4.12\%$
- Changes in 1998 =  $[(72.75 - 59.91) : 59.91] \times 100\%$   
 $= (12.84 : 59.91) \times 100\%$   
 $= 0.2143 \times 100\%$   
 $= 21.43\%$
- Changes in 1999 =  $[(67.92 - 72.75) : 72.75] \times 100\%$   
 $= [(4.83) : 72.75] \times 100\%$   
 $= (0.0664) \times 100\%$   
 $= (6.64\%)$

## 2. Operating Profit Margin Ratio

|   |
|---|
| $\text{Operating Profit Margin} = \frac{\text{Total Operating Income}}{\text{Sales}}$ |
|---|

- a. Operating Profit Margin Ratio of 1996 =  $(586,696 : 1,223,247) \times 100\%$   
 $= 0.4796 \times 100\%$   
 $= 47.96\%$
- b. Operating Profit Margin Ratio of 1997 =  $(695,320 : 1,456,806) \times 100\%$   
 $= 0.4773 \times 100\%$   
 $= 47.73\%$

c. Operating Profit Margin Ratio of 1998 =  $(1,107,094 : 2,108,245)$

$$= 0.5251 \times 100\%$$

$$= 52.51\%$$

d. Operating Profit Margin Ratio of 1999 =  $(1,520,242 : 2,738,813) \times 100\%$

$$= 0.5551 \times 100\%$$

$$= 55.51\%$$

e. Changes in Operating Income

- Changes in 1997 =  $[(695,320 - 586,696) : 586,696] \times 100\%$

$$= (108,624 : 586,696) \times 100\%$$

$$= 0.1851 \times 100\%$$

$$= 18.51\%$$

- Changes in 1998 =  $[(1,107,094 - 695,320) : 695,320] \times 100\%$

$$= (411,774 : 695,320) \times 100\%$$

$$= 0.5922 \times 100\%$$

$$= 59.22\%$$

- Changes in 1999 =  $[(1,520,242 - 1,107,094) : 1,107,094] \times 100\%$

$$= (413,148 : 1,107,094) \times 100\%$$

$$= 0.3732 \times 100\%$$

$$= 37.32\%$$

f. Changes in Operating Profit Margin Ratio

- Changes in 1997 =  $[(47.73 - 47.96) : 47.96] \times 100\%$

$$= [(0.23) : 47.96] \times 100\%$$

$$= (0.0048) \times 100\%$$

$$= (0.48\%)$$

- Changes in 1998 =  $[(52.51 - 47.73) : 47.73] \times 100\%$   
 $= (4.78 : 47.73) \times 100\%$   
 $= 0.1001 \times 100\%$   
 $= 10.01\%$
- Changes in 1999 =  $[(55.51 - 52.51) : 52.51] \times 100\%$   
 $= (3 : 52.51) \times 100\%$   
 $= 0.0571 \times 100\%$   
 $= 5.71\%$

### 3. Net Profit Margin Ratio

|   |
|---|
| $\text{Net Profit Margin} = \frac{\text{Net Income}}{\text{Sales}}$ |
|---|

- a. Net Profit Margin Ratio of 1996 =  $(521,685 : 1,223,247) \times 100\%$   
 $= 0.4265 \times 100\%$   
 $= 42.65\%$
- b. Net Profit Margin Ratio of 1997 =  $(636,527 : 1,456,806) \times 100\%$   
 $= 0.4369 \times 100\%$   
 $= 43.69\%$
- c. Net Profit Margin Ratio of 1998 =  $(1,142,403 : 2,108,245) \times 100\%$   
 $= 0.5419 \times 100\%$   
 $= 54.19\%$
- d. Net Profit Margin Ratio of 1999 =  $(1,379,341 : 2,738,813) \times 100\%$   
 $= 0.5036 \times 100\%$   
 $= 50.36\%$



e. Changes in Net Income

- Changes in 1997 =  $[(636,527 - 521,685) : 521,685] \times 100\%$   
 $= (114,842 : 521,685) \times 100\%$   
 $= 0.2201 \times 100\%$   
 $= 22.01\%$
- Changes in 1998 =  $[(1,142,403 - 636,527) : 636,527] \times 100\%$   
 $= (505,876 : 636,527) \times 100\%$   
 $= 0.7947 \times 100\%$   
 $= 79.47\%$
- Changes in 1999 =  $[(1,379,341 - 1,142,403) : 1,142,403] \times 100\%$   
 $= (236,938 : 1,142,403) \times 100\%$   
 $= 0.2074 \times 100\%$   
 $= 20.74\%$

f. Changes in Net Profit Margin Ratio

- Changes in 1997 =  $[(43.69 - 42.65) : 42.65] \times 100\%$   
 $= (1.04 : 42.65) \times 100\%$   
 $= 0.0244 \times 100\%$   
 $= 2.44\%$
- Changes in 1998 =  $[(54.19 - 43.69) : 43.69] \times 100\%$   
 $= (10.5 : 43.69) \times 100\%$   
 $= 0.2403 \times 100\%$   
 $= 24.03\%$

- Changes in 1999 =  $[(50.36 - 54.19) : 54.19] \times 100\%$   
=  $[(3.83 : 54.19) \times 100\%$   
=  $0.0707 \times 100\%$   
=  $7.07\%$



## Appendix 4. Calculation of Activity Ratio

### 1. Fixed Assets Turnover Ratio

$$\text{Fixed Assets Turnover} = \frac{\text{Sales}}{\text{Fixed Assets}}$$

a. Fixed Assets Turnover Ratio of 1996 = (1,223,247 : 774,174)

$$= 1.58 \text{ times}$$

b. Fixed Assets Turnover Ratio of 1997 = (1,456,806 : 810,867)

$$= 1.8 \text{ times}$$

c. Fixed Assets Turnover Ratio of 1998 = (2,108,245 : 1,083,364)

$$= 1.95 \text{ times}$$

d. Fixed Assets Turnover Ratio of 1999 = (2,738,813 : 1,333,501)

$$= 2.05 \text{ times}$$

#### e. Changes in Fixed Assets

- Changes in 1997 =  $[(810,867 - 774,174) : 774,174] \times 100\%$

$$= (36,693 : 774,174) \times 100\%$$

$$= 0.0474 \times 100\%$$

$$= 4.74\%$$

- Changes in 1998 =  $[(1,083,364 - 810,867) : 810,867] \times 100\%$

$$= (272,497 : 810,867) \times 100\%$$

$$= 0.3360 \times 100\%$$

$$= 33.60\%$$

- Changes in 1999 =  $[(1,333,501 - 1,083,364) : 1,083,364] \times 100\%$   
 $= [(250,137 : 1,083,364) \times 100\%$   
 $= 0.2309 \times 100\%$   
 $= 23.09\%$

f. Changes in Fixed Assets Turnover Ratio

- Changes in 1997 =  $[(1.80 - 1.58) : 1.58] \times 100\%$   
 $= (0.22 : 1.58) \times 100\%$   
 $= 0.1392 \times 100\%$   
 $= 13.92\%$
- Changes in 1998 =  $[(1.95 - 1.80) : 1.80] \times 100\%$   
 $= (0.15 : 1.80) \times 100\%$   
 $= 0.0833 \times 100\%$   
 $= 8.33\%$
- Changes in 1999 =  $[(2.05 - 1.95) : 1.95] \times 100\%$   
 $= [(0.1 : 1.95) \times 100\%$   
 $= 0.0513 \times 100\%$   
 $= 5.13\%$

2. Total Assets Turnover Ratio

|   |
|---|
| $\text{Total asset turnover} = \frac{\text{Sales}}{\text{Total asset}}$ |
|---|

- a. Total Assets Turnover Ratio of 1996 =  $(1,223,247 : 2,843,927)$   
 $= 0.43 \text{ times}$

b. Total Assets Turnover Ratio of 1997 =  $(1,456,806 : 3,532,466)$   
 = 0.41 times

c. Total Assets Turnover Ratio of 1998 =  $(2,108,245 : 4,879,041)$   
 = 0.43 times

d. Total Assets Turnover Ratio of 1999 =  $(2,738,813 : 5,755,420)$   
 = 0.48 times

e. Changes in Total Assets Turnover Ratio

- Changes in 1997 =  $[(0.41 - 0.43) : 0.43] \times 100\%$

$$= [(0.02) : 0.43] \times 100\%$$

$$= (0.0465) \times 100\%$$

$$= (4.65\%)$$

- Changes in 1998 =  $[(0.43 - 0.41) : 0.41] \times 100\%$

$$= (0.02 : 0.41) \times 100\%$$

$$= 0.0488 \times 100\%$$

$$= 4.88\%$$

- Changes in 1999 =  $[(0.48 - 0.43) : 0.43] \times 100\%$

$$= [(0.05 : 0.43) \times 100\%$$

$$= 0.1163 \times 100\%$$

$$= 11.63\%$$

## Appendix 5. Calculation of Du Pont Scheme

### 1. Return On Investment (ROI)

$$\text{ROI} = \text{Net Profit Margin} \times \text{Total Asset Turnover}$$

$$\begin{aligned} \text{a. ROI of 1996} &= 42.65\% \times 0.43 \\ &= 18.34\% \end{aligned}$$

$$\begin{aligned} \text{b. ROI of 1997} &= 43.69 \times 0.41 \\ &= 17.91\% \end{aligned}$$

$$\begin{aligned} \text{c. ROI of 1998} &= 54.19\% \times 0.43 \\ &= 23.30\% \end{aligned}$$

$$\begin{aligned} \text{d. ROI of 1999} &= 50.36\% \times 0.48 \\ &= 24.17\% \end{aligned}$$

### 2. Equity Multiplier

$$\text{Equity Multiplier} = \frac{\text{Total Assets}}{\text{Total Stockholder Equity}}$$

$$\begin{aligned} \text{a. Equity Multiplier of 1996} &= 2,843,927 : 2,557,423 \\ &= 1.11 \end{aligned}$$

$$\begin{aligned} \text{b. Equity Multiplier of 1997} &= 3,532,466 : 2,999,087 \\ &= 1.18 \end{aligned}$$

$$\begin{aligned} \text{c. Equity Multiplier of 1998} &= 4,879,041 : 3,817,394 \\ &= 1.28 \end{aligned}$$

$$\begin{aligned} \text{d. Equity Multiplier of 1999} &= 5,755,420 : 4,759,346 \\ &= 1.21 \end{aligned}$$

### 3. Return On Equity (ROE)

|   |
|---|
| $\text{ROE} = \text{ROI} \times \text{Equity Multiplier}$ |
|---|

$$\begin{aligned} \text{a. ROE of 1996} &= 18.34\% \times 1.11 \\ &= 20.36\% \end{aligned}$$

$$\begin{aligned} \text{b. ROE of 1997} &= 17.91\% \times 1.18 \\ &= 21.13\% \end{aligned}$$

$$\begin{aligned} \text{c. ROE of 1998} &= 23.30\% \times 1.28 \\ &= 29.82\% \end{aligned}$$

$$\begin{aligned} \text{d. ROE of 1999} &= 24.17\% \times 1.21 \\ &= 29.25\% \end{aligned}$$