CHAPTER V

INTERPRETATION AND DISCUSSION
CHAPTER V

INTERPRETATION AND DISCUSSION

Here an attempt will be made to interpret the results obtained as mentioned in tabulated and graphical forms in chapter IV and will be discussed to give a meaning to them. This will be done systematically as per research questions raised and hypotheses proposed in the chapter III of methodology.

1 Sectors of economy

Year wise percentage return of various sectors

<table>
<thead>
<tr>
<th>Year Sectors</th>
<th>93</th>
<th>94</th>
<th>95</th>
<th>96</th>
<th>97</th>
<th>98</th>
<th>99</th>
<th>00</th>
<th>01</th>
<th>02</th>
<th>First day</th>
<th>First month</th>
</tr>
</thead>
<tbody>
<tr>
<td>Banking</td>
<td></td>
<td></td>
<td>247.93</td>
<td></td>
<td>612.02</td>
<td>112.23</td>
<td>35.7</td>
<td>51.36</td>
<td>22.9</td>
<td>59.4</td>
<td>59.84</td>
<td>62.57</td>
</tr>
<tr>
<td>Software</td>
<td>87.50</td>
<td>222.5</td>
<td>582.5</td>
<td>265.59</td>
<td>112.23</td>
<td>35.7</td>
<td>51.36</td>
<td>22.9</td>
<td>59.4</td>
<td>59.84</td>
<td>62.57</td>
<td></td>
</tr>
<tr>
<td>Pharma.</td>
<td>381.57</td>
<td>182.76</td>
<td>130.69</td>
<td>47.9</td>
<td>17.07</td>
<td>-5.96</td>
<td>112.35</td>
<td>35.7</td>
<td>51.36</td>
<td>22.9</td>
<td>59.4</td>
<td>59.84</td>
</tr>
<tr>
<td>Telecom.</td>
<td>0.0</td>
<td>87.50</td>
<td>182.76</td>
<td>130.69</td>
<td>47.9</td>
<td>17.07</td>
<td>-5.96</td>
<td>112.35</td>
<td>35.7</td>
<td>51.36</td>
<td>22.9</td>
<td>59.4</td>
</tr>
<tr>
<td>Entertain</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1335.94</td>
<td>168.43</td>
</tr>
<tr>
<td>Engg.</td>
<td>135</td>
<td>263.33</td>
<td>307.1</td>
<td>18.91</td>
<td>-20.14</td>
<td>-24.25</td>
<td>286.51</td>
<td>543.24</td>
<td>22.9</td>
<td>59.4</td>
<td>59.84</td>
<td>62.57</td>
</tr>
<tr>
<td>Chem.</td>
<td>135</td>
<td>263.33</td>
<td>307.1</td>
<td>18.91</td>
<td>-20.14</td>
<td>-24.25</td>
<td>286.51</td>
<td>543.24</td>
<td>22.9</td>
<td>59.4</td>
<td>59.84</td>
<td>62.57</td>
</tr>
</tbody>
</table>
Q1 Is there any difference in returns on IPOs of different sectors of economy?

H1 There will be marked difference in rate and patterns of return on IPOs of seven sectors of economy taken in the present study.

A perusal of the above table shows that the software sector consistently outperformed all other sectors except the entertainment sector which had highest return of 12040.5% in the first year. In the traditional sectors of the economy the peak returns were obtained in the first three years from listing but in case of software sector the peak returns were obtained in the year 1999 and 2000, the years in which both sensex and nifty recorded unprecedented upward movement and attained all time high level.

In case of chemical sector the IPOs showed negative returns for three consecutive years. Engineering sector showed negative returns twice for two consecutive years each. In case of pharmaceutical sector IPOs have negative return once for two consecutive years only. In case of all others sector IPOs the negative returns persisted only for a year. The implication of this is that investor would have done better if they would have purchased the IPOs from secondary market (after listing) in case of chemical, engineering and pharmaceutical IPOs.
For the first day and first month returns the entertainment sector had the highest rate of return i.e. 1868.47 and 1335.94% respectively followed by software sector having returns of 675.33 and 735.65%. Telecommunication sector returns were in the tune of 138.57 and 168.43 followed by chemical sector having returns of 123.29 and 137.18. The banking sector returns were 59.84 and 62.57 followed by engineering sector and pharmaceutical sector returns.

The banking sectors returns are not as expected. They are less than the returns on other sectors of the economy. One of the possible cause for this is that since most of the issues were big in size and the over subscriptions was also low, therefore adequate trading interest could not be generate in the investors. Apart from this most of the banks had come out with IPOs to fulfill capital adequacy norms. During the past decade banks were also grappling with the problem of NPA’s, which had a direct bearing on their bottom lines.

The returns in all these sectors varied with the growth rate of these sectors. The new economy sector IPO returns were higher as compared to the returns on IPOs of the traditional sector of the economy.

Therefore, the hypothesis one has been accepted as above description showed that rates as well as patterns of return on IPOs
markedly differ in seven sectors of economy studied in the present investigation.

2. First day returns on IPOs

Q2 Is there any difference in the first day return of IPOs of different sectors of economy?

H2 There will be significant difference in rate of first day return of IPOs of seven sectors of economy taken in the present study.

<table>
<thead>
<tr>
<th>Sectors</th>
<th>Bank</th>
<th>Software</th>
<th>Pharma</th>
<th>telecom</th>
<th>Ent.</th>
<th>Eng</th>
<th>Chem</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average% Returns</td>
<td>59.84</td>
<td>675.33</td>
<td>37.75</td>
<td>138.57</td>
<td>1868.47</td>
<td>27.95</td>
<td>123.29</td>
</tr>
</tbody>
</table>

Table 6.2 to 12.2 and table 13 depict the above results which clearly shows that average percentage first day returns on IPOs of entertainment and Software sectors are very high compared to remaining other sectors. Sectors wise analysis is as below:

Banking: IPOs listed between 1994 to 2001 gave an average of 59.84 % first day return. Nine IPOs over performed and 12 IPOs underperformed on the first day. This first day return was abnormally high for those IPOs listed in 1994 i.e. Western Bank Ltd.
(355%), Federal Bank Ltd. (172.22%) and Global Trust Bank (665%). (Table 6.2)

It was attempted to correlate first day IPOs returns with premium charged, size and over subscriptions. As data on these parameters were not available for all the banks, a sub sample of sixteen IPOs (table 6.5) was taken for the purpose. Table 14 shows that correlation between premiums charged and first day returns on IPOs, is (0.24620) which is positive but low. This means that there is some trend here where premium attract mild first day returns. The correlation between size and first day returns of IPOs is low negative (-0.2573). Here issue size and first day returns are in inverse relationship, if one increases other decreases slightly and vice versa. The correlation between over subscription and first day return is almost zero (0.0586). This means here in this sample number times subscription to issues have no effect on first day returns.

Software: IPOs of software sector listed between 1993 to 2000 have an average of 675.33% first day return. Eighteen IPOs overperformed and only three IPOs underperformed. (Table 7.2)

The first day return was abnormally high for many IPOs but Visual software India Ltd. (3995%, Polaris software Lab Ltd. (7870%) performed exceptionally better on the first day of trading.
As it was for banks, a sub sample (9 IPOs) was taken to correlate first day IPOs returns with premium charged, size and over subscription (Table 7.5) Table 14 shows that first day returns on software IPOs is (- .2187) which is low negative. This means that here premium on IPOs has inverse relationship with first day percentage returns. Correlations of first day returns with size (.0672) and oversubscription (.0093) are positive best negligible.

**Pharmaceutical:** IPOs of Pharmaceutical sector listed between 1993 to 2000 have an average of 37.75% first day returns. Eight IPOs over performed and only two IPOs underperformed. (Table 8.2)

Here also a sub sample of 7 IPOs was taken to correlate first day IPOs returns with premium charged, size and over subscription (Table 8.5). Table 14 shows that first day returns were positively very high correlated with premium (.7163), size (.9372) and oversubscription (.9437) of the IPOs. Here it is clear trend that as the premium, size and subscription of the issue increases, simultaneously first day returns on IPOs also increases.

**Telecommunication:** IPO seven in total of Telecommunication sector listed between 1994 to 2001 have an average of (138.57%) first day returns, issues listed in 94-95 over performed whereas issues listed in 2000-2001 underperformed on the first day.
Here also a sub sample of four IPOs was taken to correlate first day returns with premium charged, issue size and over subscription (Table 9.5). Table 14 shows that first day returns correlation was very high with over subscription (.8362) but very low with premium charged (.1564) and issue size (.1400). All correlations were positive. This means that here over subscription has bearings on increased first day returns, other relations are negligible.

**Entertainment:** IPOs (nine in total) of entertainment sector listed between 2000-2001 have an average of 1868.17% first day returns. Seven IPOs overperformed and two underperformed on first day of trading. TV. Eighteen India Ltd. abnormally performed very high (16785.1%) 

**Engineering:** IPOs (nine in total) of engineering and Auto Ancillaries sector listed during 1993 to 1996 have an average of (27.95%) first day returns, Data on first day returns are available of six IPOs only out of which four over performed and two underperformed. It has positive correlation with premium charged (.8362), issue size (.9638) and oversubscription (.2916). Thus here first day return increased with increases in these variables.

**Chemical:** IPOs (eleven in total) of chemical sector listed between 1992 to 2002 have an average of (123.29%) first day returns. Data
available of 10 only out of which eight over performed and two underperformed on first day trading.

Here also a sub sample of 8 was taken and it was found that first day return has high positive correlation with premium charged (.8707), size (.7920) and over subscription (.8954). This means that here increases in premium, size and subscription tend to increase first day returns of IPOs.

Above results reveal average first day percentage returns of entertainment sector was highest (1868.47) and engineering and auto ancillaries sector was lowest (27.95). Software (675.33), telecommunication (138.57) and chemical sector (137.18) gained moderately, banking (59.84) and pharmaceutical sectors (37.95) gained mildly.

The second hypothesis, therefore, has been accepted that there will be significant difference in the rate of first day returns of IPOs of seven sectors of economy taken in the present study.

Abnormal excess short-run rates of returns on IPOs have been found in nearly every country in the world. This is primarily due to the under pricing of these issues. Loughran et. al. (1994) found initial under pricing in all the 25 countries they have studies, under pricing raged from 4.2 to 80.3% for Malaysia. These are basically the first day returns.
Madhusoodanan and Thiripatraju (1997) found that returns given by the Indian IPOs were high in short run compared to the experience of other countries. Finding of the present research is in confirmation with the above findings.

3. First month returns

Q3 Is there any difference in first month return of IPOs of different sectors economy?

H3 There will be significant difference in rate of first month returns of IPOs of seven sectors of economy taken in the present study.

The end of the first month performance of IPOs listed on NSE/BSE during the period 1993–2001 is presented in table 13. It is sector wise presentation. It is also graphically depicted in graph 16. It showed the average returns in percentage. It is observed from the above that first month returns were much better for entertainment’s sector (1335.94%) followed by software sector (735.65%). Telecommunication sector (168.43%) and chemical sector (137.18%) also performed better. Banking sector (62.57%) could not performed to the expectations and engineering and pharmaceutical sectors performed at the end of first month in the lowest way (37.35% and 15.94%).

Thus sector wise performance of IPOs at the end of first month differ significantly and the hypothesis is accepted.
4. **Par and premium IPOs**

**Q4** Is there any difference on the rate of returns of IPOs at par and IPOs at premium?

**H4** There will be no difference in IPOs returns between par and premium issues.

In the sub sample of IPOs of different sectors variegated degrees of correlation was found between premium charged and IPOs return of first day/first month. It was as below

**Correlation between**

<table>
<thead>
<tr>
<th>Correlation premium charged and IPOs returns</th>
<th>Banking</th>
<th>Software</th>
<th>Pharmaceutical</th>
<th>Telecommunication</th>
<th>Engineering</th>
<th>Chemical</th>
</tr>
</thead>
<tbody>
<tr>
<td>First day</td>
<td>0.2462</td>
<td>-0.2187</td>
<td>0.7564</td>
<td>0.1564</td>
<td>0.8362</td>
<td>0.8707</td>
</tr>
<tr>
<td>First month</td>
<td>0.3380</td>
<td>-0.2174</td>
<td>-0.4370</td>
<td>-0.1114</td>
<td>0.8161</td>
<td>0.8563</td>
</tr>
</tbody>
</table>

Positive correlation indicates that returns are associated with premium. Negative correlation indicates inverse relationship between premium and returns. It means less the premium more is the returns on IPOs.

There were 6 par issue in banking sector. Three over performed and three under performed on the end of first day and first month trading. 15 IPOs were premium issues and all over performed in the short run. The
correlation between the first day/ first month returns and premium was low but positive.

In software sector 6 were par issues out of which five abnormally over performed, only one under performed. Rest of the 15 IPOs were premium issues and 13 over performed in the short run, here correlation between returns and premium was low negative i.e. inverse relationship. Lower the premium higher the returns. Pharmaceutical, Engineering and Chemical sectors have positive correlation between the short run returns and premium charged.

In general from the present investigation no definite trend can be found and therefore we can say that there is no difference between par and premium issue.

It is believed that par issues have better prospectus than premium issues in short run and reverse in the long run. Here it is not so. Therefore the hypothesis 4 is accepted.

5  **Size of the IPOs**

Q5 Whether different size of IPOs have different rate of returns.

H5 There will be difference in returns between IPOs of small size and large size.

Low negative correlation was found between size of the IPOs and short run returns of banking, software and telecommunication sectors and high positive relationship in Pharmaceutical, Engineering, and chemical sectors. (table 6.5 to 12.5)
6 Times issue subscribed

Q6 Whether over subscribed IPOs returns are different than under subscribed IPOs?

H6 There will be difference in returns between over subscribed and under subscribed IPOs.

No relationship was found in banking sector and software sectors very high correlation between the two was found in telecommunication, pharmaceutical and chemical sector and some relationship was found in engineering sector. (table 6.5 to 12.5). Therefore no definite trend could be found.

7. Short run and long run returns

Q7 Whether there is any difference in short run and long run returns on IPOs?

H7 There will be difference in short run and long run returns on IPOs.

A perusal of table 6.2 indicates the following:

Banking sector: The first day and first month average returns were 59.84 and 62.57 respectively and the year wise average returns were 247.93% in 1995, 112.02% in 1996, 35.70% in 1997, 51.36% in 1998, -20.90 in 1999, 59.4% in 2000, 14.16 in 2001 and 18.69% in 2002.

In banking sector the maximum returns were obtained in the short run on the first day, first month and first year of listing.

Software sector: In case of software sector the first day and first month average return were 675.33% and 735.65%. Some of the scrip's showed
high amount of abnormal positive returns in the first year i.e. Visual Software India Ltd. (31900%), Polaris Software Lab Ltd. (18913%). In the software sector the first day and first month return were higher as compared to long run returns that is for the period of three years the return on IPOs were quite high in 1999 and 2000, except for these two years the short run return on IPOs were higher than the long run returns on the software sector IPOs.

**Pharmaceutical sector:** In the pharmaceutical sector the average first day and first month returns were 37.75% and 15.94% respectively. Out of the sample size of eleven, three companies had negative return on the first day and six companies had negative return in the first month. It is observed that in the pharmaceutical sector the return obtained in the first two years start declining there after and after three years again (5th year) the returns start increasing.

**Telecommunication sector:** Out of sample size of seven five companies showed positive return on the first day and the first month. The average returns were 138.57 and 168.43% for the first day and the first month respectively. The maximum returns were obtained in the first year and there after the returns started declining, out of seven companies only two companies showed consistent positive return. In case of the remaining companies two had negative return in the first year, two companies had negative returns in the second year and one company had negative return in the fifth year. The average return of the sector was 381.57% in the
second year, which started declining there after and turned negative in the 5th year (march 1998) the return again rose to 104.28% and 206.8% in the 6th and 7th year.

**Entertainment sector:** Out of sample size of nine two companies had negative returns on the first day and five companies had negative return in the first month, seven companies had negative return in the first year. The average returns on the first day and first month were 1868.47% and 1335.94%, but this average return does not portray the correct picture because one company TV eighteen India Ltd. Had returns of 16785% and 12045% on the first day and the first month. For other companies first day return varied from -37.43% to 28.2% and first month return varied from -51% to 79.38%. For the first two years of trading all the companies (7) except TV eighteen Ltd. and Balaji Telefilms (2) posted negative returns.

**Engineering and Auto Ancillaries sector:** The average first day and first month return were 27.95% and 37.35%. In this sector also the peak returns are obtained in the first two years of listing and there after the rate of returns declined and eventually turned negative. This trend of negative returns persisted for two years and eventually turns positive. The companies which showed negative returns in the first year itself, for them the negative trend lasted for three to five years. The negative returns increasing in the first two years and there after decreasing and eventually turning positive in the 5th and 6th year.
Chemicals sector: In this sector the average first day and first month returns were 123.29% and 137.18%. In this sector too it is observed that the maximum return were obtained in the first and second year of listing there after the magnitude of returns starts decreasing eventually turning negative. In this sector the persistence of negative returns is for longer periods as compared to the other sectors of the economy. The companies which had negative returns in the first year consistently posted negative returns. The possible cause for this may be that the chemical sector in the last decade was not growing as fast as compared to the other sector of the economy.

Overall the maximum returns on the IPOs are in the short run. In the long run the IPOs returns are negative starting from the third year of listing and persisting for a period of two years. Thereafter again the returns are positive but not to the extent of the returns obtained in the first two years of listing, therefore the seventh hypothesis has been accepted that on IPOs there will be difference in the short run and long run returns. The results are in confirmation with Logue(1973), Ibbotson (1975), Ritter (1984) who concluded that in IPOs there exists a short run under pricing and long run over pricing, but not in conformity with Madhusoodanan and Thripatraju (1997), who said that in long run also IPOs give good returns in India.
8 IPOs returns and secondary market (NIFTY index)

Q8 Whether returns on IPOs are similar to returns on secondary market (NIFTY index)?

H8 There will be difference in returns on IPOs and NIFTY index returns.

Banking sector: In banking sector the results are mixed. There is no clear trend of IPOs under performing or over performing the market in the short run. There is no clear trend as far as daily average returns are concern.

There is a marked difference in volatility of the daily returns of IPOs and daily return of index in the short run. The volatility of the returns on IPOs is ranging from 15 to 2 times to that of daily returns of index in the short run, but in the long run both the returns and volatility of index and IPOs are nearly same.

Software sector: In the software sector the average daily mean return of the IPOs and index vary. In the year 1999, the mean daily return on the IPOs was 13 to 15 times that of daily mean return on index in the year 2000 it was 5 to 30 times in the year 2001 it was mixed. In the long run the IPOs issued during the period of 1993-1998 had excess return as compared to index but IPOs of 1999-2000 under performed the market.

As far as volatility of the IPOs return is concerned, it was 2.5 to 5 times that of return on index.

Pharmaceutical: In the year 1996 the mean of daily returns of this sector varied 40 times down ward to that of return on index. In 1997 and 1998 this
trend was positive and IPOs returns were 2.5 times higher than of index. In the long run, only two companies had higher returns to index. The volatility in the short run was 1.5 to 3 times that of index which reduce to 1.5 to 2 times in the long run.

**Telecommunications:** In the 1994 mean of daily returns for IPOs was 3 to 4 times less than the index. In the year 1996 it was 27 to 48 times lower than of index. But in the year 2000 mean daily return of IPOs was 12.5 higher than of index. In the year of 2001 and 2002 IPOs mean returns were lower than the index. In the long run, all the scrips under performed the index. Volatility in the short run was 1.5 to 3 times that of the index which reduce to 1.5 to 2 times.

**Entertainment:** The mean of the daily returns of the IPOs than that of the index was less in the year 2000 and 2001 except for Balaji Telefilms and Mukta Arts. The volatility in the short run was 2 to 3 times higher than that of the index.

**Engineering:** The mean daily returns on IPOs was lower than of the index. Only one company, Thermax was the exception in the short run. Most other companies under performed to the market but in the long run they over performed the market. The probable answer for this may be that engineering firms require higher capital and long gestation period. In the short run. The volatility of the daily return of IPOs was 1.5 to 25 times that of index but in long run it reduce to 2 to 5 times.
Chemical: In this sector also IPOs as a whole under performed the index. Same was the case in the long run. In the short run and in the long run volatility ranged from 1.5 to 3.5 times.

In the light of the above the 8th hypothesis has been accepted as difference in returns between IPOs and NIFTY was evident.