Outline of the chapter:-

I Profit Margin
1. Earnings Ratio
2. Operating Ratio

II Assets Turnover
1. Total Assets Turnover Ratio
2. Fixed Assets Turnover Ratio
3. Current Assets Turnover Ratio
4. Working Capital Turnover Ratio
5. Conclusion
A business firm is always established to earn profit from its operations. It is the profit, which is a backbone for survival, growth and stability of a business firm, provides incentives and encouragements for prospective investors, attracts external funds and serves a major source of internal funds. Hence profit margin is the most essential object of the business firm, as it a very good indicator of profitability. For better evaluation of profit margin, it should be expressed in terms of percentage of net sales. Overall profitability of business firm also depends on assets turnover, along with profit margin. Assets turnover is concerned with how effectively the assets of the business firm are utilized. In order to study profit margin, operating profit ratio, gross margin ratio, net profit margin ratio and operating ratio need to be examined and in order to study assets turnover ratio, total assets turnover ratio, fixed assets turnover ratio, current assets turnover ratio, working capital turnover ratio and inventory turnover ratio need to be examined.

Now the researcher will discuss concept of profit margin and assets turnover and calculate various ratio related with profit margin and assets turnover of the selected private sector life insurance companies by applying F-test.
I. Profit Margin:

The business firms are generally established with a view to earning profit from its business operations. But under different situations the objects of the business firms may be changed to survival, growth and stability etc. If the business firm is to survive in a dynamic and expanding environment, it has to go on expanding the scale of its operations on a regular and continuing basis by generating sufficient profit. Hence, profit margin is the most essential object of the business firm which is a very good indicator of profitability. Any increase in profit margin, when the other things remains the same, represents that the business operations are sound, efficient and successful. It provides incentives and encouragement for prospective investors and attracts external funds and acts as a major source of internal funds.

In on insurance firm the excess of premium income and other important income is income from investment over the expenses is termed as profit margin Apart from total revenue, premium income shows the main function of an insurance company. The other income of an insurance company from like income of interest, rent, and dividend, profit on sale of investment, income from re-insurance accepted, the total will be termed as the total revenue of total operating and non operating revenues.

For better evaluation of profit margin, it should be expressed in terms of net premium. Here net premium would mean gross premium minus re-insurance ceded premium, and other expenses directly related to earned premium etc. Profit are needed not only to remunerate capital but also to finance growth and expansion.
While undertaking an analytical study of the revenue account of (life) insurance concern the first item would be the amount of premium earned.

The non-operating income surplus (excess of non-operating income over non-income expenses) are added in operating profit the amount received thus would terms as profit before tax and from this profit before tax when income tax deducted, the balancing figure would be called as net profit or profit alter tax.

According to Kuchhal S.C, “The profit margin is a measure of overall profitability. This measure is also referred to as the net income percentage or return on sales”1 “Profit margin is the return generated by a company’s assets and represents the different between revenues and total expenditure.”2

In manufacturing firm, the excess of sales over the cost of product is termed as profit margin. Apart from total revenue, net premium is the main function of an insurance company. The other income of an insurance company like interest on out-side investments, service charge received, amount received on sale of assets are included in sales, the total will be termed as the total revenue of total operating and non-operating revenues.

The important ratio related to profit margin has been studied under various heads.

1. Operating Profit Margin/Earning Ratio

2. Operating Ratio
1. **Earnings Ratio:**

   
   \[
   \text{Earning Ratio} = \frac{\text{Profit after Tax}}{\text{Net Premium}}
   \]

   Premium is most important element in achieving net profit. So the ratio of net profit to premium will be an indicator of profit achievement or profit target to be achieved. The net Profit indicates the management’s ability to earn sufficient profits on premium not only to cover all revenue operating expenses of the business (including depreciation).

   The expenses of merchandising of servicing but also to have a sufficient margin to pay a reasonable compensation to share holders on their contribution to the firm.

   A high earning ratio would indicate a sound financial position of a business firm with which the firm will be able to face the problem of falling selling price, rising expenses of services or declining demand of service. Depending upon the concept of earning ratio can be computed as given bellow Earning ratio = profit after tax / net premium.

   Table 6.1 shows that the Earning ratio of selected private sector life insurance companies. The Earning ratio in SBI Life Insurance Co. Ltd. registered a net loss during the first two years 2003-04 and 2004-05. The earning ratios were -7.37 percent in 2003-04 and -1.92 percent in 2004-05. It presented the inability to earn sufficient profit to cope up with the expenses. Though the ratio turned to positive thereafter and was 0.02 percent in 2005-06 but then it shows increasing trend during the year 2006-07 to 2012-13. It was the highest 5.99 percent in 2012-13. The earning ratio of Bajaj Allianz Life Insurance Co. Ltd. indicates net losses during the year 2003-04 to 2008-09. The highest loss occurred in the year 2003-04. It was -12.23 percent but then it shows increasing trend and was the highest 17.64 percent in 2011-12.
CHART 6.1
The ratio of Max New York Life Insurance Co. Ltd. registered an increasing trend during the 2003-04 to 2006-07 but thereafter it decreased to -10.29 percent in the year 2008-09. Thereafter it increased at rocking speed and reached at 33.61 percent in 2012-13 which indicates the ability to earn enough profit to recover its fixed as well as variable expenses from its premium and investment during the year 2010-11 to 2012-13.

The ratio of Reliance Life Insurance Co. Ltd. witnessed an increasing trend during the study period. It was the highest -59.39 percent in 2003-04 which increased to 9.47 percent in 2012-13 which reveals the highest ratio of the study period.

In ING Vysya Life Insurance Co. Ltd., the earning ratio indicates rising trend during the year 2003-04 to 2012-13. It witnessed negative during the year 2003-04 to 2011-12 which ranged between 71.34 percent to 1.86 percent. Thereafter it rose up slightly and reached at 1.33 percent in 2012-13.

The ratio of Birla Sun Life Insurance Co. Ltd. shows upward trend during the year 2003-04 to 2006-07 but thereafter it declined to -43.01 percent in 2009-10. However it increased to 10.72 percent in 2012-13 which was at highest level during the study period.

The earning ratio of ICICI Prudential Life Insurance Co. Ltd. shows an increasing trend during the study period. It was the highest at 19.1 percent in 2012-13 which indicates the ability to earn enough profit to recover its fixed as well as variable expenses from its premium and investment.
In HDFC Standard Life Insurance Co. Ltd., the ratio was the highest 4.01 percent in 2012-13 which indicates good position of the company and the lowest -13.33 in 2004-05 not showing healthy position.

The ratio of TATA AIA Life Insurance Co. Ltd. registered a mixed trend during the year 2003-04 to 2012-13. The earning ratio was the highest at 12.07 in 2012-13 which indicates the ability to earn enough profit to recover its fixed as well as variable expenses from its premium and investment.

The ratio of Met Life Insurance Co. Ltd. indicating mixed trend during the year 2003-04 to 2008-09 but there after it shows an increasing trend. The ratio was the highest 1.41 percent in 2012-13 which indicates good position of the company and the lowest -42.8 percent in 2003-04 not showing healthy position of the company.

The inter firm comparison of net profit to net premium represents that the Max Newyork had generated a sizeable net profit throughout the study period and ICICI Prudential Life Insurance Co. Ltd. was next one firm which also generated net profit throughout the study period followed by Bajaj Allianz, TATA AIA, Birla Sun Life, SBI and Met. While ING Vysya suffered weak profit then HDFC standard and Reliance had maintain profitability except one year loss during the study period. Hence it can be concluded that the earning position of seven firms under review were success in earning during the study period, while ING Vysya was under pressure in terms of earning during the study period.

☞ ‘F’ TEST

$H_0$ is that the variance arose in the proportion of Earning ratio over the years and among the various companies do not differ significantly.
**H₁** is that the variances arose in the proportion of Earning ratio over the year and among the various companies differ significantly.

The table 6.1.1 represents the ‘F’ test in insurance companies under study.

**Table 6.1.1**

‘F’ test for Earning ratio (From 2003-04 to 2012-13)

<table>
<thead>
<tr>
<th>SOURCE OF VARIATION</th>
<th>Sum of Squares</th>
<th>d.f.(V)</th>
<th>Mean Square</th>
<th>F Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between companies</td>
<td>53.25</td>
<td>3.00</td>
<td>17.75</td>
<td>0.01</td>
</tr>
<tr>
<td>Between Years</td>
<td>21098.16</td>
<td>5.00</td>
<td>4219.63</td>
<td>2.79</td>
</tr>
<tr>
<td>Residual</td>
<td>22682.08</td>
<td>15.00</td>
<td>1512.14</td>
<td></td>
</tr>
<tr>
<td>Total S.S</td>
<td>43780.23</td>
<td>23.00</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Between companies, table Value of F-test = 2.76 at 5% level.
Between years, table Value of F-test = 2.76 at 5% level.

1) The calculation value (0.01) of F-test between companies is lower than table value of (2.76), So H₀ is accepted.
2) The calculation value (2.79) of F-test between years is more than table value of (2.76), So H₁ is accepted.

**2. Operating Ratio:**

The operating ratio is calculated by dividing operating profit plus investment income by the figure of net premium and then multiplied by 100 which represents the ratio of operating profit plus investment income to net premium. With the help of this ratio one can judge the marginal efficiency. Moreover, this ratio (a) Tella the management that
the premium can generate earnings before any expenses of business excepts the expenses of services are met (b) Reflects unfavorable expenses and mark up policies and the inability of management to develop business when it is slow.\(^3\)

The operating profit ratio is the test of the operational efficiency which the business is being carried on. The operating profit ratio is very important ratio which shows the variations in the net profit margin ratio as both are complementary to each other. The operating profit ratio is calculated by dividing operating profit plus investment income by net premium.\(^4\)

\[
\text{Operating ratio} = \frac{\text{Operating profit} + \text{Investment income}}{\text{Net premium}}
\]

Here the operating over profit includes surplus of revenue income over revenue expenses, as per the revenue account, [income like premium, income of from investment profit/loss on sale of investment and other income and outgo like claims commission management expenses and other expenses]. Net premium means less reinsurances ceded.

Investment income includes income of interest dividend and rent and profit on sale of investment.
Chart 6.2
The table 6.2 represent the operating ratio of selected private sector life insurance companies.

Table make it clear that the operating profit ratio in SBI Life Insurance Co. Ltd. recorded a fluctuating trend during the study period. The ratio was the highest 2.31 percent in 2009-10. This shows that the company had achieved the growth rate during the year 2009-10. The lowest 0.12 percent in 2005-06 which represented the inability to earn sufficient operating profit to cope up with total outgo.

The operating profit ratio in Bajaj Allianz Life Insurance Co. Ltd. registered declining trend during the year 2003-04 to 2007-08. It ranged between 1.21 percent to 0.72 percent. It was the lowest 0.72 percent in 2008-09. It represented the inability to earn sufficient operating profit to cope up with total outgo. The ratio turned to positive thereafter and was 1.45 percent in 2012-13 at the highest level during the study period. That shows very good performance of the company’s management efficiency.

The operating profit ratio of Max Newyork Life Insurance Co. Ltd. witnessed in mixed trend during the study period. It was the highest 2.20 percent in 2003-04 which went down to 1.05 percent, the lowest level in 2011-12.

In Reliance Life Insurance Co. Ltd. operating profit ratio witnessed fluctuating trend during the study period. The operating profit ratio was 0.15 percent in 2003-04 which increased to 1.68 percent in 2005-06, it was decreased to 1.03 percent in 2008-09. Thereafter it was increased slightly to 1.91 percent. Finally ratio was rose up at highest level of the study period when it was 1.91 percent in 2009-10.

In ING Vysya Life Insurance Co. Ltd., the proprietary ratio indicates declining trend during the year 2003-04 to 2009-10. It was more than
1.10 percent during the year 2010-11 to 2012-13 which indicates the best position of the company.

The ratio of Birla Sun Life Insurance Co. Ltd. shows mixed trend during the year 2003-04 to 2012-13. It was the highest 1.46 percent in 2012-13 which would indicates very good performance of the company’s management efficiency.

The operating ratio of ICICI Prudential Life Insurance Co. Ltd. shows mixed trend during the year 2003-04 to 2012-13. It was the best in the year 2012-13.

In HDFC Standard Life Insurance Co. Ltd., the ratio was remained stable at 1.19 percent during the year 2003-04 to 2004-05 and the highest 1.35 percent in 2005-06 which indicates healthy position of the company and the lowest in 2012-13 not showing healthy position.

The ratio of TATA AIA Life Insurance Co. Ltd. registered a mixed trend during the year 2003-04 to 2012-13. The proprietary ratio was the highest 1.52 percent in 2012-13 which indicates good position of the company.

The ratio of Met Life Insurance Co. Ltd. indicating mixed trend during the study period. The operating ratio was the highest 1.74 percent in 2004-05 which indicates good position of the company and the lowest 0.82 percent in 2008-09 which indicates more burden of operating expenses on the company.

On the basis of above discussion it can be opined the percentage of operating profit ratio was highest in SBI followed by Max Newyork, Reliance, ING Vysya, Met, TATA AIA, Birla Sun Life, Bajaj Allianz, ICICI Prudential and HDFC Standard respectively. The operating profit ratio increased during the last two years of the study period in all the
selected life insurance companies under study hence it can be said that the profit ability of almost all the life insurance have grown sustainably especially during the last two years, from the viewpoint of operating profit and investment income.

 куді ‘F’ TEST

\( H_0 \) is that the variance arose in the proportion of Operating ratio over the years and among the various companies do not differ significantly.

\( H_1 \) is that the variances arose in the proportion of Operating ratio over the year and among the various companies differ significantly.

The table 6.2.1 represents the ‘F’ test in insurance companies under study.

**Table 6.2.1**

‘F’ test for Operating Ratio (From 2003-04 to 2012-13)

<table>
<thead>
<tr>
<th>SOURCE OF VARIATION</th>
<th>Sum of Squares</th>
<th>d.f.(V)</th>
<th>Mean Square</th>
<th>F Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between companies</td>
<td>20.76</td>
<td>3.00</td>
<td>6.92</td>
<td>5.42</td>
</tr>
<tr>
<td>Between Years</td>
<td>142.09</td>
<td>5.00</td>
<td>28.42</td>
<td>22.25</td>
</tr>
<tr>
<td>Residual</td>
<td>19.16</td>
<td>15.00</td>
<td>1.28</td>
<td></td>
</tr>
<tr>
<td>Total S.S</td>
<td>161.25</td>
<td>23.00</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Between companies, table Value of F-test = 2.76 at 5% level.
Between years, table Value of F-test = 2.76 at 5% level.

1) The calculation value (5.42) of F-test between companies is more than table value of (2.76), So \( H_1 \) is accepted.

2) The calculation value (22.25) of F-test between years is more than table value of (2.76), So \( H_1 \) is accepted.
II - Assets Turnover:

The overall profitability of any business largely depends on two factors viz. (1) the rate of return on capital employed; and (2) The turnover.

The assets turnover means the number of times an asset flows through a business firm’s operations in relation to net premium. The relationship between the net premium and assets is known as assets turnover. Any change in assets turnover would affect the profitability of a business.

Assets turnover ratios are concerned with how efficiently the assets of the firm are managed or utilized. These ratios indicate the rate at which different assets are turned over in the process of doing business. The greater the rate of turnover or conversion, the more efficient is the utilization or management, other things being equal, resulting in higher profitability. Sometimes these ratios are called activity ratio, efficiency ratio or investment turnover ratios. Thus, the assets turnover ratios reflect the relationship between the level of the net premium and the various assets and a proper balance between assets and net premium shows better management of assets. Different assets turnover ratio has been computed for judging the effectiveness of assets utilization.

The important ratio pertaining to assets turnover has been studied under the following various heads:

1. Total Assets Turnover Ratio
2. Fixed Assets Turnover Ratio
3. Current Assets Turnover Ratio
4. Working Capital Ratio
1. Total Assets Turnover Ratio:

   This ratio expresses the relationship between cost of net premium and total assets of a firm. It is also called ‘Total Investment turnover Ratio’ and calculated by using the following formula:

   \[
   \text{Total Assets Turnover Ratio} = \frac{\text{Net premium}}{\text{Total Assets}}
   \]

   Total assets mean all fixed and current assets but the provision for deprecation is adjusted in it. A few experts exclude fictitious assets like preliminary expenses, underwriting commission, discount on shares and debentures etc, but include intangible assets such as goodwill, patents, trade mark etc.

   This ratio indicates the number of times the assets are turned over in a year in relation to net premium. A higher total assets turnover ratio indicates an effective utilization of investment in assets, whereas lower assets turnover ratio indicates that assets are not properly utilized in compared to net premium.

   Table 6.3 and chart 6.3 represent the total assets turnover ratio of selected private sector life insurance companies.
Table 6.3
Chart 6.3
Table 6.3 shows that the total assets turnover ratio of selected private sector life insurance companies. The ratio of SBI Life Insurance Co. Ltd. presented mixed trend during the study period. It was the highest 17.04:1 which would indicate an effective utilization of investment in assets and the lowest 2.7:1 in 2011-12 which would not indicate that assets are not properly utilized in comparison to net premium.

The ratio of Bajaj Allianz Life Insurance Co. Ltd. narrates increasing trend during the year 2003-04 to 2008-09 but thereafter it decreased to 1.39:1 in 2009-10. It was the highest 15.7:1 in 2007-08 which indicates good position of the company and lowest 2.23:1 in 2003-04 which does not show healthy position. Generally, the proprietary ratio of the company was more than 1.39:1 during the year 2003-04 to 2012-13.

The ratio of Max New York Life Insurance Co. Ltd. registered a mixed trend during the 2003-04 to 2012-13. The total assets turnover ratio was the highest 9.57:1 in 2006-07 which indicates an effective utilization of investment in assets.

The ratio of Reliance Life Insurance Co. Ltd. shows rising trend during the year 2003-04 to 2008-09 but then it decreased to 0.75:1 in 2009-10 and thereafter it rose up sharply and reached at the highest level in 2010-11. The lowest 1.01:1 in 2012-13 which would not indicate healthy position of the company.

In ING Vysya Life Insurance Co. Ltd., the total assets turnover ratio indicates an increasing trend during the year 2003-04 to 2009-10 but thereafter it shows declined trend. It was more than 4.30:1 during the year 2007-08 to 2011-12 which would indicate the best position of the company.
The ratio of Birla Sun Life Insurance Co. Ltd. shows mixed trend during the year 2003-04 to 2012-13. It ranged between 5.36:1 to 9.36:1. It was the highest 9.36:1 in 2005-06 which would indicates an effective utilization of investment in assets.

The total assets turnover ratio of ICICI Prudential Life Insurance Co. Ltd. remained more than 10.15:1 during the year 2005-06 and 2008-09 to 2011-12 which would indicates an effective utilization of investment in assets.

In HDFC Standard Life Insurance Co. Ltd., the ratio was the highest 7.83:1 in 2009-10 which indicates good position of the company and the lowest in 2003-04 not showing healthy position.

The ratio of TATA AIA Life Insurance Co. Ltd. registered a mixed trend during the year 2003-04 to 2012-13. The ratio was the highest 8.33:1 in 2011-12 which indicates an effective utilization of investment in assets.

The ratio of Met Life Insurance Co. Ltd. indicating also mixed trend during the study period. The proprietary ratio was the highest 5.66:1 in 2011-12 which indicates good position of the company and the lowest 0.88:1 in 2004-05 which would not indicates that assets are not properly utilized in compared to net premium.

On like basis of above analysis, it can be conclude that the total assets turnover ratio of ICICI Prudential Life Insurance Co. Ltd. was the highest among all the companies during the study period followed by SBI, Bajaj Allianz, Reliance, Max Newyork, Birla Sun Life, TATA AIA, HDFC Standard, ING Vysya and Met respectively.
‘F’ TEST

H₀ is that the variance arose in the proportion of total assets turnover ratio over the years and among the various companies does not differ significantly.

H₁ is that the variances arose in the proportion of total assets turnover ratio over the year and among the various companies differ significantly.

The table 6.3.1 represents the ‘F’ test in insurance companies under study.

<table>
<thead>
<tr>
<th>SOURCE OF VARIATION</th>
<th>Sum of Squares</th>
<th>d.f.(V)</th>
<th>Mean Square</th>
<th>F Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between companies</td>
<td>956.18</td>
<td>3.00</td>
<td>318.73</td>
<td>4.00</td>
</tr>
<tr>
<td>Between Years</td>
<td>3881.82</td>
<td>5.00</td>
<td>776.36</td>
<td>9.74</td>
</tr>
<tr>
<td>Residual</td>
<td>1195.20</td>
<td>15.00</td>
<td>79.68</td>
<td></td>
</tr>
<tr>
<td>Total S.S</td>
<td>5077.03</td>
<td>23.00</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Between companies, table Value of F-test = 2.76 at 5% level.
Between years, table Value of F-test = 2.76 at 5% level.

1) The calculation value (4.00) of F-test between companies is more than table value of (2.76), So H₁ is accepted.

2) The calculation value (9.74) of F-test between years is more than table value of (2.76), So H₁ is accepted.
2. Fixed Assets Turnover Ratio:

This ratio expresses the relationship between fixed assets and net sales. Since investment in fixed assets is made for the ultimate purpose of efficient sales, the ratio is used to measure the fulfillment of that objective. As such, investments are excluded from fixed assets as they do not affect sales. It is calculated by the following formula:

\[
\text{Fixed Assets Turnover Ratio} = \frac{\text{Net premium}}{\text{Fixed Assets}}
\]

This ratio measures the efficiency and profit earning capacity of a firm. The higher the ratio, the greater is the intensive utilization of fixed assets. Lower ratio means under utilization of fixed assets and excessive investment in fixed assets. As volumes of sales depend on a variety of factors such as price, quality of goods, salesmanship, marketing etc, it is argued that no direct relationship can be established between sales and fixed assets. Accordingly, it is not recommended for general use.

Table 6.4 and chart 6.4 represent the total fixed assets turnover ratio of the selected private sector life insurance companies.
Table 6.4
Chart 6.4
Table 6.4 shows that the fixed assets turnover ratio of selected private sector life insurance companies. The ratio of SBI Life Insurance Co. Ltd. presented declined trend during the study period. It was the highest 77.15:1 which would indicate the intensive utilization of fixed assets and the lowest 10.92:1 in 2008-09 which would indicate the under utilization of fixed assets and excessive investment in fixed assets.

The fixed assets ratio of Bajaj Allianz Life Insurance Co. Ltd. narrates increasing trend during the year 2003-04 to 2006-07 but thereafter it decreased to 63.5:1 in 2009-10. It was the highest 99.61:1 in 2006-07 which would indicate the intensive utilization of fixed assets and the lowest 7.05:1 in 2003-04 which would indicate the under utilization of fixed assets and excessive investment in fixed assets.

The ratio of Max New York Life Insurance Co. Ltd. registered a rising trend during the 2003-04 to 2012-13. The fixed assets turnover ratio was the highest 17.89:1 in 2010-11 which would indicate the intensive utilization of fixed assets.

The ratio of Reliance Life Insurance Co. Ltd. shows an increasing trend during the year 2003-04 to 2008-09 but then it shows mixed trend. It was the highest 61.44:1 in 2006-07. The lowest 2.20:1 in 2003-04 which would not indicates healthy position of the company.

In ING Vysya Life Insurance Co. Ltd., the fixed assets turnover ratio indicates an increasing trend during the year 2003-04 to 2009-10 but thereafter it shows mixed trend. It was more than 40.91:1 during the year 2008-09 to 2011-12 which would indicate the intensive utilization of fixed assets.

The ratio of Birla Sun Life Insurance Co. Ltd. shows mixed trend during the year 2003-04 to 2010-11. It ranged between 17.14:1 to
80.39:1. It was the highest 80.39:1 in 2010-11 which would indicate the intensive utilization of fixed assets.

The fixed assets turnover ratio of ICICI Prudential Life Insurance Co. Ltd. remained more than 32.86:1 during the year 2003-04 to 2011-12 which would indicate the intensive utilization of fixed assets.

In HDFC Standard Life Insurance Co. Ltd., the ratio was the highest 65.45:1 in 2007-08 which would indicate the intensive utilization of fixed assets and the lowest 5.76:1 which would indicate the under utilization of fixed assets and excessive investment in fixed assets.

The ratio of TATA AIA Life Insurance Co. Ltd. registered a mixed trend during the year 2003-04 to 2012-13. The ratio was the highest 80.11:1 in 2010-11 which would indicate the intensive utilization of fixed assets.

The ratio of Met Life Insurance Co. Ltd. indicating also mixed trend during the study period. The proprietary ratio was the highest 68.62:1 in 2011-12 which indicates good position of the company and the lowest 0.88:1 in 2004-05 which would not indicates that fixed assets are not properly utilized in compared to net premium.

On like basis of above analysis, it can be conclude that the fixed assets turnover ratio of Bajaj Allianz Life Insurance Co. Ltd. was the highest among all the companies during the study period followed by Birla Sun Life, SBI, ICICI Prudential, Met, HDFC Standard, Reliance, ING Vysya, Max Newyork and TATA AIA respectively.

**‘F’ TEST**

$H_0$ is that the variance arose in the proportion of fixed assets turnover ratio over the years and among the various companies does not differ significantly.
\textbf{H}_1 \text{ is that the variances arose in the proportion of fixed assets turnover ratio over the year and among the various companies differ significantly.}

The table 6.4.1 represents the ‘F’ test in insurance companies under study.

\textbf{Table 6.4.1}

‘F’ test for fixed assets turnover (From 2003-04 to 2012-13)

<table>
<thead>
<tr>
<th>SOURCE OF VARIATION</th>
<th>Sum of Squares</th>
<th>d.f.(V)</th>
<th>Mean Square</th>
<th>F Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between companies</td>
<td>39646.66</td>
<td>3.00</td>
<td>13215.55</td>
<td>0.98</td>
</tr>
<tr>
<td>Between Years</td>
<td>190230.57</td>
<td>5.00</td>
<td>38046.11</td>
<td>2.82</td>
</tr>
<tr>
<td>Residual</td>
<td>202099.89</td>
<td>15.00</td>
<td>13473.33</td>
<td></td>
</tr>
<tr>
<td>Total S.S</td>
<td>392330.46</td>
<td>23.00</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Between companies, table Value of F-test = 2.76 at 5% level.
Between years, table Value of F-test = 2.76 at 5% level.

1) The calculation value (0.98) of F-test between companies is lower than table value of (2.76), So \( H_0 \) is accepted.
2) The calculation value (2.82) of F-test between years is more than table value of (2.76), So \( H_1 \) is accepted.

3. \textbf{Current Assets Turnover Ratio:}

The ratio is an indicative of the over-all marking efficiency of an organization. The ratio shows the unnecessary locking up of capital in inventories and funds tied up in unrealized sundry debts. Further, this ratio also suggests whether the net sales are adequate in comparison to current assets or whether the current assets are too high in comparison to
net sales. Thus, this ratio is an index of ‘Efficiency’ or ‘profitability’ of a business firm. The current assets of a business firm includes inventories, sundry debtors, bills receivable, cash and bank balance, short term loans, advances and other current assets.

The formula for calculation of current assets turnover ratio is as below.

\[
\text{Current Assets Turnover Ratio} = \frac{\text{Net premium}}{\text{Current Assets}}
\]

The high ratio of current assets reveals the better and efficient management and utilization of current assets and vice versa. Table 6.3 and chart 6.3 represent the current assets turnover ratio in the selected private sector life insurance companies.
Table 6.5
Chart 6.5
Table 6.5 shows that the current assets turnover ratio of selected private sector life insurance companies. The ratio of SBI Life Insurance Co. Ltd. has shown a fluctuating trend during 2003-04 to 2012-13. It was 2.95 times in 2001-02 which increased to 49.45 times during 2005-06, but immediately decreased to 9.78 times during 2006-07, again increased to 19.73 times during 2007-08 and decreased to 8.74 times during 2009-10. Thereafter it increased to 9.66 times in 2010-11 and declined to 3.03 times during the year 2012-13. The ratio of current assets turnover in SBI Life Insurance Co. Ltd. was more than 1.00 times during 2003-04 to 2012-13, which shows that the utilization of current assets in generation of net premium was satisfactory during the time period.

The ratio of Bajaj Allianz Life Insurance Co. Ltd. has recorded an upward trend during 2003-04 to 2009-10 but then it shows downward trend. It was 3.26 times during 2003-04 and reached at 31.15 times in 2009-10.

The ratio of current assets turnover in Bajaj was more than 1.00 times during 2003-04 to 2012-13 indicating that utilization of current assets in generation of the net premium was satisfactory during this time period.

The ratio of Max New York Life Insurance Co. Ltd. registered a mixed trend during the 2003-04 to 2012-13. It was the highest 8.97 times in 2007-08 and the lowest 1.12 times during 2012-13.

In Max Newyork, the current assets turnover ratio was more than 1.00 times during 2003-04 to 2012-13 indicating that the utilization of current assets in generation of net premium was satisfactory.

The ratio of Reliance Life Insurance Co. Ltd. has witnessed a progressive trend during the year 2003-04 to 2010-11 and a declining trend during 2011-12 to 2012-13. The current assets turnover ratio was
more than 1.00 times during 2003-04 to 2012-13 indicating that the utilization of current assets in generation of net premium was satisfactory.

In ING Vysya Life Insurance Co. Ltd., has witnessed an increasing trend during the year 2003-04 to 2010-11 and a declining trend during 2011-12 to 2012-13. The current assets turnover ratio was the highest 20.58 times during the year 2009-10. The ratio was more than 1.00 times during 2003-04 to 2012-13 indicating that the utilization of current assets in generation of net premium was satisfactory.

The ratio of Birla Sun Life Insurance Co. Ltd. shows mixed trend during the year 2003-04 to 2012-13. It was more than 5.94 times during the study period indicating that the utilization of current assets in generation of net premium was satisfactory.

The ratio of ICICI Prudential Life Insurance Co. Ltd. indicates mixed trend during the year 2003-04 to 2011-12. It was more than 8.71 times during the study period indicating that the utilization of current assets in generation of net premium was satisfactory but in 2012-13 it was 0.60 times which was lower than 1.00 times indicating that the utilization of current assets in generation of net premium was not satisfactory.

In HDFC Standard Life Insurance Co. Ltd., the ratio was the highest 7.83:1 in 2009-10 and the lowest in 2003-04. It was more than 5.94 times during the study period indicating that the utilization of current assets in generation of net premium was satisfactory.

The ratio of TATA AIA Life Insurance Co. Ltd. registered an increasing trend during the year 2003-04 to 2007-08 and then it decreased to 6.82 times during 2009-10 thereafter it increased to 10.03 times in 2010-11 and again declined to 5.05 times in 2012-13. The ratio was more than 1.00 times during the study period indicating that the
utilization of current assets in generation of net premium was satisfactory.

The ratio of Met Life Insurance Co. Ltd. indicating a rising trend during the 2003-04 to 2009-10 but thereafter it shows declining trend. The ratio was the highest 11.21 times in 2009-10. The current assets turnover ratio was more than 1.00 times during the study period indicating that the utilization of current assets in generation of net premium was satisfactory.

From above discussion, it can be said that the current assets turnover ratio was the highest in ICICI Prudential Life Insurance Co. Ltd. during the study period followed by Bajaj Allianz, SBI, Reliance, Birla Sun Life, Met, TATA AIA, Max Newyork, HDFC Standard and ING Vysya respectively.

☞ ‘F’ TEST

H₀ is that the variance arose in the proportion of current assets turnover ratio over the years and among the various companies does not differ significantly.

H₁ is that the variances arose in the proportion of current assets turnover ratio over the year and among the various companies differ significantly.

The table 6.5.1 represents the ‘F’ test in insurance companies under study.
Table 6.5.1

‘F’ test for current assets turnover Ratio (From 2003-04 to 2012-13)

<table>
<thead>
<tr>
<th>SOURCE OF VARIATION</th>
<th>Sum of Squares</th>
<th>d.f.(V)</th>
<th>Mean Square</th>
<th>F Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between companies</td>
<td>2588.69</td>
<td>3.00</td>
<td>862.90</td>
<td>3.54</td>
</tr>
<tr>
<td>Between Years</td>
<td>7587.22</td>
<td>5.00</td>
<td>1517.44</td>
<td>6.23</td>
</tr>
<tr>
<td>Residual</td>
<td>3655.33</td>
<td>15.00</td>
<td>243.69</td>
<td></td>
</tr>
<tr>
<td>Total S.S</td>
<td>11242.55</td>
<td>23.00</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Between companies, table Value of F-test = 2.76 at 5% level.
Between years, table Value of F-test = 2.76 at 5% level.

1) The calculation value (3.54) of F-test between companies is more than table value of (2.76), So $H_1$ is accepted.
2) The calculation value (6.23) of F-test between years is more than table value of (2.76), So $H_1$ is accepted.

4. Working Capital Turnover Ratio:

This ratio shows relationship between net working capital and net sales. It is calculated by dividing the net sales by net working capital. Formula for calculating working capital turnover ratio is as below.

$$\text{Working capital Turnover Ratio} = \frac{\text{Net premium}}{\text{Net working capital}}$$
This ratio is used to assess the efficiency with which the working capital is being used in the business. A high working capital ratio indicates efficient management of working capital or over-trading i.e. low investment in working capital and more profits. On the contrary, a low working capital turnover ratio implies under-trading i.e. funds are not being utilized efficiently. A higher net premium in comparison to working capital means over-trading and lower premium in comparison to working capital means under-trading.

Table 6.6 and chart 6.6 represent the working capital turnover ratio in the selected private sector life insurance companies. Table 6.6 shows that the total assets turnover ratio of selected private sector life insurance companies. The ratio of SIB Life Insurance Co. Ltd. the working capital turnover ratio indicating a fluctuating trend during 2003-04 to 2012-13. It shows negative effect except the year 2003-04, 2011-12 and 2012-13. It was 7.81 times during 2003-04, which declined to -57.51 times and increased to -10.96 times during 2009-10 and again declined 34.18 times during 2010-11 and then increased to 6.73 times during 2012-13. The working capital turnover ratio in SBI was more than 2.00 times during 2003-04 and 2011-12 and 2012-13 indicating the working capital management of the company was very satisfactory.

In Bajaj Allianz Life Insurance Co. Ltd., the working capital turnover ratio has registered a fluctuating trend in during 2003-04 to 2012-13. The ratio was lower than 1.00 times except the year 2003-04 which indicates that the working capital management was not satisfactory. The reason for this was constant increase in the net premium but not increasing working capital.
Table 6.6
The ratio of Max New York Life Insurance Co. Ltd. registered a mixed trend during the 2003-04 to 2012-13. The ratio of Max Newyork was lower than 1.00 times during the study period which indicates that the working capital management was not satisfactory. The reason for this was constant increase in the net premium but not increasing working capital.

The ratio of Reliance Life Insurance Co. Ltd. shows rising trend during the year 2003-04 to 2007-08 but then it decreased to -40.5 times in 2008-09 and thereafter it rose up sharply in 2009-10 and declined to -14.09 times and then it increased to -3.92 times in 2012-13. It was more than 1.00 times in the year 2003-04 2012-13 indicating the working capital management of the company was very satisfactory.

In ING Vysya Life Insurance Co. Ltd. presented a fluctuating trend during the 2003-04 to 2012-13. The ratio of Max Newwyork was lower than 1.00 times during the study period which indicates that the working capital management was not satisfactory. The reason for this was constant increase in the net premium but not increasing working capital.

The ratio of Birla Sun Life Insurance Co. Ltd. shows registered a fluctuating trend during the 2003-04 to 2012-13. The ratio was lower than 1.00 times during the study period which indicates that the working capital management was not satisfactory. The reason for this was constant increase in the net premium but not increasing working capital.

The ratio of ICICI Prudential Life Insurance Co. Ltd. registered a mixed trend during the 2003-04 to 2012-13. The ratio was lower than 1.00 times during the study period which indicates that the working capital management was not satisfactory. The reason for this was constant increase in the net premium but not increasing working capital.
In HDFC Standard Life Insurance Co. Ltd., presented an increasing trend during the year 2003-04 to 2004-05 and then it decreased to 12.8 times in 2005-06 and thereafter it rose up and reached at 67.01 times in 2008-09 and then declined to -48.48 times in 2011-12. The working capital turnover ratio in HDFC Standard was more than 7.00 times during 2003-04 to 2008-09 indicating the working capital management of the company was very satisfactory.

The ratio of TATA AIA Life Insurance Co. Ltd. registered a rising trend during the year 2003-04 to 2005-06. The ratio was more than during the year 2003-04 to 2005-06. During these years the ratio was more than 1.00 times indicating working capital management of the company was very satisfactory.

The ratio of Met Life Insurance Co. Ltd. indicating a rising trend during the year 2003-04 to 2005-06 and then decreased to -97.2 times in 2012-13. The ratio was more than 1.00 times during the year 2003-04 to 2005-06 which indicates that the working capital management was not satisfactory.

From above discussion, it can be said that the working capital turnover ratio in Birla Sun Life was almost lower in compared to ICICI Prudential Life Insurance Co. Ltd., SBI, Bajaj Allianz, Reliance, Max Newyork, , TATA AIA, HDFC Standard, ING Vysya and Met. In HDFC Standard, SBI, ING Vysya, TATA AIA and Met ratio was higher than 2.00 times during 2003-02 to 2005-06, which indicates that the working capital management of these companies was sound and effective.
‘F’ TEST

$H_0$ is that the variance arose in the proportion of working capital ratio over the years and among the various companies do not differ significantly.

$H_1$ is that the variances arose in the proportion of working capital ratio over the year and among the various companies differ significantly.

The table 6.12 represents the ‘F’ test in insurance companies under study.

<table>
<thead>
<tr>
<th>SOURCE OF VARIATION</th>
<th>Sum of Squares</th>
<th>d.f.(V)</th>
<th>Mean Square</th>
<th>F Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between companies</td>
<td>8545.38</td>
<td>3.00</td>
<td>2848.46</td>
<td>0.41</td>
</tr>
<tr>
<td>Between Years</td>
<td>40116.41</td>
<td>5.00</td>
<td>8023.28</td>
<td>1.15</td>
</tr>
<tr>
<td>Residual</td>
<td>104621.64</td>
<td>15.00</td>
<td>6974.78</td>
<td></td>
</tr>
<tr>
<td>Total S.S</td>
<td>144738.05</td>
<td>23.00</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Between companies, table Value of F-test = 2.76 at 5% level.
Between years, table Value of F-test = 2.76 at 5% level.

1) The calculation value (0.41) of F-test between companies is lower than table value of (2.76), So $H_0$ is accepted.

2) The calculation value (1.15) of F-test between years is lower than table value of (2.76), So $H_0$ is accepted.

5. Conclusion:

Profit is lifeblood, backbone for survival, growth and stability of a business firm and profit margin is a very good indicator of overall
profitability of a business firm. Over all profitability of a business firm depends also on assets turnover along with profit margin. Assets turnover ratio indicates how effective the assets of a business firm are utilized.

Earning ratio indicates the relationship of earning ratio to net profit to net premium represents that the Max Newyork had generated a sizeable net profit throughout the study period and ICICI Prudential Life Insurance Co. Ltd. was next one firm which also generated net profit throughout the study period followed by Bajaj Allianz, TATA AIA, Birla Sun Life, SBI and Met. While ING Vysya suffered weak profit then HDFC standard and Reliance had maintain profitability except one year loss during the study period. Hence it can be concluded that the earning position of seven firms under review were success in earning during the study period, while ING Vysya was under pressure in terms of earning during the study period 2003-04 to 2012-13.

Application of F test for analyzing Earning ratio was not significant between the companies, so $H_0$ is accepted and $H_1$ is rejected. However, it was significant over the years, so $H_0$ is rejected and $H_1$ is accepted.

It can be opined the percentage of operating profit ratio was highest in SBI followed by Max Newyork, Reliance, ING Vysya, Met, TATA AIA, Birla Sun Life, Bajaj Allianz, ICICI Prudential and HDFC Standard respectively. The operating profit ratio increased during the last two years of the study period in all the selected life insurance companies under study hence it can be said that the profit ability of almost all the life insurance have grown sustainably especially during the last two years, from the view point of operating profit and investment income.
Application of F test for analyzing operating ratio was significant between the companies and over the years, so $H_0$ is rejected and $H_1$ is accepted.

The total assets turnover ratio of ICICI Prudential Life Insurance Co. Ltd. was the highest among all the companies during the study period 2003-04 to 2012-13 followed by SBI, Bajaj Allianz, Reliance, Max Newyork, Birla Sun Life, TATA AIA, HDFC Standard, ING Vysya and Met respectively.

Application of F test for analyzing total assets turnover ratio was significant between the companies and over the years, so $H_0$ is rejected and $H_1$ is accepted.

The fixed assets turnover ratio of Bajaj Allianz Life Insurance Co. Ltd. was the highest among all the companies during the study period followed by Birla Sun Life, SBI, ICICI Prudential, Met, HDFC Standard, Reliance, ING Vysya, Max Newyork and TATA AIA respectively.

Application of F test for analyzing fixed assets turnover ratio was not significant between the companies, so $H_0$ is accepted and $H_1$ is rejected. However, it was significant over the years, so $H_0$ is rejected and $H_1$ is accepted.

It can be said that the current assets turnover ratio was the highest in ICICI Prudential Life Insurance Co. Ltd. during the study period 2003-04 to 2012-13 followed by Bajaj Allianz, SBI, Reliance, Birla Sun Life, Met, TATA AIA, Max Newyork, HDFC Standard and ING Vysya respectively.
Application of F test for analyzing current assets turnover ratio was significant between the companies and over the years, so $H_0$ is rejected and $H_1$ is accepted.

The working capital turnover ratio in Birla Sun Life was almost lower in compared to ICICI Prudential Life Insurance Co. Ltd., SBI, Bajaj Allianz, Reliance, Max Newyork, TATA AIA, HDFC Standard, ING Vysya and Met. In HDFC Standard, SBI, ING Vysya, TATA AIA and Met ratio was higher than 2.00 times during 2003-02 to 2005-06, which indicates that the working capital management of these companies was sound and effective.

Application of F test for analyzing working capital turnover ratio was not significant between the companies and over the years, so $H_0$ is accepted and $H_1$ is rejected.
References:


