Chapter : 5

ANALYSES AND FINDINGS

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A total of 214 copies of the questionnaire were distributed. Against this, 89 were returned. In many of these cases, the questionnaire was substantially filled in, whereas in some, the response was lukewarm. Overall, the response rate is a little over 41%.

The data have been analysed mainly using percentages. Wherever appropriate, hypotheses have been set up and tested. Incidentally, a scrutiny of the responses indicated that 4 out of 89 are students, who are not earning income. These four have filled in their names and addresses and they all happen to be residing in students' hostels. Hence, wherever relevant, the total is taken as 85 instead of 89. The presence of these four accounts for, in part, the number of missing responses in each question. Hence, this figure too has been adjusted downward in all answers.

5.1 Analyses with percentages

Briefly, the results of the analysis are as follows :

5.1.1 RESIDENTAL STATUS

81 (95.3%) out of 85 reported themselves as being residents, two as being not ordinarily resident, and two did not indicate their status. There were no non-residents.

5.1.2 MARITAL STATUS

65.9% identified their status as married, whereas 24 (28.2%) were single, with five not giving any answer.

5.1.3 INCOME SLAB

Out of 85 individuals, 34.1% reported themselves to be in the lowest taxable slab (Rs.35,001 to 60,000), 38.8% featured in the next tax bracket (Rs.60,001 to 120,000) and 12.9% were in the highest slab of income exceeding Rs.120,000. However, nine individuals expressed their desire not to disclose their income and there were three missing responses. Nevertheless, the total number of individuals who have disclosed their income slab adds up to 73.

5.1.4 MAIN SOURCE OF INCOME

Those with salary as the main source of income, i.e., 56.5% of 85 seemed to outnumber all others taken together! Those reporting income from business and profession as the prime source numbered only 10 (11.8%) with the others even lower. There were 18 individuals who had chosen more than one answer, so their main source could not be ascertained and classified properly.

5.1.5 STRATEGIC CHOICE

An overwhelming number of respondents (74), replied that they invest in tax-saving schemes with the intention of reducing tax liability. It works out to a little over 87%. In contrast, only six (7.06%) reported their strategy to be to pay taxes on total taxable income and then invest freely to maximize return.

It can be inferred therefore, that people in general believe that it is desirable to avail of the tax shelters even though the rebate is only 20% of every rupee invested. Perhaps, the explanation is that notwithstanding the modest return on most tax shelters the effective after-tax return on account of rebates, deductions and exemptions satisfies people in general. Moreover, it must be remembered that the return on tax shelters is almost completely

risk-free in terms of capital loss (except for the Equity Linked Savings Scheme) whereas the alternative strategy would impel an individual to invest in stocks, bonds and the like, which is a high-risk proposition. The overwhelming inclination for tax shelters may be explained with the concept of utility. Since "utility is usually depicted as a positive function of expected return and a negative function of risk,"[1] the equation is :

$$U = E(r) - \lambda \cdot \sigma^2$$

where : U = utility

E(r) = expected return

σ = standard deviation of returns, and

λ = risk-aversion coefficient

Suppose, for instance, that the risk-aversion coefficient of those opting for tax shelters, is 2. Further, if we postulate that a portfolio of tax shelters has an effective (post-rebate) expected return of 15% and a standard deviation of 3% whereas the respective figures for a portfolio of risky assets (stocks, bonds, etc.,) are 18% (after-tax) and 20%, the utilities work out as follows :

<u>On tax shelters</u>	<u>On risky assets</u>
$U = .15 - 2(.03)^2$	$U = .18 - 2(.2)^2$
$= 14.82\%$	$= 10\%$

A question that arises is : what might induce people at large to consider moving away from tax shelters to the alternative strategy ? The possible answer(s) can involve one or a combination of the following :

1. A reduction in the tax rebate.
2. A lowering of the return(s) on tax shelters.
3. A higher rate of inflation that would erode the value of fixed income yielded by most tax shelters. This would raise their risk factor.

4. The prospect of a higher return on risky assets.

5. A general decline in risk aversion, which can have a dramatic effect on the demand for risky assets.

5.1.6 INSURANCE CHOICE

The results show that 40% of 85 prefer a life insurance policy rather than ULIP (11.8%) or Dhanraksha (4.7%). 13 (15.3%) respondents selected more than one answer, which blurs the picture somewhat. The number of missing responses was 24 (28.2%).

The different products mentioned above are not strictly comparable, since there is a ceiling on the target amount with ULIP and Dhanraksha at Rs.60,000. Other differences were also brought out in Chapter 3. Nevertheless, the evidence suggests that people do not seem to be aware of the superior features of ULIP and Dhanraksha (e.g. higher return) vis-a-vis a life insurance policy. Perhaps, a strong promotion of these products may alter the situation to some extent. In any case, it appears that Dhanraksha has a lot of ground to cover.

5.1.7 GUESSTIMATE RETURN

The results here may explain the findings in the previous question. As many as 19(22.4%) out of 85 respondents figured that the annual return on ULIP and Dhanraksha was less than 12%, whereas 25(29.4%) thought that it was between 12 to 16%. Only ten individuals felt that the return was somewhere between 16 to 20%. Interestingly, 31(36.5%) respondents did not answer the question.

The above pattern of responses suggests that many are unaware or mistaken about the true yield, which would bear upon their selection. A perusal of the brochures of ULIP and Dhanraksha in circulation in 1995

reveals that the annual return could be anywhere from over 14% to nearly 17%, depending upon the age of entry and the duration of the scheme. Moreover, this is after taking into consideration only the benefit of rebate, but not of deduction under Section 80L. It appears, therefore, that a significant number of people may be missing an opportunity to improve the yield on their insurance portfolio. A lack of information or awareness seems to be the contributing factor.

5.1.8 RANKING OF TAX SHELTERS

The rankings of different tax shelters are summarized below.

TABLE 5.1

ANALYSIS OF 1st RANK ASSIGNED TO DIFFERENT TAX SHELTERS

Tax Shelter	No. of respondents who gave 1st rank	Percentage of valid responses
PPF	20	33.3
ELSS	17	28.8
PF*	16	27.6
NSC	12	18.8
NSS	2	3.9
Annuity Plan	0	0 of 51
* This is not strictly comparable to the others, as only salary earning individuals may avail of it.		

The above rankings would not change if the responses are analyzed as a percentage of the total sample size of 85. Interestingly, no one assigned the first rank to annuity plans.

For the second rank, the pattern changes. This is to be expected since something like PPF which emerged first for the top spot would not feature again at the top.

TABLE 5.2

ANALYSIS OF 2nd RANK ASSIGNED TO DIFFERENT TAX SHELTERS

Tax Shelter	No. of respondents who gave 2nd rank	Percentage of valid responses
NSC	19	29.7
PPF	16	26.7
ELSS	11	18.6
PF & NSS	7 each	12.1 & 13.5
Annuity Plan	4	7.8

For the third rank, the results were as follows :

TABLE 5.3

ANALYSIS OF 3rd RANK ASSIGNED TO DIFFERENT TAX SHELTERS

Tax Shelter	No. of respondents who gave 3rd rank	Percentage of valid responses
NSC	15	23.4
ELSS	13	22.0
PF	12	20.7
PPF	11	18.3
Annuity Plan	5	9.8
NSS	3	5.8

When the data are analyzed for the sixth rank, an interesting picture emerges.

TABLE 5.4

ANALYSIS OF 6th RANK ASSIGNED TO DIFFERENT TAX SHELTERS

Tax Shelter	No. of respondents who gave 6th rank	Percentage of valid responses
Annuity Plan	19	37.3
NSS	9	17.3
PF	7	12.1
ELSS	5	8.5
PPF & NSC	3 each	5 & 4.7

Yet another way to evaluate the data would be to see the relative positions taking the responses for the 1st and 2nd ranks together. The question this would answer is : how many have assigned the 1st or 2nd rank to a tax shelter ?

TABLE 5.5

ANALYSIS OF 1st OR 2nd RANK ASSIGNED TO DIFFERENT TAX SHELTERS

Tax Shelter	No. of respondents who gave 1st or 2nd rank	Percentage of valid responses
PPF	36	60.0
NSC	31	48.4
ELSS	28	47.5
PF	23	39.7
NSS	9	17.3
Annuity Plan	8	15.7

Even if the base is taken as the total sample size of 85, the positions above are not altered.

From the foregoing analysis, it can be inferred that PPF, ELSS and NSC are the most preferred shelters with NSS and Annuity Plans being the least desired. As to what induces individuals to arrive at such choices, is

revealed by the responses to the next two questions.

5.1.9 REASONS FOR RANKS ASSIGNED

The main reason cited more than any other was "Higher return inclusive of tax benefits" followed by "safety of capital" and "loan facility". Interestingly, no one singled out "shorter term" as the prime consideration, inspite of the fact that NSC has done well in the rankings. The reasons offered explain the greater preference for PPF, NSC and ELSS. Other explanatory factors could include the good showing by the stock market in the early nineties.

The responses for the lowest rank apparently support the findings above. "Lower return inclusive of tax benefits" bears the highest frequency as the primary reason for assigning the lowest rank to a tax shelter. Other reasons include "longer term" and "inconvenient" followed by "unfamiliar". The general pattern of responses indicate the need to identify a one-to-one association between the identified tax shelter and the reason specified. This is done later in this chapter.

5.1.10 TIMING THE INVESTMENTS

The responses to questions numbered 12 and 13 suggest that the general tendency is to invest in tax shelters late in the financial year.

Fifty-one (60%) answered in the affirmative to the pertinent question. However, in the next question, 39 (45.9%) respondents said that they invest in PPF early in the financial year so as to maximum tax-free interest income. Significantly, 32 (37.6%) answered in the negative whereas 14 gave no response. It appears therefore, that while some individuals are savvy enough to make their PPF deposit early on, others are not. This is one area where tax planning could be improved!

5.1.11 OTHER TAX SHELTERS

The purpose of this question was to ascertain broadly as to the other shelters or avenues used by individuals. They are not comparable with each other and an individual's personal circumstances (whether married, if having children, etc.,) will also influence the choices. The results indicate that a fair number of individuals are utilizing avenues such as medical insurance policy (21) PPF deposits on behalf of children (22) and insurance policy for spouse (27) in order to reduce taxable income. But only seven persons indicated that donations to specified charities have been availed of to reduce tax liability. Evidently, the satisfaction that beneficence would produce is not good enough for many!

5.1.12 HINDU UNDIVIDED FAMILY (HUF)

The questions in this case were to ascertain as to how many were benefiaries of the HUF proviso. From the responses, it appeared that one person had made a mistake in that he answered in the negative to the question as to whether he belonged to the Hindu religion, and yet claimed to be a beneficiary under HUF. Hence, after this minor adjustment, the results show that 77 (90.6%) out of 85 were Hindus, but of these 19 were HUF beneficiaries whereas 51 were not, with 7 persons not giving any answer. Thus, about 25% of the Hindus figuring in the sample are beneficiaries of the HUF provision.

5.1.13 STRATEGIES TO MINIMIZE TAXABLE CURRENT INCOME

This part contains six different questions, each representing a technique or device aimed at minimizing taxable current income. The results of the survey are summarized below.

TABLE 5.6

ANALYSIS OF TECHNIQUES EMPLOYED TO MINIMIZE TAXABLE CURRENT INCOME

Technique \ Response	Yes	No	Not Reqd.	Missing Resp.	Total
Investments for 80 L benefits	43	15	13	14	85
Purchase of tax-free securities	2	29	27	27	85
Substituting ordinary income by capital gains	8	24	27	26	85
Buying shares of lower payout growth companies	18	25	14	28	85
Preferring bonus shares rather than high payout	22	21	13	29	85

Of the various strategies, the one whose use seems to be widespread is that of investing in shares, units, bank deposits and others that qualify for benefits under Section 80L. 43 (60.6%) out of 71 respondents replied in the affirmative to adopting this technique. Moreover, it needs to be noted that 13 individuals replied that they do not need to adopt this technique. Another revelation is that the purchase of tax-free securities is limited to a very few individuals. As against 2 who replied in the affirmative, 29 answered in the negative while 27 said that they were not required to utilize this device. Incidentally, even in the next two questions, individuals who have answered in the negative outnumber those who have replied in the affirmative. Still it appears that the option of investing in growth companies and in those that may conserve profits but are liberal with bonus issues, has some appeal in contrast with the ideas of investing in tax-free securities or even buying deep discount bonds. Incidentally, the number of missing responses in all but one option is over 30%, and this may be responsible in preventing a clearer picture from emerging.

5.1.14 DEFERMENT OF CAPITAL GAINS

Significantly, 45 (52.9%) out of 85 persons replied that they do defer realization of capital gains when current income is expected to be high. In contrast, only 17 answered in the negative, while 23 did not respond.

5.1.15 STRATEGIES TO MINIMIZE TAXES ON CAPITAL GAINS

This section comprised four questions and a summary of the results is shown below.

TABLE 5.7

ANALYSIS OF TECHNIQUES EMPLOYED TO MINIMIZE TAXES ON CAPITAL GAINS

Technique \ Response	Yes	No	Not Reqd.	Missing Resp.	Total
Make capital gains long-term	39	10	13	23	85
Loans to relatives for buying shares	14	17	25	29	85
Booking capital losses short-term	10	18	26	31	85
Gift of securities within the limit	21	9	24	31	85

Of the strategies to minimize taxes on capital gains, the two that stand out are : (a) extending the holding period for shares, debentures, etc., to make capital gains long-term, and (b) gift of securities. In both these cases those employing such techniques outnumber those that do not by more than twice. But, for the remaining two viz., loans to relatives and booking capital losses short-term, fewer have used these devices than those who have not. Incidentally, in each of the above posers, the number of missing responses is not less than 25%.

5.1.16 STRATEGY FOR INCOME FROM BUSINESS/PROFESSION

A couple of questions were included to know the preferred means of

reducing taxable income from business or profession. More specifically, the questions centered on the matter of financing the acquisition of assets. Since the scope of the questions was narrow, there were in all 33 responses, out of 85. 13 of the 33 favoured hire-purchase, closely followed by those (12) favouring the acquisition of assets with owned capital and/or loans. Only six were in favour of leasing. There were two cases where more than one financing options were indicated. As for the reason, 18 out of 32 who indicated their answers, felt that capital and loans are less expensive. There is a discrepancy here since only 12 had favoured owned capital and loans as the source for acquiring assets. Similarly, six and eight individuals chose one or the other advantage with regard to leasing. The results are somewhat curious and the inference that can be drawn is that though a fair number of businessmen and professionals (14 out of 32 or 43.8%) acknowledged some benefit(s) of leasing, it still came a distant third as a funding option. Leasing appears to lose out on the matter of financing costs.

5.1.17 THE IMPACT OF DIFFERENT PHENOMENA ON PERSONAL FINANCIAL WELL-BEING

The visitors surveyed were asked to assign ranks to different phenomena such as stock market performance, interest rates, etc., in terms of their importance to personal financial well-being.

The results of the survey are summarized in Table 5.8.

TABLE 5.8

FREQUENCY DISTRIBUTION OF RANKS

ASSIGNED TO DIFFERENT PHENOMENA

Phenomenon / Rank	Stock Market Perfor-mance	General level of interest rates	Inflation	Income-tax rates	Total
1st	(23)	13	11	13	60
2nd	11	11	(19)	16	57
3rd	10	(24)	10	11	55
4th	15	10	15	15	55
Missing responses	26	27	30	30	113
Total	85	85	85	85	340

The results show that stock market performance was chosen by 23 respondents as being the most important whereas the others received lower scores. For the second rank, more (19) chose inflation than any other, (although income-tax rates was close at 16) while for the third rank, the general level of interest rates was picked by 24 respondents ahead of the others.

Two curious dimensions of the results are :

1. There may be two groups of individuals with extreme stances towards the stock market. One which has a pronounced proclivity towards investing in stocks while another, albeit smaller, which has a distasteful or indifferent attitude towards the same. This may explain the increase in the number of individuals who have assigned 4th rank to stock market performance in contrast to the numbers against the 2nd and 3rd ranks.

2. Only 10 have assigned the 4th rank to the general level of interest rates and this is lower than for any other. This point is examined later.

It appears that stock market performance and inflation are of greater concern to individuals followed by income-tax rates and interest rates. This has been tested for statistical significance, as described later. Incidentally, if the numbers of respondents who have assigned either the first or the second rank to each phenomenon were added, the results are as follows.

Phenomenon ---->	Stock Market Performance	Interest rates	Inflation	Income-tax rates
Number of individuals who have assigned the first or second rank	34	24	30	29
Percentage (of 85)	40	28.2	35.3	34.1

5.1.18 TAX DEDUCTION AT SOURCE (TDS)

The question in this case was to know if the provision of tax deduction at source might affect the selection of investments. Significantly, 50 (58.8%) out of 85 replied that it mattered, whereas only 18 (21%) replied in the negative. No response was given by 17 individuals. A possible inference from these results could be that, other things being comparable, an individual is more likely to invest in a vehicle which does not have the TDS feature than one which does.

5.1.19 THE USE OF TAX ADVISORY SERVICES

There were 72 responses to this question of which 33 (45.8% of 72) revealed that they do formally consult/use professional services for tax planning. In contrast, 39 (54.2%) replied in the negative.

5.1.20 SATISFACTION WITH ONE'S TAX PLANNING

70 individuals responded to this question. 54 (77.1% of 70) respondents affirmed that they were satisfied with their tax planning, while 16 indicated dissatisfaction.

The answers of this and the previous question were analyzed with the aid of a 2 x 2 contingency table, and some interesting findings emerged.

Of the 33 availing of tax advisory help, 26 (78.8% of 33) claimed to be satisfied whereas six (18.2%) were not. Of the 39 who did not avail of professional help, 26 (66.7%) expressed satisfaction, but nine (23.1%) were dissatisfied.

The composition of the 54 who indicated satisfaction is as follows :

26 seek profession help

26 do not

Two had not revealed their answers

Of the 16 who indicated dissatisfaction, six were availing of professional help while nine were not.

Thus, the impression one gathers is that while the lack of professional help may give rise to dissatisfaction with one's tax planning, misgivings remain even among those receiving such advice. Whether such dissatisfaction is based on sound reasons or is unjustified is a matter that would need more investigation.

5.1.21 REMARKS BY THE RESPONDENTS

Not many took the opportunity to offer their comments or views that would have added to answers provided by them. Of the 10 or so respondents, a few appealed for reduction in tax rates while one desired an increase in the rebate to 100%! Yet another wanted advice on tax planning and

investment decisions. One respondent pointed out that tax planning would also be determined by the requirements of having to discharge social obligations (e.g., marriage) for which savings need to be in liquid assets. Consequently, individuals in such situations may steer clear of long-term tax shelters.

In general, considering the few comments that were offered, it is not possible to draw anything meaningful from the last question.

5.2 Statistical Tests

A number of hypotheses were framed and tested and some interesting results have been obtained.

5.2.1 PREFERENCES FOR TAX SHELTERS

1. There were 46 individuals who had assigned ranks to each of the six tax shelters. An analysis of these responses was carried out to know their most preferred tax shelter, i.e. the first-ranked. A frequency distribution of the first rank was prepared tax shelterwise to test the null hypothesis (Ho) that tax-payers are indifferent with regard to various tax shelters. Theoretical frequencies were assigned in line with Ho and the computed chi square of 26.81 was found significant at the .001 level, at 5 degrees of freedom. Even when Provident Fund was excluded as a tax shelter (since it is available to only salaried employees), the computed chi square among the remaining shelters was highly significant. The portions which contributed most to the total chi square were the frequencies relating to PPF (greater number of first ranks) and NSS and Annuity Plan (one and nil first ranks respectively). Therefore, Ho which held that tax-payers are indifferent with regard to their tax shelter preference was rejected. The Friedmann's

test was tried on the tax shelters (excluding PF). It too resulted in the rejection of the null hypothesis of indifference between the five tax shelters, at .001 level.

2. Another exercise was done to see if a similar result was obtained in the case of three tax shelters, viz., PPF, NSC and ELSS. The frequency distribution of first rank assigned by 43 individuals among the three shelters was prepared; the null hypothesis postulated indifference between these three shelters and the chi square was calculated by assigning appropriate theoretical frequencies. In this case, however, Ho could not be rejected even at the .05 level. The Friedmann's test here yielded a similar result (non-rejection). The computed test statistic at 1.35 was rather low.

3. The null hypothesis of indifference between NSS and Annuity was also subjected to Friedmann's test. It was rejected at the .01 level.

5.2.2 TAX SHELTER PREFERENCE AND REASONS THEREFOR

A contingency table was prepared to probe for any association between the most preferred tax shelter and the possible reasons. The question being examined here is whether certain reasons might induce individuals to prefer particular shelters. One interesting finding which may be mentioned at this stage is that out of the 54 individuals who had indicated their primary reason for their preferred tax shelter, **not even one singled out shorter term as the grounds for their preference**. In the first contingency table that was prepared, there were several cells with low expected frequencies. Therefore, this table was condensed by taking only three categories of reasons: Higher return inclusive of tax benefits, Safety of capital and others which comprised loan facility, familiarity and convenience. Although the problem of low frequencies persisted, it did not make sense theoretically to further condense the data

The picture that emerged is shown below. The cells are identified by letters a to o.

TABLE 5.9

A 5 x 3 CONTINGENCY TABLE OF TAX SHELTERS PREFERRED AND REASONS THEREFOR

Reason / Tax Shelter	Return	Safety	Other reasons	Total
PF	(a) 2	(b) 4	(c) 4	10
PPF	(d) 8	(e) 6	(f) 3	17
NSC	(g) 2	(h) 3	(i) 6	11
ELSS	(j) 11	(k) 2	(l) 1	14
NSS	(m) 0	(n) 1	(o) 1	2
Total	23	16	15	54

Ho : There are no differences among the reasons with respect to explaining tax shelter preference. The chi square of 16.4 was found to be significant at the .05 level. This result indicated some association between certain tax shelters and the reasons influencing those preferences, and it was decided to probe this further. By examining the residuals eij for each cell, it was found that the cells that contributed substantially to the high chi square were d, i and j. Therefore, a subtable relating to PPF, NSC and ELSS was examined. As in the previous case, three categories of reasons were considered. Thus, there were 9 cells in the 3 x 3 subtable. The null hypothesis was again the same as before.

TABLE 5.10

A 3 x 3 SUBTABLE OF TAX SHELTERS

PREFERRED AND REASONS THEREFOR

Reason / Tax Shelter	Return	Safety	Other reasons	Total
PPF	(a) 8	(b) 6	(c) 3	17
NSC	(d) 2	(e) 3	(f) 6	11
ELSS	(g) 11	(h) 2	(i) 1	14
Total	21	11	10	42

The calculated chi square was 12.11 and it was significant at the .02 level. In this case, the cells where the residuals were large were a, f and g. It appears that considerations of return give rise to a strong preference for PPF and ELSS as contrasted with NSC. Further partitioning of the above table was done as shown below.

TABLE 5.11

A 3 x 2 SUBTABLE OF TAX SHELTERS

PREFERRED AND REASONS THEREFOR

Reason / Tax Shelter	Return & Safety	Other reasons	Total
PPF	(a) 14	(b) 3	17
NSC	(c) 5	(d) 6	11
ELSS	(e) 13	(f) 1	14
Total	32	10	42

Chi square equals 8.21; Ho of "no differences" is rejected at the .02 level. The key cells above are a and e.

TABLE 5.12

A 3 x 2 SUBTABLE OF TAX SHELTERS

PREFERRED AND REASONS THEREFOR

Reason / Tax Shelter	Return	Safety	Total
PPF	ⓐ 8	ⓑ 6	14
NSC	ⓒ 2	ⓓ 3	5
ELSS	ⓔ 11	ⓕ 2	13
Total	21	11	32

Chi square equals 3.97; Ho of "no difference" cannot be rejected even at the .05 level.

From the above, it is revealed that when two reasons viz., return and safety are combined and pitted against the others, the chi square is significant. However, it is not so when return and safety only are considered.

Further, "ransacking" of the data was performed in the following manner. Safety was clubbed with "other reasons" and juxtaposed with return, and a 2 x 3 table was prepared where the tax shelters were PPF, NSC and ELSS. The null hypothesis was, as before, that of no differences among the reasons with respect to the tax shelter preferences.

TABLE 5.13

A 3 x 2 SUBTABLE OF TAX SHELTERS

PREFERRED AND REASONS THEREFOR

Reason / Tax Shelter	Return	Safety & Other reasons	Total
PPF	ⓐ 8	ⓑ 9	17
NSC	ⓒ 2	ⓓ 9	11
ELSS	ⓔ 11	ⓕ 3	14
Total	21	21	42

Since the calculated chi square was 9.08, Ho was rejected at the .02 level. An analysis with the help of residuals eij indicated that cells a, b, d and e have contributed most to the total chi square, especially the last two mentioned above. It appears that the attraction of higher return including tax benefits seems to tip the scales in favour of PPF and ELSS. Another subtable was utilized to determine if there was any difference between Return and Safety (alone) with respect to PPF and ELSS. The adjusted chi square turned out to be 1.29 and that it was not significant even at .10 level is also of some interest.

5.2.3 LEAST PREFERRED TAX SHELTERS AND REASONS THEREFOR

As was done in the previous section, contingency tables were prepared with the idea of ascertaining association between reasons and lowly ranked tax shelters. The lowest rank was taken as the lower of 6 or 7, since in some cases even the 7th rank was assigned. 35 respondents had indicated their answer properly. These are summarized in a contingency table below.

TABLE 5.14

A 6 x 6 CONTINGENCY TABLE OF LEAST PREFERRED TAX SHELTERS AND REASONS THEREFOR

Reasons / Tax	Low return	No loan	Longer term	Capital loss	Un-familiar	Incon-venient	Total
PF	0	1	2	0	1	1	5
PPF	0	0	0	0	0	2	2
NSC	1	0	1	0	0	1	3
ELSS	0	0	0	1	1	0	2
NSS	5	0	0	0	0	2	7
Annuity plans	4	2	4	1	4	1	16
Total	10	3	7	2	6	7	35

Annuity plans have a dubious "distinction" in that each reason has been cited by one or more respondents as the explanation for the lowest rank. There is, also the odd objection like that of "longer term" against NSC or "no loan" against PF. The grouse against NSS appears to be essentially one of "low return".

Two subtables were prepared from the above contingency table. These are shown below. PF was excluded from both.

TABLE 5.15

A 2 x 3 SUBTABLE OF LEAST PREFERRED

TAX SHELTERS AND REASONS THEREFOR

Reason / Tax Shelter	Low Return	Longer term or Capital Loss	Other reasons	Total
PPF + NSC + ELSS	1	2	4	7
NSS + Annuity	9	5	9	23
Total	10	7	13	30

Chi square is 1.50

TABLE 5.16

A 2 x 2 SUBTABLE OF LEAST PREFERRED

TAX SHELTERS AND REASONS THEREFOR

Reason / Tax Shelter	Low Return	Other reasons	Total
PPF + NSC +ELSS	1	6	17
NSS + Annuity	9	14	23
Total	10	20	30

Adjusted Chi square is 0.58

In both the above cases, the chi square was not significant at the .05 level. Therefore, the null hypothesis of no differences among reasons with regard to the least preferred tax shelter cannot be rejected.

5.2.4 A COMPARISON OF THE RATIONALE FOR ASSIGNING THE HIGHEST AND LOWEST RANKS TO TAX SHELTERS

The objective here is to examine if there was consistency in the logic or criteria in assigning the highest or lowest rank. To illustrate, if higher return and safety of capital are the bases for assigning the first rank to a particular tax shelter, are lower return and fear of capital loss the reasons for assigning the last rank to another tax shelter ? If it were generally the case, one could say that there was consistency in the logic applied by individuals. A contingency table of 41 complete responses is presented below.

TABLE 5.17

A 2 x 2 CONTINGENCY TABLE OF REASONS FOR THE MOST AND LEAST PREFERRED TAX SHELTERS

Reason for first rank / Reasons for last rank	Higher return + Safety of capital	Short term, familiar and convenient	Total
Lower return + Fear of capital loss	(a) 13	(b) 3	16
Longer term, inconvenient and unfamiliar	(c) 15	(d) 10	25
Total	28	13	41

Ho : There is no relationship between the bases for the first- and last-ranked tax shelters.

The calculated chi square was 2.03 and hence the null hypothesis could not be rejected at the .05 level.

.On the matter of deciding the first rank, considerations of higher return including tax benefits and safety of capital conspicuously dominate the other factors such as shorter term, familiarity and convenience. This is apparent from a comparison of the totals in the two middle columns above. When it came to assigning the last rank, reasons such as longer term, unfamiliarity and inconvenience seemed to operate more strongly than lower return (inclusive of tax benefits) and fear of capital loss. Curiously, the Odds Ratios come in handy for analyzing the situation further.

TABLE 5.18

ODDS RATIOS OF REASONS FOR THE MOST AND LEAST PREFERRED TAX SHELTERS

$\frac{a}{c} = 0.87$	$\frac{b}{d} = 0.3$
$\frac{c}{a} = 1.15$	$\frac{d}{b} = 3.33$

The following can be gleaned by looking at the odds ratios calculated above :

1. Among those (thirteen) who chose shorter term, familiarity and convenience as the reasons for assigning the first rank, the odds of their proceeding on the same basis (i.e., longer term, unfamiliarity and inconvenience) in assigning the last rank are high at 3.33 as compared to only 0.3 in favour of those who would identify lower return and fear of capital loss as the considerations. Viewed broadly, there is, therefore, consistency as far as the rationale goes.

2. Among those (twenty-eight) who identified higher return and safety of capital as the reasons for assigning the first rank, the odds of their employing a consistent logic (i.e. lower return and fear of capital

loss) in assigning the last rank are lower at 0.87 as against 1.15 in favour of those who would cite longer term, unfamiliarity and inconvenience as the objections. In this case, therefore, the rationale among a majority undergoes a change !

5.2.5 RANKING DIFFERENT PHENOMENA BASED ON THEIR IMPORTANCE TO PERSONAL FINANCIAL WELL-BEING

The question required the subjects to rank different phenomena, viz., stock market performance, the general level of interest rates, inflation and income-tax rates on the basis of their importance to personal financial well-being. The responses are summarized with the help of a contingency table. There were 55 individuals who had assigned ranks to each of the four phenomena.

TABLE 5.19

FREQUENCY DISTRIBUTION OF RANKS TO DIFFERENT PHENOMENA BY 55 INDIVIDUALS

Phenomenon / Rank	Stock market perfor-mance	General level of interest rates	Inflation	Income-taxc rates	Total
1st	19	12	11	13	55
2nd	11	9	19	16	55
3rd	10	(24)	10	11	55
4th	15	10	15	15	55
Total	55	55	55	55	220

Ho : There are no differences between the phenomena in terms of their importance to personal financial well-being.

Friedmann's test statistic was calculated to be 0.709 and so, Ho could not be rejected even at .80 level. The chi square was calculated for each of the columns of the different phenomena by assigning a theoretical frequency of 55/4 to each cell, which implied indifference in ranking. **Only in the case of general level of interest rates was the chi square of 10.53 significant (at the level of .02).** Thus, attention is drawn to the considerably higher frequency of third rank (24) to the general level of interest rates. The Odds Ratios are again utilized to explain this high density.

TABLE 5.20

ODDS RATIOS OF FREQUENCIES OF RANKS

ASSIGNED TO DIFFERENT PHENOMENA

Phenomenon / Rank	Stock market perfor-mance	General level of interest rates	Inflation	Income-tax rates
1st and 2nd to 3rd and 4th	30 / 25 = 1.2	21 / 34 = 0.62	30 / 25 = 1.2	29 / 26 = 1.12
3rd to 4th	10 / 15 = 0.67	24 / 10 = 2.4	10 / 15 = 0.67	11 / 15 = 0.73
1st to 2nd	19 / 11 = 1.73	12 / 9 = 1.33	11 / 19 = 0.58	13 / 16 = 0.81

The first row in the above table relates the frequencies of higher ranks to those of lower ranks. It may be inferred that interest rates are not considered as important as the others with respect to personal financial well-being, since the relevant odds ratio at 0.62 is lower than others in that row. And yet, as the second row numbers demonstrate, there appears to be a marked reluctance to treat interest rates as least important. **The odds ratio of 2.4 is far higher than others in the row.** The last row is merely to

distinguish the superior ranking of stock market performance, since the other ratios involving stock market performance and inflation are identical and therefore, misleading. Another observation is that none of the ratios involving income-tax rates take on extreme values, i.e., either the highest or the lowest in their respective rows. It appears that the view on income-tax rates is more tempered, in comparison to the others.

5.2.6 PROFESSIONAL ASSISTANCE AND SATISFACTION WITH ONE'S TAX PLANNING

A 2 x 2 contingency table was prepared to summarize the responses. This is shown below.

TABLE 5.21

A 2 x 2 CONTINGENCY TABLE OF TAX PLANNING MODE AND SATISFACTION THEREFROM

Mode of tax Planning / Whether satisfied	With professional aid/advice	Independently	Total
Yes	26	26	52
No	6	9	15
Total	32	35	67

Ho : There is no difference among the two groups with regard to dissatisfaction with their tax planning.

The chi square worked out to be 0.46 and it was not significant at the level of .05. Hence, Ho cannot be rejected. This result was also confirmed by a difference of proportions test. **While this is an interesting result**, it would be necessary to probe further in order to learn whether dissatisfaction inspite of receiving professional help, is based on substantial grounds !

5.2.7 PREFERRED CHOICE FOR INSURANCE

There were 48 responses to this question, as shown below :

LIC	34
ULIP	10
Dhanraksha	4
	48

The null hypothesis set up was that individuals are indifferent in their choice of an insurance vehicle and theoretical frequencies were assigned accordingly. The calculated chi square was 13.815 and it was significant at the level of .001 leading to the rejection of the hypothesis.

5.2.8 GUESSTIMATE RETURN ON ULIP/DHANRAKSHA

The frequency distribution of answers to this question are as follows :

% annual return	No. of individuals
8 to 11.99	19
12 to 15.99	25
16 to 19.99	10
	54

Ho : Individuals do not have a fair idea about the yield on ULIP/Dhanraksha.

Theoretical frequencies were assigned in line with Ho. The chi square was found to be 6.33 and Ho was rejected at .05 level. Interestingly though, 35% of the respondents wrongly thought that the yield was under 12%. This is an instance where, perhaps some inaccurate rule of thumb is being employed.

5.2.9 INCOME LEVELS AND AWARENESS REGARDING YIELDS ON INSURANCE VEHICLES

An effort was made to ascertain if there was an association between income levels and the degree of awareness regarding yields on the insurance vehicles, ULIP and Dhanraksha.

Accordingly, the following data were gleaned from the responses :

TABLE 5.22

INCOME GROUP AND THE NUMBER OF PERSONS WHO ARE KNOWLEDGEABLE/IGNORANT

Income Group (Rs.)	No. of persons with a fair idea	No. of persons who are unaware	Total
35,001 to 60,000	12	7	19
60,001 to 120;000	13	3	16
Total	25	10	35

Ho : The average income of knowledgeable individuals is equal to the average income of ignorant individuals.

The above hypothesis was subjected to the t test. The t statistic was calculated to be 1.169 and hence the hypothesis could not be rejected.

5.2.10 BUSINESSMEN/PROFESSIONALS : PREFERRED MEANS OF REDUCING TAXABLE INCOME

The frequencies under the three routes to reducing taxable income were as follows :

Asset acquisition with capital and loan	12
Leasing	6
Hire-purchase	13
	31

Ho : Businessmen/professionals are indifferent between the three means of reducing taxable income.

Theoretical frequencies corresponding to Ho above were assigned and chi square was found to be 2.77. However, it was not significant at the level of .05.

5.3 A Summary of the Findings

At this point, it may be useful to have a recap of the main findings.

1. Individuals overwhelmingly favour the option of investing in tax shelters in order to reduce income tax liability.

2. There appears to be a clear preference for life insurance (of LIC) vis-a-vis ULIP and Dhanraksha.

3. The respondents had a fair idea about the annual return from ULIP/ Dhanraksha.

4. Individuals are not indifferent between various shelters.

5. PPF and ELSS are the most preferred tax shelters. The reasons behind this are higher return inclusive of tax benefits and safety of capital. Statistically, however, the hypothesis of indifference between PPF, NSC and ELSS could not be rejected.

6. NSS and Annuity Plans are the least preferred of the tax shelters. Also, it was possible to establish statistically that individuals are not indifferent between NSS and the annuities, Jeevan Dhara and Jeevan Akshay. The

objections in the case of Annuity Plans are on all counts, though not equally; against NSS, the main grouse seems to be "lower return inclusive of tax benefits".

7. NSC was placed in the middle. Interestingly, no one singled out "shorter term" as main reason for preferring a tax shelter including for NSC.

8. In assigning the first rank to a tax shelter, considerations of higher return and safety of capital dominate others such as shorter term, familiarity and convenience. However, in assigning the last rank, objections of longer term, inconvenience and unfamiliarity prevail over those of lower return and fear of capital loss.

9. The basis for assigning the highest and lowest ranks to tax shelters does not remain unchanged. This appears to be the case for that set of individuals who were induced by considerations of higher return and safety of capital in assigning the highest rank to a tax shelter.

10. A majority of the respondents sought tax shelters late in the financial year. Even in the case of PPF, it appeared that a sizeable number may be missing an opportunity to start generating tax-free income early on.

11. The strategy of investing in shares, units and others qualifying for tax benefits under Section 80L was employed by a majority of the respondents in order to minimize taxable current income.

12. It also transpired that the other popular means of checking the tax burden are : (a) to defer realization of capital gains when current income is expected to be high, and (b) to extend the holding period appropriately for shares and other securities in order to make capital gains long term.

13. Among businessmen and professionals, leasing is the least preferred route to reducing taxable income.

14. In terms of importance to personal financial well-being, the order appears to be stock market performance first followed by the others. Statistically, however, the hypothesis of indifference between the four phenomena could not be rejected. There is interestingly a marked reluctance to treat interest rates as least important.

15. Evidence suggests that the proviso of tax deduction would have an adverse influence on the stance towards an investment vehicle.

16. There is no statistically significant difference in the numbers of people dissatisfied with their tax planning between those who receive professional assistance and those who don't.

17. There is no statistically significant difference in the income levels of those who have a fair idea about the yield on ULIP and Dhanraksha as compared to those who do not.

END-NOTE

[1]Kritzman, Mark, "What Practitioners Need to Know... About Utility," *Financial Analysts Journal* (May-June 1992), p. 19.