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EDITORIAL

The emerging national scenario is forcing us to look at accounting and finance from a different perspective. Mr. Debashis Kundu in his paper raised a pertinent question about the influence of stock prices on changes in the accounting revenues. Prof. O.S. Gupta has tried to touch the basics of accounting with a scientific approach. His single rule for debit and credit entries will give a new dimension to the whole structure of accounting. Mr. Sanjay J. Bhayani made a study of Indian pharmaceutical firms to explain the determinants capital structure. His results show that the leverage is negatively related to the tangibility of assets. Prof. S.M. Dhar and Ghosh have analysed in detail the systems, perceptions and problems of presumptive taxation. Dr. Satyajit Dhar and De have made an indepth study of ESOP valuation and disclosure practices in Indian companies. Ms. Pushpa Negi and others have made a perceptual study of IFRS Adoption by collecting informations from 85 respondents. Ms. Komal Narang and others have made a study on the relationship among various components and productivity by using simple statistical tools. Prof. K.V. Achalapathi and others have analysed loan waiver scheme towards credit discipline. Ms. Leena B. Dam has made an empirical study regarding preferred investment avenues among the people.

June 30, 2010

Professor Nageshwar Rao
Chief Editor

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SINGLE RULE FOR DEBIT AND CREDIT ENTRIES

**O.S. Gupta*

ABSTRACT

This article on Single Rule for Debit and Credit entries opens a new gate for simple, quick and clear approach to making decisions as to which account to debit and which to credit for a given monetary transaction.

EARLY HISTORY OF ACCOUNTANCY

"Accountancy infancy dates back to the earliest days of human agriculture and civilisation".¹ "Ancient economic thought of the Near East facilitated the creation of accurate records of quantities and relative values of agricultural products, methods that were formalised in trading and monetary system of 2000 B.C."²

"In the twelfth century A.D., Ibn Taymiyyah mentioned in his book Hisba (Calculation) detailed accounting systems used by Muslims as early as in seventh century A.D. These accounting practices were influenced by Roman and Persian civilisations that Muslims interacted with."³

LUCA PACIOLI AND BIRTH OF MODERN ACCOUNTANCY

In the year 1494, a mathematics compendium "Summa de Arithmetica, Geometria, Proportionalia" (Trans, Review of Arithmetic, Geometry, Ratio and Proportion) written by a Fransiscan Monk, Luca Pacioli, was printed and published in Venice. It included a 27-page treatise on book-keeping "Particularis de Computis et Scripturis" (Trans. Details of Accounting and Recording). "It represents the first known printed treatise on book keeping, and it is widely believed to be the forerunner of modern book-keeping practice".⁴

DOUBLE ENTRY SYSTEM

Modern Accountancy is based on the concept of Dual Aspect. Accountancy records and deals with financial transactions. Each exchange involves give and take between two things and, thus, there are two ends of monetary value, i.e., transfer of monetary value between the two ends or accounts.

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Every transaction is recorded in the books of accounting in two accounts, one to be debited, the other to be credited, both with the same amount of the transaction, so that at any point of time the totals of debit amounts and of credit amounts are the same. This has given rise to Double Entry System of recording financial transactions in Accounts Books.

The rules followed under this system are given below:

1. Debit the receiver and Credit the giver. This is used in respect of personal accounts.
2. Debit what comes in and Credit what goes out. This relates to real accounts.
3. Debit all expenses and losses like wages, rent, interest, insurance, premiums and loss by fire, etc., and credit all incomes, like sales revenues, commission earned, gain on disposal of fixed assets, etc.

These are also popularly known as Three "Golden" Rules. These have been used over the past 5 centuries (from year 1994 onwards) without any change and in almost all countries of the world. Often people, even with fairly good knowledge of accounting, get confused as to which rule is to be applied, particularly in respect of some accounts about which they can't decide whether these are real accounts or personal accounts. Example of such account is Bank A/c. There often is also confusion as to how the rules are to be applied to entries of Bad Debts and Depreciation.

People have to deal with combinations of 3 rules and 3 types of accounts for determining the right entry and often mistakes are committed.

THE NEW AVTAR

The author of this article often wondered if there could be something common in these three rules. Pondering over this question, he realised that there certainly is one thing common and if it is clearly understood, we can work with just one rule of debit and credit. This ONE RULE is explained below-

Financial accounting deals with financial transactions. Each transaction involves an exchange of monetary value between two accounts related with the given transaction. In this exchange, value is transferred from one account to another account. For example,

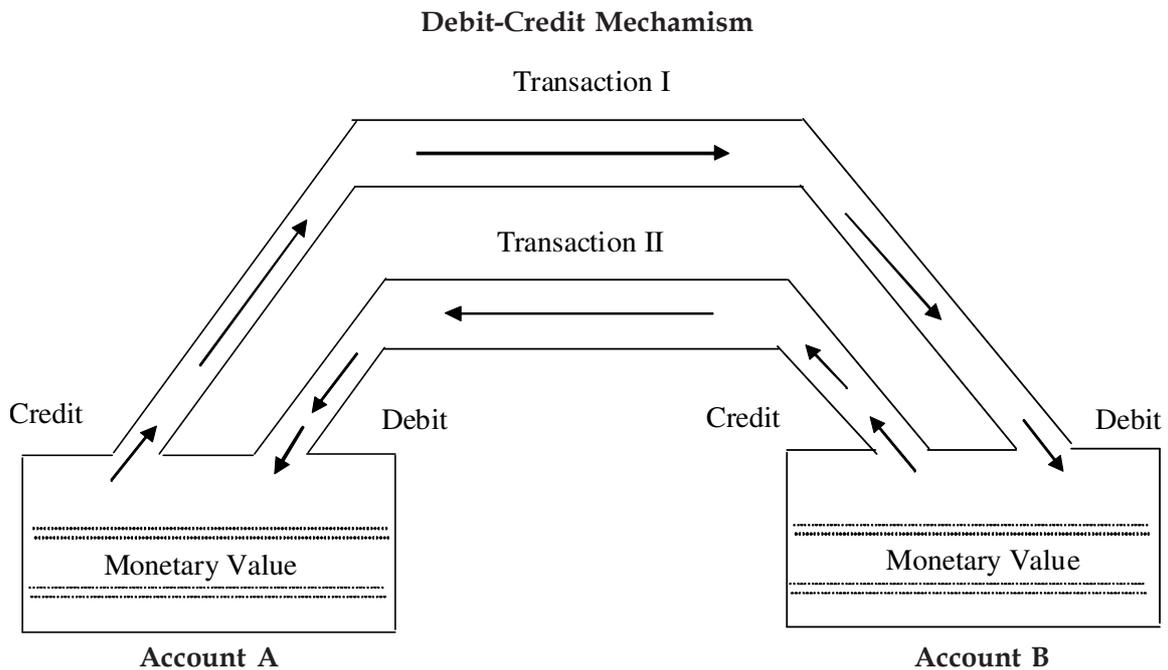
- (i) When furniture is bought and cash payment made, value is put in Furniture A/c and is given by Cash A/c.
- (ii) When wages are paid, value is added to Wages A/c and it is given by Cash A/c.
- (iii) When cash is put in the bank, value is given by Cash A/c and put in the Bank A/c.
- (iv) When goods are sold on credit to Hari Mohan, value is added to debts to be realised later from Hari Mohan and it is given by Goods A/c.
- (v) When goods are purchased on credit from Ram Ratan, value is added to Goods A/c and is given by Ram Ratan A/c.
- (vi) When proprietor brings capital to the firm through a cheque, value is added to Bank balance and given by proprietor as capital.

In all these cases, monetary value is taken from some account and given to some other concerned account. The account that provides monetary value does a credit to the

organisation to enable it to put it in another account from where it can be used now or later. Therefore, the account providing monetary value is credited. The account is to which the monetary value is put become debtor to the organisation, such that the value can be taken from it now or later. Therefore, the account in which monetary value is put is debited. This reasoning provides us as SINGLE RULE FOR DEBIT AND CREDIT, namely.

Debit the Account that Receives Monetary Value and Credit the Account that Provides Monetary Value.

This is shown diagrammatically below -



Arrows indicate the direction of flow of monetary value.

The journal entries for the six transaction given above, using the Three Rules of Debit and Credit, will be as given below:

TRANSACTION

- (i) Furniture comes in and cash goes out. So Debit Furniture A/c and Credit Cash A/c.
- (ii) Wages constitutes expense and cash goes out. So Debit Wages A/c and Credit Cash A/c.
- (iii) Bank balance increases and cash goes out. So Debit Bank A/c and Credit Cash A/c
- (iv) Hari Mohan received goods and goods go out, so Debit Hari Mohan's A/c and Credit Goods A/c.
- (v) Goods come in and Ram Ratan is the giver of goods. So Debit Goods A/c and Credit Ram Ratan's A/c

- (vi) Bank balance increases and proprietor is the giver. So Debit Bank A/c and Credit Capital A/c.
Using the Single Rule also, the entries will be the same namely,
- (i) Furniture A/c Dr., because value is put in it and Cash A/c Cr., because the value is given by Cash A/c.
 - (ii) Wages A/c Dr., because value is put in Wages A/c and Cash A/c Dr., because value is given by Cash A/c.
 - (iii) Bank A/c Dr., because value is received by Bank A/c and Cash A/c Cr., because value is given by Cash A/c.
 - (iv) Hari Mohan's A/c Dr., because value is added to it and Good's A/c Cr., because value is given by it.
 - (v) Goods A/c Dr., because value is added to it and Ram Ratan's A/c Cr., because that account gives monetary value.
 - (vi) Bank A/c Dr., because value is added to this A/c and Proprietors Capital A/c Cr., because value is coming from it.

It will be seen that entries will be the same whether three Rules are followed or just one Rule.

The Single Rule is however, superior to Three rules because of the following reasons -

- (i) One does not have to remember three rules. Only one rule will serve the purpose.
- (ii) One does not have to find whether a given account is Personal A/c, Real A/c or Nominal A/c.
- (iii) One does not have to remember which rule is to be applied to which kind of account.
- (iv) There would be no need to remember three kinds of accounts for this purpose. The Single Rule can be used whatever the type of account may be.

Because of all these conveniences much time is saved in deciding which account to debit and which one to credit.

Of course, Single Rule has to be understood with realisation that transfer takes place not of persons, not of real thing nor of expenses, losses, gains and incomes but of monetary value involved in it.

Students of classes where debit and credit has been taught using the Single Rule have named it the "DIAMOND RULE".

Although, in practice, it will not matter whether the age-old Three Rules are used or the Single Rule is adopted, yet use of Single Rule will put According on a sound logical basis, saving time and confusion.

END NOTES

1. Accountancy Wikipedia, the free encyclopedia page 1 of 5
2. Ibid. Page 2 of 5
3. Ibid. Page 2 of 5
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2. www.accountingformanagers.blogspot.com.

PRESUMPTIVE TAXATION : SYSTEMS, PERCEPTIONS AND PROBLEMS

**Samirendra Nath Dhar*

**Gangogtree Ghosh*

ABSTRACT

Presumptive taxes are usually employed to simplify tax procedure particularly in relation to compliance burden on taxpayers with very low turnover and the corresponding administrative burden of auditing such taxpayers. This kind of tax makes sense in cases where the otherwise desirable tax base is difficult for the tax authorities to measure, verify, and monitor and helps in combating tax avoidance or evasion. Presumptive tax schemes were started in India with the passing of the Finance Act 1997, which made the presumptive taxation operative retrospectively from the assessment year 1994-95 for the businesses dealing with civil construction, hiring leasing or plying goods carriages and later for retail businesses. Nearly all these schemes have been operative for more than two decades and have been an integral part of the income tax system in India. . However, not much effort have been made to approach the tax payers to find out whether presumptive tax schemes have really been comprehended by them and whether they are aware and convenient with these schemes.

This study is an attempt in this direction and is based on a survey carried out to find out how taxpayers understand the system and perceive the presumptive tax system. The scope of this study has been limited to understanding the awareness and perception of persons engaged in the business of civil construction about the system of presumptive tax applicable to them. The findings of the survey point out the deficiencies in the awareness of the taxpayers highlight their perceptions regarding the system and lead to suggestive policy prescriptions for better efficacy of the system.

The kick-start for presumptive taxes were made in India more than two decades ago with the recommendations of the Chelliah Committee (1992) recommending that presumptive tax scheme and the estimated income scheme be implemented for small trading, brokerage or commission activities and construction contract activities. Chelliah stressed that attempts should be made to estimate the ratio ratios separately for each separate activity and also suggested that it would be necessary to make presumptions rebuttable so that they do not come under any legal attack. "

1. INTRODUCTION

On the basis of the recommendations of the Chelliah Committee report, presumptive tax schemes were started in India with the passing of the Finance Act 1997, which made the presumptive taxation operative retrospectively from the assessment year 1994-95 for the businesses dealing with civil construction, hiring leasing or plying goods carriages. The

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salient features of these schemes are presented in table 1. There are also some presumptive tax schemes exclusively for non residents. These had come into effect much earlier. Their salient features are separately mentioned in table 2.

Table 1
Presumptive Tax Schemes in India with ceiling on tax base- Salient Provisions

Type of Business	Section (effective AY)	Type of Taxpayer	Tax Base	Mode of Computation of taxable income
Civil Construction	44AD (1994-95) retro FA 97	Individual, HUF, AOP, Partnership Company, Cooperative Societies (Resident or Non Resident)	Gross Receipts from business not exceeding Rs. 40 lakhs p.a.	8% of gross receipts
Plying, Hiring or leasing Goods Carriages	44AE (1994-95) retro FA 97	"do"	Number of goods carriages not exceeding 10	3,500 p.m. for heavy goods vehicle and 3150 p.m. for light goods vehicle
Retail Trade	44AF 1998-99	"do"	Turnover of Business not exceeding Rs. 40 lakhs p.a.	5% of total turnover.

In all the above schemes, assesses are exempted from compulsorily maintaining books of accounts under section 44AA and getting them audited under section 44AD. Further, when the presumed income has been determined at the specified rates, all deductions under section 30 to 38 will be deemed to be already allowed. These features bring in simplicity in the system and relieve the taxpayer from computational complexities. It is always possible for assesses to declare higher income than the presumed income under these schemes. However if the assesses wish to declare a lower income than the presumptive income, then these benefits are removed, i.e., assesses will have to comply with the provisions of sections 44AA and 44AB.

These schemes are similar to the scheme under section 44AD since the taxable income of assesses are determined on the basis of certain percentages of gross receipts. The main difference with the schemes mentioned in table 1 is that there is no ceiling under gross receipts. However, the provisions for maintaining books of accounts under section 44AA and getting them audited are exempted for businesses under sections 44B and 44BBB.

Table 2
Presumptive Tax Schemes in India for Non Residents only - Salient Provisions

Type of Business	Section (effective AY)	Type of Taxpayer	Tax Base	Mode of Computation of taxable income
Shipping Business	44B (1976-77) retro by FA 1997	Non-Residents only	Receipt from carriage of passengers, livestock, mail or goods	7.5% of receipts
Exploration of Mineral Oil	44BB (1983-84)	Non- Residents only	Receipt from provision of services or facilities for prospecting/ extraction/production of mineral oils in India/Outside India	10% of receipts
Aircraft Business (1988-89)	44BBA (N.A.)	Non- Residents only	Receipt from carriage of passengers, livestock, mail or goods	5% of receipts
Civil construction in Turnkey Power Projects	44BBB	Foreign Companies only	Receipts from such business	10% of receipts

II. OBJECTIVE, SCOPE AND METHODOLOGY OF THE STUDY

This study is an attempt in this direction and is based on a survey carried out to find out how taxpayers understand the system and perceive the presumptive tax system. Specifically, the objectives of the study are to find:

- (i) Whether tax payers are aware of the scheme of Presumptive taxes.
- (ii) The sources from which taxpayers gather information about presumptive taxes.
- (iii) Whether they perceive the presumptive tax system as simple and easy to comply.
- (iv) Whether, taxpayers, who are unaware about the scheme comprehend the system to be simple when educated about the presumptive taxes.
- (v) Whether tax payers feel that the Income Tax authorities should disseminate adequate information to them about presumptive taxes.

For the purpose of the study, only one scheme of presumptive taxes, i.e., the scheme applicable for civil contractors specified under section 44AD was taken. This scheme is applicable to developers, builders and contractors who are engaged in the construction or repair of buildings, dams, bridges, roads, electrical fittings, plumbing job, landscaping etc. This section was taken on the basis of a pilot survey which found that contractors were more responsive when approached with questionnaires and reliable answers could be obtained from them mainly relating to the gross receipts. The scope of the study was therefore restricted to presumptive taxation for civil contractors. Other presumptive tax schemes were left out of the purview of this study considering the time and cost constraints in survey.

The survey was carried out in 10 towns and cities of West Bengal. Different contractors associations, tax practitioners and municipalities were approached to get the contacts of small and medium contractors. More than 500 contractors could be contacted, out of which 422 had gross receipts lower than Rs. 40 lakhs in the financial year 2008-09.

Developers and Builders were automatically excluded because they had gross receipts more than Rs 40 lakhs p.a. The sample, which was a mix of random and convenience sampling, stood at 422 civil contractors. Out of this there were certain contractors who did not have to pay taxes for the year 2008-09. The distribution of the sample stood as follows:

Table 3
Distribution of the sample on the basis of Awareness of Presumptive Tax for Civil Contractors and Actual Payment of Taxes by Contractors

	Aware of PT	Not Aware of PT	Total
Pay Taxes	69	304	373
Do not pay taxes	4	45	49
Total	73	349	422

Though this table describes the distribution of the sample, yet it reveals certain interesting features. As revealed by the figures 83% of the civil contractors taken as the sample were not aware of the scheme under section 44AD, though 74% who did not know about presumptive tax paid their taxes. A significantly large proportion was therefore ignorant about presumptive taxes.

A structured questionnaire was administered to these 422 respondents; however there was a tendency for those contractors who did not pay taxes to not respond correctly to the questions. Though most of them did not have taxable incomes, yet it was found that they were reluctant to talk about their tax affairs. Therefore questionnaires were only administered to contractors, who paid taxes, i.e, to 373 respondents. Among the two categories were made:

Category 1: Those who were aware of PT and paid taxes: N= 69

Category 2: Those who were not aware of PT but paid taxes, N= 304

The distribution of the respondents stood as follows:

Table 4
Distribution of Respondents according to Gross Receipts and category of Assesseees

Gross Receipts (Rs lakhs)	Individual	AOP	Partnership Firms	Total
0- 10	43	18	12	73
10-20	34	19	31	84
20-30	49	20	43	112
30-40	42	26	36	104
Total	168	83	122	373

The table is self explanatory and also shows that there were no companies were included in the sample. This is because no companies were found with gross receipts below 40 lakhs.

The findings of the study are reported in the next section.

III. FINDINGS OF THE SURVEY ON PRESUMPTIVE TAX FOR CIVIL CONTRACTORS

In the previous section it was reported that a large section of the civil contractors in the sample were not aware about the system of presumptive tax operative from them. However, a small proportion of the sample, i.e., 69 respondents said that they knew about the system of estimating the income from their business @ gross receipts. These contractors were asked about the sources from which they learnt about presumptive taxes. Their responses are shown in the following table.

Table 5
Major Sources of Information about Presumptive Tax for Category I respondents (N=69)

Sources	Newspapers/ Magazines	TV	Internet	Business Community/ Friends	Tax Consultant	Income Tax Personnel
No of respondents	nil	nil	14	34	13	8

Source: Field Survey

The figures in the table explain that nearly 50% of the respondents have gathered the knowledge from friends and people in their business community and 18% from tax consultants. Very few respondents learnt about the system from income tax people. Moreover, nearly all the respondents were literate and had the habit of reading newspapers and watching TV. Yet none of them had gathered any information from these sources. This suggests that either the publicity was not adequately made in these popular media or if it was made it was rather inconspicuous.

The next stage of the analysis is based on the responses of the contractors belonging to category 1. Their responses were recorded on a five point Likert Scale. The scale used for all the statements were Strongly Agree, Agree, No opinion, Disagree and Strongly Disagree. Values of 2, 1, 0 -1 and -2 respectively were assigned to these points so as to have a quantitative measure of the perceptions of each of these statements. Scores of each statement were summated for all the respondents and the mean score reported. A value higher than zero for the mean score would denote a positive attitude of the respondents towards the statements. To test the response it was hypothesized that the mean score for perception (MSp) of each aspect related to the statements administered would exceed zero, the neutral value on the five point scale.

The hypothesis framed was as follows:

- H_0 : Mean Score for Perception of Civil Contractors-Category 1 (MS_{ip}) = 0
 H_1 : Mean Score for Perception of Civil Contractors-Category 1 (MS_{ip}) > 0, where
 (i = denotes the serial number of the statements)

The observations have been given in the table below. For the purpose of brevity, mainly the statistically significant results are reported.

Table 6
Perception of Respondents who know about Presumptive Tax. (N=69)

Sl. No.	Statements	Mean Score	Z values
1	Provision of PT is easier to understand than that of IT	1.03	7.92*
2	Calculation of tax under PT is less complex than calculation of tax under ordinary IT provisions	1.07	8.92*
3	The system of not maintaining books under sec 44AA and not getting them audited under sec 44AB if PT is opted removes a lot of computational complexities	0.83	6.38*
4	Due to simple systems under PT , I would comply and pay my taxes more readily	0.99	5.94*
5	I can file my returns under the PT system	-0.59	-5.36
6	I would rather employ a tax consultant to file my returns under PT	1.13	7.95*
7	The ceiling of Rs. 40 lakhs should be raised	0.74	4.90*
8	I would encourage other civil contractors to pay tax according to PT	0.74	4.90*
9	Much more awareness need to be developed by the IT dept. regarding PT through advertisement and counseling	0.88	5.35*

*denotes significance at 1% level, Source: Field Survey

The table reveals many interesting facts. First, the null hypothesis has been rejected at 1% significant level in all the above cases, except statement 5, showing the positive attitude of the respondents towards the statements. The respondents opined that it is easier to understand presumptive tax and fewer complexes to calculate, especially when books of accounts are not to be compulsorily maintained and audited. This would lead them to better compliance though they would prefer to rely on tax consultants to file their returns. This is probably because of the fact that filing of returns in ITR forms seems to a complex matter for them. Many of them opined that simple forms for filing returns under presumptive taxation would have been better. Since the contractors find the system to be convenient, they would encourage other contractors to file returns under this system though they earnestly feel that the ceiling for gross receipts being fixed at Rs 40 lakhs is too low considering the present day prices and rates. If it can be raised it would be possible for more contractors

to come under this system. Lastly they feel that awareness about this system should be generated by the income tax department through counseling and advertisements.

Continuing the same type of analysis, a similar type of questionnaire was administered to the category 2 contractors. However, in this case each respondent was first made familiar with the provisions of section 44AD and taught how to calculate the taxable income under this system. The analysis was based on similar techniques (Likert Scale) used for Category 1 contractors.

The hypothesis framed was as follows:

H_0 : Mean Score for Perception of Civil Contractors-Category 2 (MS_{ip}) = 0

H_1 : Mean Score for Perception of Civil Contractors-Category 2 (MS_{ip}) > 0, where (i = denotes the serial number of the statements).

The significant results are given in the table below.

Table 7
Comprehensibility and Perception of Category- 2 Contractors who were not aware about Presumptive Tax before. (N = 304)

Sl. No.	Statements	Mean Score	Z values
1	Provision of PT is easier to understand than that of IT	0.93	7.15*
2	Calculation of tax under PT seems to less complex than calculation of tax under ordinary IT provisions	0.66	4.71*
3	The system of not maintaining books under sec 44AA and not getting them audited under sec 44AB if PT is opted removes a lot of computational complexities	0.65	5.90*
4	Estimating my income @8% of gross receipts is rational	0.51	3.64*
5	The ceiling of Rs. 40 lakhs should be raised	0.88	6.77*
6	Learning the provisions of PT is beneficial to me as I can have a good idea of my tax liability based on gross receipts	0.68	4.53*
7	Now, I would comply and pay my taxes more readily	0.83	6.92*
8	After learning PT , now I can myself file returns under the PT system	-1.24	-10.33
9	Though I have learnt about PT, I would rather employ a tax consultant to file my returns under PT	1.15	11.50*
10	My tax consultant should have explained the provisions of PT to me before	1.22	12.20*
11	Much more awareness need to be developed by the IT dept. regarding PT through advertisement and counseling	1.11	9.25*

* denotes significance at 1% level, Source: Field Survey

The pattern of responses of category 2 respondents is quite similar to those of category 1 respondents. In all the cases except statement 8, the null hypotheses have been rejected

showing a positive attitude of the respondents towards presumptive tax. The matter should be taken into cognizance by the policy makers since increase of awareness through taxpayer education can lead to an environment where the taxpayer can perceive the system as simple and friendly and therefore lead to better compliance. The respondents in this case also opine that the ceiling of Rs. 40 lakhs is quite low and needs to be raised. However, differences are noticed in the opinion whether the estimated income should be calculated at 8% of gross receipts. Some respondents opined that the rate should be lowered, but statistically significant responses were not received. The most important part is that the respondents feel that the tax consultants should have explained the provisions of presumptive tax before to them. Further, they would also like the Income Tax department to increase their awareness levels through counseling and advertisements.

It has been noticed that both categories of respondents have opined in favour of increasing the ceiling on gross receipts. However, the sample consisted of contractors with gross receipt levels ranged from Rs. five lakhs per annum to forty lakhs per annum and many had incomes under other heads like profits and gain from other businesses simultaneously carried on by them or income from house property. It would be worthwhile to examine whether the opinion of small contractors regarding raising of ceiling is as strong as those of larger contractors (i.e., contractors with higher gross receipts). For this purpose a test of association between the levels of receipts of the contractors and their level of agreement for raising the ceiling was made. The hypotheses framed for this purpose were:
 H_0 : There would be no association between the levels of receipts of the contractors and their level of agreement for raising the ceiling.
 H_1 : Contractors with higher receipts would agree much more in favour of raising the ceiling.

The hypotheses were tested using the Chi Square Test. The contingency table is given below.

Table 8
Association between level of Gross Receipts by Contractors and their Opinion
regarding raising of the ceiling of Rs 40 lakhs for section 44AD.
(N= 69 + 304 = 373)

Gross Receipts Rs. lakhs	Levels of agreement					Total
	Strongly Agree	Agree	Do not know		Disagree	
0-10	18	18	21	10	6	73
10-20	24	26	27	4	3	84
20-30	43	34	28	5	2	112
30-40	43	34	22	3	2	104
Total	128	112	98	22	13	373

(Source: Field Survey) (Note: For the purpose of calculating χ^2 , columns 5 and 6 were coalesced so that the expected cell frequencies would be more than 5)

The calculated value of χ^2 is 23.95 at 9 degrees of freedom is significant at 1% level. The null hypothesis is rejected, showing therefore that there is a strong association between the level of gross receipts and agreement for increasing the ceiling. From the distribution observed in the contingency table it can also be seen that a larger proportion of the contractors with higher receipts have either agreed or strongly agreed to the proposition that the ceiling should be increased.

IV. CONCLUSIONS AND POLICY PRESCRIPTIONS

It can no longer be denied that Presumptive tax has been employed for simplification, particularly in relation to compliance burden on taxpayers with very low turnover. Efforts of the tax authorities have been fruitful in incorporating a variety of presumptive tax schemes for different types of business activities for residents and non resident Indians. The effectiveness any tax scheme depends on its comprehension and acceptance. However, the study reveals presumptive tax scheme for civil contractors has not generated much awareness among the taxpayers. The sources of information are largely informal and the contractors are rarely made aware of this system through wide publicity in media by the tax authorities. This system defeats the basic canons of taxation as unawareness about simple tax systems leads to the perception of inconvenience and practice of noncompliance. Taxpayers who are already aware of the system and those who have been made aware of the system opine that this simple system should be widely publicized by the tax authorities.

The aspect of publicizing presumptive tax schemes through advertising in the media therefore needs immediate attention of the tax authorities. The Directorate of Income-tax (RSP & PR) which is mainly responsible for conducting research on tax matters, compilation of economic and administrative statistics, printing, publications and organizing publicity and taxpayers' education should enhance its activities in the following areas:

- Organize a sustained publicity campaign to promote the Presumptive Tax Scheme (PTS) throughout the country.
- To reach the grass root level, suitable media such as newspapers, magazines, brochures and posters should be used on a national scale.
- Efforts should be made to develop a de-centralized approach to PT publicity, especially through word-of mouth publicity and counseling by income tax personnel.
- To educate taxpayers, Taxpayers' Awareness Programme can be commenced on various TV channels.
- The budget allocation to Commissioners of Income-tax for local Presumptive Tax Scheme publicity can be adequately enhanced.

Contractors who perceive the presumptive tax system to be simple do not find the filing of returns to be simple and depend more on tax consultants for the job. The problem is that returns for presumptive tax under sections 44AD, 44AE and 44AF have to be made in the ITRs (ex. ITR 4 and ITR 7). These return forms have many details to fill in regarding income from other heads and seems to be complicated to the contractors. The difficulties

can be removed for contractors whose sole source of income is the business of civil construction by bringing out a simple return form which would require the assesses to fill in their particulars related to name, address, PAN etc. and the information related to gross receipts and calculation of taxable income . Such a form can well be a 'SARAL' for civil contractors.

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ESOP VALUATION AND DISCLOSURE PRACTICES OF INDIAN COMPANIES

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ABSTRACT

Most companies like to measure compensation expense using the intrinsic value method, though they are required to disclose in their footnotes the fair value of employee stock options granted. The issue whether the value of employee stock options (ESOs) should be recognized as expenses has been subject of debate for decades. In ESOP valuation controversy, the anti expensing lobby arguing that there is no easy and proper accounting mechanism that captures the economic rationale underlying stock option expensing. Questions that are raised on valuation of ESOs include: 'ESOs can't be valued', 'How can you value something that is not traded in an open market?' Focusing on the four key option pricing model inputs - expected option life, expected stock price volatility, expected dividend yield, and the risk-free interest rate for valuation of fair value of option the study finds that assumptions regarding such model inputs vary widely among sample companies.

Such variation is may be due to exercise of management discretion regarding opting pricing model inputs. Use of management discretion and lack of audit requirements adversely affect the overall reliability of disclosed stock option based compensation expense for Indian firms.

I. INTRODUCTION

Stock option plans are considered to be a highly appreciated tool for attracting and retaining top talent by the companies. Such a plan ties together the shareholder and management interests. The options can offer advantageous linkage between talent and pay at the onset of an employment relationship. Options prove useful because they can force a manager to put his pay on the line (Arya & Mittendorf, 2005). A stock option plan gives employees the right to acquire shares of the company in future at a pre-determined price, even if the market value of the stock has increased from that option's grant price. It may be noted often, companies will require the employee to hold the allotted options for a period of time before being exercised.

India's growing economy is being propelled by fast paced, talent dependent service industries like Information Technology (IT). In this environment where top talent is very difficult to find and keep, stock options have become popular, primarily for retention purpose,

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in 1990. Industries where they are very common include IT, Drugs & Pharmaceuticals, Banking & Financial Services and fast moving consumer goods. Now, manufacturing industries also use this tool for retention of key employees.

Two alternatives for valuing employee stock option (ESO) are intrinsic value method and fair value method. Most companies like to measure compensation expense using the intrinsic value method, though they are required to disclose in their footnotes the fair value of employee stock options granted. Due to the features that a call option holder need not bear the downside risk and eligible to gain from upside, options are valuable. Same rule is applicable for ESO. However, there being no active market of ESO like market traded options, valuation of ESO is a controversial issue

The issue whether the value of employee stock options (ESOs) should be recognized as expenses has been subject of debate for decades. In valuation of Employee Stock Options (ESOs) Sinnett, W. (2003) raised few questions: 'ESOs can't be valued', 'How can you value something that is not traded in an open market?'

Against this backdrop the paper attempts to assess ESO valuation practice of Indian companies. In the process, it brings into fore use of managerial discretion over valuation model inputs. Further, it surveys the disclosure practice of Indian companies on ESO valuation. Lack of previous studies in this area provides incentive to undertake the study.

II. ESOP ACCOUNTING

It is fact that US GAAP contains most comprehensive treatment regarding accounting of ESOPs. US GAAP pronouncements on ESOP are contained in APB Opinion No. 25 (1972), SFAS 123 (123), SFAS 148 (2002) and SFAS 123(R) (revised 2004).

The Financial Accounting Standard Board (FASB) of USA recognized that the intrinsic value method does not capture the true value of employee stock options and issued a new standard SFAS 123 in 1993 with the intent of conforming financial reporting to economic reality. SFAS 123 specified that options would be valued by using fair value based approach model and expenses at the time of the grant. But due to massive opposition (Opponents were saying that options need not be expensed as there was no dollar outgo), FASB, however, permitted continuation of the old rule, i.e. use of existing intrinsic value method with a rider that fair value of value of ESOs should be disclosed in the footnotes.

The FASB issued SFAS 123 (Revised) in December, 2004 to eliminate APB Opinion No. 25's intrinsic value method and SFAS 123 prescribed footnote disclosures of fair value. SFAS 123 (Revised) requires all public entities to recognize as expense the fair value of stock options issued to employees. FASB prescribe Black-Scholes model, Black-Scholes-Merton (BSM) model, Monte-Carlo model, Lattice model for valuation of employee stock option options, but showed no preference to any model. International Accounting Standard Board (IASB) issued in February, 2004, IFRS 2, Share Based Payment, which is very much similar to SFAS 123 (Revised), and requires fair value based accounting for share based payment transaction. The debate on accounting for employee stock option is shifting from whether to report options on income statements to how to report those (Kaplan & Palepu, 2003).

In India, there is no accounting standard on ESOP accounting. Certain requirements are laid down in the SEBI Guidelines. The requirements of SEBI Guidelines are discussed in next section

Disclosure Requirements as per SEBI Guidelines

SEBI guidelines do not prescribe any valuation method to be utilized when determining the fair value of stock option but the guidelines do require companies to disclose the method used. As per the SEBI Guidelines, 1999, as amended in 2003 a company is required to make the stock option scheme related disclosure either in the Director's Report or in the Annexure to the Directors' Report. Such disclosure should include the following details:

- (a) options granted;
- (b) the pricing formula;
- (c) options vested;
- (d) options exercised;
- (e) the total number of shares arising as a result of exercise of option;
- (f) options lapsed;
- (g) variation of terms of options;
- (h) money realized by exercise of options;
- (i) total number of options in force;
- (j) employee wise details of options granted to;
 - (i) senior managerial personnel;
 - (ii) any other employee who receives a grant in any one year of option amounting to 5% or more of option granted during the year;
 - (iii) identified employees who were granted option, during any one year, equal to or exceeding 1% of the issued capital (exceeding outstanding warrants and conversions) of the company at the time of grant;
- (k) diluted Earnings Per Share (EPS) pursuant to issue of shares on exercise of option calculated in accordance with Accounting Standard (AS) 20, Earnings Per Share .
- (l) where the company has calculated the employee compensation cost using the intrinsic value of the stock options, the difference between the employee compensation cost so computed and the employee compensation cost that shall have been recognized if it had used the fair value of the options, shall be disclosed. The impact of this difference on profits and on EPS of the company shall also be disclosed.
- (m) weighted-average exercise prices and weighted-average fair values of options shall be disclosed separately for options whose exercise price either equals or exceeds or is less than the market price of the stock.
- (n) a description of the method and significant assumptions used during the year to estimate the fair values of options, including the following weighted-average information:
 - (i) risk-free interest rate,
 - (ii) expected life,

- (iii) expected volatility,
- (iv) expected dividends, and
- (v) the price of the underlying share in market at the time of option grant.

There is no requirement to audit such disclosures those are part of the Directors' Report. Further, there are no reviews by any regulatory body to check the authenticity of such disclosure of such disclosure. Hence, completeness and correctness of such disclosure may not be taken for granted. In the next section we present the results of the survey undertaken to assess the valuation related disclosure by Indian companies.

III. PRACTICES OF INDIAN COMPANIES

Studies on ESOP in Indian context are very limited. Surprisingly, there is no study on ESOP valuation and disclosure practice in India. Absence of extensive study on ESOP disclosure practice prompted us to undertake a detail survey on reporting by Indian companies.

The present study has been conducted to observe the valuation techniques and presentation of ESOS related information in the annual reports by the selected companies in India. So far, no study has been undertaken to assess the trend of ESOS reporting in India which is a recent addition in the area of financial reporting after the introduction of ESOP in India. The main objective of the study is to examine the extent of compliance with the SEBI Guidelines regarding valuation and disclosure.

Sample Selection & Survey Procedure

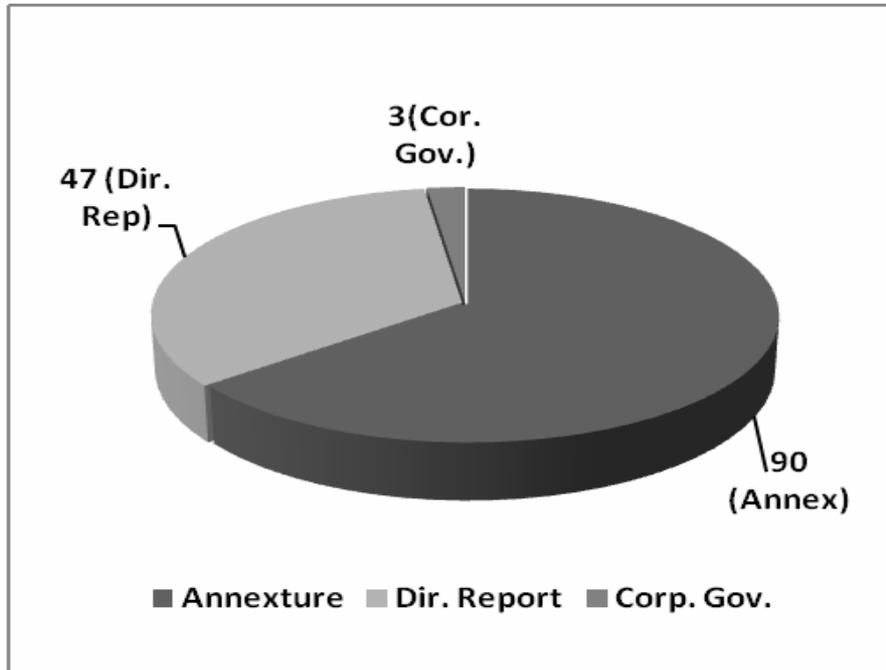
The requirements of SEBI disclosure of the ESOS are applicable to the listed companies in India. Hence, we draw our sample from listed Indian companies that have issued shares pursuant to exercise of employee stock options till March 2008. The sample consists of 140 listed companies that have issued shares pursuant to exercises of employee stock option till March 2008. We have obtained the name of these companies from Prowess, a database, maintained by CMIE LTD. The information on employee stock options is based on the annual reports of 140 companies for the financial year 2007-08. Pro forma disclosure in the Directors' Report portion of the annual reports of the sample companies is the main source of these data. Additional information is also taken from Notes to the Accounts, which has a vital role in respect of ESOS disclosure aspect. The survey procedures include close scrutiny of the annual reports of the sample companies.

Place of Disclosure

As per SEBI Guidelines, the Board of Directors should disclose the details of ESOS either in the Directors' Report or in the Annexure to the Directors' Report. In most of the cases, such disclosures are made in the Annexure as a part of the Directors' Report. All companies of the sample except few companies have provided additional information about ESOS in the Notes to the Accounts. It is observed that out of 140 companies 90 companies have disclosed ESOS related information in Annexure of the Directors' Report, 47 companies presented it in the body of the Directors' Report, 03 companies disclosed it in the Corporate

Governance Report. Fig 1 gives a pictorial presentation of places of disclosure for ESOP related information by the sample companies.

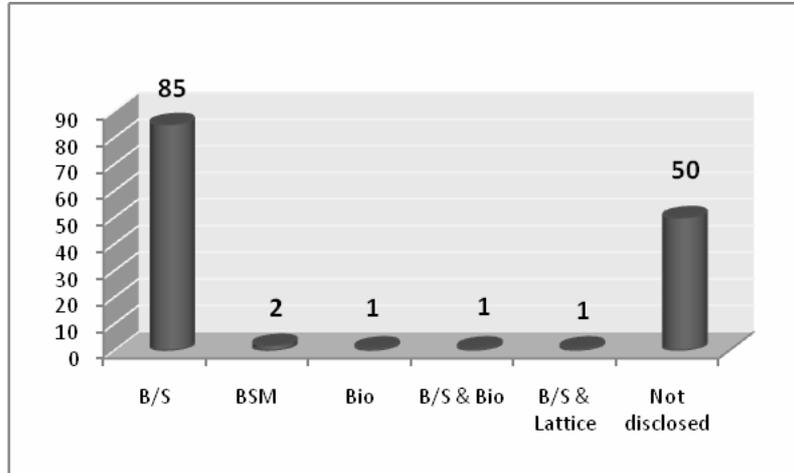
Fig. 1



Valuation Model

SEBI Guidelines specifies that for disclosure purpose the company should calculate the compensation costs of an option grant at fair value by using an appropriate model if intrinsic value method is used. But there is no mention of fair valuation model to be used in the SEBI Guidelines. The disclosure must include all of the following weight-average information that are to estimate fair value of options: (i) risk-free interest rate, (ii) expected life, (iii) expected volatility, (iv) expected dividends, and (v) the price of the underlying share in market at the time of option grant. As there is no preference to any valuation model in SEBI Guidelines, our analysis reveals that surveyed companies follow the all valuation models such as Black-Scholes, Black-Scholes-Merton (BSM), Binomial, Lattice etc..During the survey, it is found that Black-Scholes Model is the most preferred model by sample listed Indian companies. 85 companies followed Black-Scholes Model, 02 companies followed BSM, 01 company followed Binomial Model, 01 company Black-Scholes & Binomial Model and 01 followed Black-Scholes & Lattice model for this purpose. A large number sample company (50) not disclosed the name of the valuation model. Fig. 2 gives a pictorial presentation of different pricing models of option valuation used by the sample companies.

Fig. 2



Valuation Parameters used

Firms are required to compute the fair value of the options granted during the year using an option pricing model. Option pricing models require firms to make several assumptions including life of the stock option, the volatility of the options, the risk free interest rate, and the dividend. Each of these assumptions affects the fair value of stock options, and there are no uniform measurement rules regarding these. Our survey reveals that the assumptions such as, risk-free interest rate, expected life, expected volatility, expected dividends to estimate the fair values do vary widely among the sample companies. Few companies only mentioned the parameters but avoid the quantitative measurement. Another assumption, 'expected life' of options disclosed by surveyed companies in terms of year, month and even in days. Some companies disclosed expected life as range estimate instead of point estimate. The assumption regarding volatility varies in a wide range (up to 199%) and even 0% volatility is also assumed. The results of our survey are presented in Tables 1, 2 and 3.

Table - 1
Valuation parameters for fair value measurement

Risk free Interest Rate	No. of companies
Point estimate of interest rate	51
Range of interest rate	36
Not disclosed	44
Mentioned only parameters, but no measurement given	09
Total	140

Source: Annual Reports of Sample Companies, Results computed

Table - 2
Valuation parameters for fair value measurement

Expected life of the option	No. of companies
<i>Disclosed in term of years</i>	
Point estimate	50
Range	31
<i>Disclosed in term of months</i>	
Point estimate	04
Range	02
Days	02
Not disclosed	42
Mention only parameters, but no measurement given	09
Total	140

Source: Annual Reports of Sample Companies, Results computed

Table - 3
Valuation parameters for fair value measurement

	Mean	Median	Range
Risk free Interest Rate (%)	7.46	7.58	5.5 - 9.5
Expected volatility (%)	47.51	43	0 - 199

Source: Annual Reports of Sample Companies, Results computed

Disclosure of EPS

The listed companies are required calculate and disclose basic and diluted earning per share (EPS) in accordance with the accounting standard 20 (AS 20) from 1st April 2001. If an unlisted company voluntarily discloses EPS data, it should calculate and disclose earnings per share in accordance with this standard. An enterprise should present basic and diluted EPS with equal prominence for all periods on the face of the Profit and Loss. Negative basic and diluted EPS also be presented in the income statement. The SEBI Guidelines being introduced before 2001 required the companies to disclose diluted EPS pursuant to issue of shares on exercise of option calculated in accordance with IAS 33 'Earning per Share' (EPS). Subsequently, the mention of IAS 33 was replaced by AS 20. In effect, a company is bound to consider the dilutive effect of options in force while calculating diluted EPS. We have found that 113 (80.71%) companies disclosed diluted EPS both as per AS 20 and basic and diluted EPS considering the adaptation of fair value method. Out of 140 companies 03 (2.14%) companies followed IAS 33 instead of AS 20 for calculation of diluted EPS.

IV. CONCLUSION

There is wide disparity among companies in relation to choice of valuation model inputs for disclosing fair value of option granted. Focusing on the four key option pricing

model inputs - expected option life, expected stock price volatility, expected dividend yield, and the risk-free interest rate for valuation of fair value of option the study finds that assumptions regarding such model inputs vary widely among sample companies. Such variation is may be due to exercise of management discretion regarding opting pricing model inputs. Use of management discretion and lack of audit requirements adversely affect the overall reliability of disclosed stock option based compensation expense for Indian firms.

On overall basis it is observed that there are cases of non-compliance with statutory requirements of the SEBI Guidelines relating to ESOS disclosure. It is interesting to note that in international case studies (Botosan and Plumlee, 2001; Street and Cereola, 2004; Chalmers and Godfrey, 2005) document non-compliance with statutory option value disclosure requirements. Now, developed countries have shifted to fair value accounting that requires recognition of stock option compensation expenses based on fair value of option. The position will change from April 2011 when Indian companies will be required to adopt IFRS set of standards for preparation of financial statements. Consequently, the requirements of IFRS 2, Share-based Payments will be applicable.

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IFRS ADOPTION: A PERCEPTUAL STUDY

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ABSTRACT

International Financial Reporting Standards (IFRS) is a novel way of looking at accounting. India is among the 150-odd countries that have decided to adopt the International Financial Reporting Standards (IFRS) in 2011. It will experience drastic changes in the way financial statements are reported. The new accounting rules will facilitate not only the process of international harmonization of financial statements, but also efficient performance of financial markets and capital flows worldwide. This study analyzes the perception of industrialist, professionals and academicians regarding the adoption of IFRS by India.

IFRS are Guidelines and rules set by the International Accounting Standards Board (IASB) that companies and organizations can follow when compiling financial statements. The creation of international standards allows investors, organizations and governments to enhance the quality and comparability of financial disclosures, which in turn facilitates a firm's access to international capital markets and thus cross-border investment flows (Barth et al 2005; Coovrig et al. 2007; Kim et al. 2007). In other words through the process of Accounting harmonization (e.g. van der Tas, 1988; Tay and Parker, 1990; Nobes, 1991) international comparability of financial statements can be improved. Choi and Mueller (1984) explained this comparability with "a single standard or rule" applied "to all (similar) situations".

Adopting IFRS by Indian corporate is going to be very challenging but at the same time could also be rewarding. Indian corporates are likely to reap significant benefits from adopting IFRS. The European Union's experience highlights many perceived benefits as a result of adopting IFRS. Overall, most investors, financial statement preparers and auditors were in agreement that IFRS improved the quality of financial statements and that IFRS implementation was a positive development for EU financial reporting (2007 ICAEW Report on 'EU Implementation of IFRS and the Fair Value Directive').

The study was conducted to find out the views of academicians (Finance), industrialists and professionals (Chartered Accountants) who are mainly concerned with these standards so that their acceptability towards IFRS can be assessed.

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Several researchers have examined the effect of voluntary IFRS adoptions on the cost of equity capital, using the implied cost of capital estimates for a firm. Cuijpers and Buijink (2005) examined the voluntary adoption of IFRS or non-local GAAP by European Union (EU) firms, but they fail to document a lower cost of capital for IFRS adopters in the EU. Daske (2006) investigates a sample of German firms with IFRS adoptions for the period of 1993-2002, and find a higher cost of equity capital for IFRS adopters or US-GAAP adopters than for local GAAP adopters, which is inconsistent with the argument advanced by proponents of IFRS. More recently, Daske et al. (2007) examine whether IFRS adoptions lead to a decrease in the cost of capital, and find that the effect of voluntary IFRS adoptions on the cost of capital is generally modest, while the effect is stronger for "serious" adopters than for "label" adopters.

OBJECTIVES

1. To develop and standardize a measure to evaluate perception towards IFRS.
2. To identify factors underlying perception towards IFRS.
3. To compare the perception of academicians, industrialists and professionals.
4. To open new vistas for further research.

RESEARCH METHODOLOGY

Study and Sample

The study was exploratory in nature where survey method was used to collect the data. The population included all the academicians, industrialists and professionals of Gwalior region. In all 125 questionnaires were distributed but only 85 questionnaires were returned and 79 responses were finally considered. An individual employee, academician or Chartered Accountant was the sample element from whom the data was collected. Out of 79 responses 23 were Chartered Accountant, 34 were academicians and rest 22 were industrialists.

Tools Used for Data Collection

The primary data was collected through non-probability judgemental sampling method as the data could be collected from the persons who have knowledge of GAAP and IFRS. The questionnaire was on a 5-point Likert scale, where 1 indicated 'Minimum Importance' and 5 indicated 'Maximum Importance' consisting of 32 items was used.

Tools Used for Data Analysis

Perception towards IFRS adoption was assessed through various tests using SPSS. Factor analysis was also computed to identify underlying dimensions of respondent's perception towards IFRS. Descriptive statistics was computed to find out the acceptance level towards IFRS adoption. To compare the difference in the perception of different groups ANOVA was applied on the collected data.

RESULTS & DISCUSSION

Dimension Identification

To fulfill second objective factor analysis was applied.

Factor Analysis

Factor Analysis using principal component Varimax rotation Kaiser normalization was applied on the raw scores of 32 items to find out the factors that contribute towards "IFRS Adoption". After factor analysis following factor were identified (See annexure Table 1):

Factors of IFRS Adoption

1. *Reliance*

This factor has emerged as the most important determinant of research with a total variance of 22.769. Corporate in India perceive that converting to IFRS would help in enhancing their reputation and relationship with the financial community. It will also increase the consistency between internal and external reporting and it can be improved through the consistency of the rules of preparation of the financial statement.

2. *Transparent*

This is the second most emerged factor of study with a total variance of 6.594. It is important for the business operators to be able to create financial statements that are understandable by the all the countries they operated in. So, there should be a unified platform and that too transparent in the global scale.

3. *Value Creation*

This factor emerged as third dominating factor with a variance of 5.192. IFRS is considered a principle based set of standards in that they establish broad rules as well as dictating specific treatments. The capital market regulator have now agreed to accept IFRS compliant financial statements as admissible for raising capital and reduce cost of raising capital in foreign currencies and there by creating value for the shareholder as well firm.

4. *Wealth Management*

This is the fourth important factor with the variance of 4.604. This shows that the adoption of IFRS will also affect the financial statements in relation to its financial performance and position and cash flow.

5. *Disclosure*

This factor has emerged as the fifth important determinant of research with a total variance of 4.460. Many IFRS reports currently have a strong national identity. The main effect of IFRS has been on how a company recognizes measures and discloses the items, not on the form or presentation of the results. Companies have adopted an approach that minimizes the changes from the previous year.

6) Risk Reduction & Employee Benefits

The total loading of the sixth factor is 4.167. The exclusion of LIFO system will eliminate the risk of obsolescence. The IFRS system provides various benefits to the employees. An entity is not required to split out all past actuarial gains and losses in a retirement benefit plans, although different method for future gains and losses are same as IAS 19 Employee Benefit.

7. Modify Directives

This is the seventh important factor with the variance of 4.14. The implementing IFRS brings the need for change in the format of accounts, different accounting policies and more extensive disclosure requirements.

8. Changing Order System

This factor emerged as eighth dominating factor with a variance of 3.710. With the IFRS the complexity will be increased with the introduction of concept. Changing order system will also required more work to improve disclosure. It may be helpful for companies to view financial statements not from a compliance perspective but as a way of communicating and explaining performance.

9. Precise

This factor emerged as ninth dominating factor with a variance of 3.206. It is also viewed that Indian GAAP sets the perfect guidelines for Indian businesses because Indian standards remain sensitive to local conditions, including the legal and economic environment. Although there are only a few differences between Indian GAAP and IFRS.

10. Dividend Decision

This factor emerged as tenth dominating factor with a variance of 3.206. Dividend should be presented as a deduction in the statement of change in shareholders equity in the period when authorized by shareholders. It must be accounted in the year when declared.

COMPARISONS

There were three samples which were compared for the differences in the perception towards IFRS. As there was only one variable so one-way Anova was applied. This test carries few assumptions. First assumption require for the independency of the samples. The data was collected from altogether different groups so first assumption was met out. Before going for further analysis the data was checked for the normality assumption. Normality was checked through Shapiro-Wilk test. Since, the sample size for each sample was less than 50 so Shapiro-Wilk test was measured in place of Kolmogorov-Smirnov test. These tests assesses whether there is a significant departure from normality in the population distribution for each of the three groups. The null hypothesis states that population distribution is normal.

The test statistic ranges from 0.876 to 0.960 and the p-values (significant level) are more than 0.05 hence the null hypothesis is not rejected and we can conclude that these data do not violate the normality assumption.

Tests of Normality

Groups	Kolmogorov-Smirnov ^a			Shapiro-Wilk			
	Statistic	Df	Sig.	Statistic	Df	Sig.	
Perception	1	.150	23	.200*	.950	23	.482
	2	.153	34	.200*	.960	34	.606
	3	.210	22	.200*	.876	22	.174

^aLilliefors Significance Correction

* This is a lower bound of the true significance.

Third assumption is of homogeneity of variance. This assumption was validated by applying Levene's test. Levene's test for homogeneity of variance assesses whether the population variances for the groups are significantly different from each other. The null hypothesis states that the population variances are equal. The Levene's Statistic has a value of 2.853 and a p-value is 0.07. Since, the p-value was greater than 0.05 we do not reject null hypothesis that homogeneity of variance assumption was fulfilled and we can go for one-way anova.

Test of Homogeneity of Variances

Levene Statistic	df1	df2	Sig.
2.853	2	77	.070

ANOVA

To find out whether CA's, Academicians and industrialists differ in their perception towards IFRS one factor anova was applied. The table below shows that F statistic equals 2.387 with a corresponding p-value .105. In this case also the null hypothesis is not rejected which states that there is no significant difference in the mean perception among the three groups.

ANOVA

Perception	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	493.910	2	246.955	2.387	.105
Within Groups	4035.424	77	103.472		
Total	4529.333	79			

It is believed that there are few differences between GAAP and IFRS. But this does not make conversion efforts for Indian companies minimal. The experts view the problems in conversion as same, so there exist no difference among their perception.

CONCLUSION

IFRS is a principle-based approach with limited implementation and application guidelines. In the initial years, there will be immense learning and subsequently, revisions would arise from the implementation of IFRS by India. Implementing IFRS will also increase financial reporting risk due to technical complexities, manual workarounds and management time taken up with implementation. Since the very first day when IFRS adoption was announced people have started giving their opinions about that. As there will be changes in the procedures and policies of accounting for different areas through IFRS adoption, it is most likely that people have framed their perception. A measure was prepared to assess the perception of different categories of financial experts. Item to total correlation was applied to find out the consistency of each item with total and results show that all items were consistent. The measure also showed the high reliability. Factor analysis resulted in ten dimensions. These dimensions suggest the most dominating factor is Reliance. This is true as the changes in accounting standards will affect more to foreign currency transaction, revaluation time etc. as they got highest loadings. Although the results further suggest that finance experts more or less carry same perception towards IFRS adoption as the F value is insignificant. So, we can say financial experts view it as a necessity for over all development.

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ANNEXURE
Table 1
Factor Analysis

Factor	Eigen Value		Variable Convergence	Loading			
	Total	% of Variance					
Reliance	7.286	22.769	23. Foreign currency transaction should be included in net income	.808			
			7. Revalu. Time all the asset should be reval.	.547			
			13. Cash flow statement should be prepared on same method	.506			
			6. Indian companies listed in US would benefit	.490			
			10. Income statement should be prepared in prescribed format	.398			
			4. IFRS adoption will lead to increase trust	.387			
			22. Lease should be classified as capital and operating	.694			
Transparent	2.110	6.594	11. Exceptional items should be disclosed separately	.644			
			12. Statement of change in shareholders should be prepared by all companies.	.543			
			14. Bank overdrafts should be included in cash equivalents.	.489			
			24. Goodwill should be written off over its use full life	.465			
			Value Creation	1.662	5.192	2. IFRS adoption will benefit Indian corporate	.715
						5. Reduce cost of capital	.593
3. More transparent financial reporting	.538						
Wealth Management	1.473	4.604	20. Dividend should be classified as a financial liability	.765			
			16. If the subsidiary held for sale the entity should be consolidate the subsidiary	.652			
			8. The balance sheet of the company should be on a prescribed particular format	.555			

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Disclosure	1.427	4.460	9. In the balance sheet certain minimum items should be presented.	.663
			27. The related parties should be determined even if there are no transactions during the period.	.518
Risk & Benefits	1.333	4.167	30. LIFO should not be applied.	.712
			29. The Compensation costs should be disclosed	.692
			28. Pension/Gratuity/Post Retirement Benefits should be provided for and funded based on actuarial valuation	.404
Modify Directives	1.325	4.141	18. balance sheet should be prepared in inverse order of liquidity	.629
			31. adoption of IFRS by India will need for a change in several laws and regulations	-.625
			17. Revenues should be recognized when all significant risks and rewards of ownership are transferred	.429
			15. Correction of errors should be Included in current year income statement	.341
Changing Order System	1.187	3.710	26. Negative goodwill should be recognized as income	.808
			19. share issue expenses should be accounted for as deferred expenses	-.476
			32. Many companies should be dependent on external advisers	-.432
			25. The straight line method should be adopted	.415
Precise	1.132	3.537	1. Indian GAAP sets the perfect guidelines for Indian businesses	.801
Dividend Decision	1.026	3.206	20. Dividends should be presented in the year of declaration	.790

PRODUCTIVITY ANALYSIS : A CASE STUDY

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ABSTRACT

This paper analyses the relationship among various components of productivity like business per employee, interest per employee, interest income per employee, and profit per employee for cooperative banks of Punjab. Data relating to year 2005 to year 2009 has been collected for the purpose of research. For the purpose of study, data has been divided into three different regions i.e. Maza region, Doaba region and Malwa region. Various statistical tools like averages, ratios, and growth rates have been used to study the relationship among the variables. Results showed that position of Malwa region was very satisfactory as its business per employee; income per employee and interest income per employee was maximum. Doaba region ranked at second position as its business per employee; income per employee and interest income per employee was second highest. Profits per employee were highest in Doaba region. Results showed that there is a great scope of improvement in all the branches located at different regions of Punjab and necessary and earliest steps should be taken to cope up the competition provided by private and foreign banks in these regions.

1. INTRODUCTION

Over a period of more than 100 years, co-operative credit institutions have grown tremendously and are catering the credit needs of rural poor people. At present, in India, there are 30 State Co-operative Banks (SCB), 367 District Central Co-operative Banks (DCCB) and more than 1,12,000 Primary Agricultural Co-operative Service Societies (PACSS). Over a period of past 17 years i.e. since 1990-91, with a change in economic policy of India, co-operative credit institutions have experienced a significant change in their working. From a mere credit distribution social welfare experiences, these institutions have now expanded their full-fledged banking business. In this paper, an effort has been made to examine the business productivity of these banks in the changed scenario.

SCOPE OF THE STUDY

We have chosen District Central Co-operative Banks (DCCB) of Punjab for the purpose of study because co-operative banks of Punjab are the best in India and performing

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very well. With its 900 branches in 20 districts of Punjab, co-operative bank is working as a premier institute. In its 900 branches, total 4368 employees are working.

OBJECTIVES AND METHODOLOGY

In this study, an effort has been made to measure the region wise as well as district wise productivity of cooperative banks of Punjab. The amount of output per unit of input is called productivity. Input parameters considered for measuring the productivity in this study are number of employees and salary per employee. While the output parameters considered for measuring the productivity in this study are business per employee and income per employee. The main objectives of the study are:

- To examine region-wise productivity of DCCB of Punjab.
- To examine district-wise productivity of DCCB of Punjab.

For this purpose, data of last 5 years starting from 2005 to 2009 has been collected from secondary sources (like annual reports and published bulletins of bank). From the available reports and balance sheets, data relating to business per employee, income per employee and salary per employee for last 5 years has been gathered. To perform region-wise analysis, banks are categorized into three regions i.e. Maza, Doaba and Malwa. Maza region includes 3 DCCB's, Doaba includes 4 DCCB's and Malwa includes rest 13 DCCB's. To check their status and productivity, statistical tools like averages (mean) and growth rates have been used.

DATA ANALYSIS

Region-wise and District-wise Analysis

Region-wise

Table 1 shows Business per employee from 2005 to 2009 in absolute terms along with their growth rate. According to the average of last 5 years, as shown in table 1, Business per employee, in Malwa region was highest (Rs. 211.48 lacs), surpassed by Doaba region (Rs. 183.32 lacs) at second and Maza region (Rs.158.80 lacs) at third number. But average growth rate of last 5 years showed a different picture. In 2007, all these three regions showed decrease in their growth rates. In 2008, growth rate of Maza region was 9.79%, Doaba region was 10.64% and Malwa region was 17.64%. In 2009, Maza region growth rate increased from 9.79% to 12.67%. Doaba region growth rate showed a tremendous increase from 10.64% to 16.97% while Malwa region growth rate decreased from 17.64 % to 17.01%. On an average growth rate basis, business per employee of Malwa region was on the top(14.55%), followed by Maza region (10.43%) at second and Doaba region (8.18%) at third number.

District-wise

According to average of last 5 years, DCCB Muktsar showed maximum business per employee (Rs. 330.74 lacs), followed by DCCB Mansa (Rs.321.23 lacs) and DCCB Patiala (Rs.270.74 lacs) at second and third number respectively. DCCB Amritsar (Rs. 133.10 lacs), DCCB Tarn Taran (Rs. 144.03 lacs) and DCCB Hoshiarpur (Rs. 160.48 lacs) showed least

business per employee. In the 2009, business per employee of DCCB Muktsar was maximum (Rs.463.77 lacs), surpassed by DCCB Mansa (Rs.456.58 lacs) and DCCB Chandigarh (Rs.327.17 lacs) at second and third number respectively. DCCB Amritsar (Rs.163.91 lacs) and DCCB Tarn taran (Rs.175.59 lacs) showed least business per employee. In 2009, DCCB Muktsar showed growth rate of 29.49%, followed by DCCB Patiala with growth rate of 28.7% and DCCB Fazilika with growth rate of 24.7%. DCCB Ferozpur showed negative growth rate of (-). 22%. On an average growth rate basis, growth rate of DCCB Patiala (22.16%), DCCB Mansa (22.13%) and DCCB Moga (20.36%) was highest while DCCB Jalandhar (4.302%), DCCB Nawasahar (4.40%) and DCCB Ferozpur (7.46%) showed least growth rate during the 5 years of study.

Table 1
Business Per Employee (in Lacs)

District	2005	2006	2007	2008	2009	Avg
Region 1: Maza						
Amritsar	108.12	122.73 (13.51)	128.76 (4.91)	142.00 (10.2)	163.91 (15.4)	133.10 (11.03)
Tarn taran	121.03	131.37 (8.54)	136.11 (3.61)	156.06 (14.6)	175.59 (12.5)	144.03 (9.827)
Gurdaspur	159.05	179.15 (12.64)	205.81 (14.30)	215.23 (4.58)	237.09 (10.1)	199.26 (10.41)
Average	129.4	144.41 (11.56)	156.89 (7.60)	171.09 (9.79)	192.19 (12.67)	158.80 (10.43)
Region 2: Doaba						
Jalandhar	170.71	168.74 (-1.15)	164.32 (-2.62)	173.82 (5.78)	200.24 (15.2)	175.56 (4.302)
Kapurthala	142.16	160.30 (12.76)	169.68 (5.85)	194.15 (14.4)	229.58 (18.2)	179.17 (12.82)
Hoshiarpur	133.01	138.92 (4.44)	152.83 (10.60)	175.95 (15.1)	201.69 (14.6)	160.48 (11.19)
Nawasahar	216.05	225.21 (4.23)	193.20 (-13.82)	207.36 (7.3)	248.54 (19.9)	218.07 (4.40)
Average	165.48	173.29 (5.07)	170.00 (.0025)	187.82 (10.64)	220.01 (16.97)	183.32 (8.178)
Region 3: Malwa						
Mansa	206.44	237.69 (15.13)	311.01 (30.84)	394.45 (26.8)	456.58 (15.7)	321.23 (22.13)
Fazilka	149.18	168.03 (12.63)	184.03 (9.52)	201.31 (9.39)	251.15 (24.7)	190.74 (14.07)
Patiala	176.65	210.12 (18.94)	270.32 (15.56)	304.60 (25.4)	392.08 (28.7)	270.74 (22.16)
Sangrur	150.68	174.83 (16.03)	192.47 (10.09)	200.28 (4.05)	266.52 (33.0)	196.95 (15.81)
Bhatinda	152.14	171.79 (12.91)	193.31 (12.53)	235.86 (22.0)	276.89 (17.4)	205.99 (16.21)
Ropar	198.79	208.70 (4.98)	223.33 (7.01)	288.07 (28.9)	318.57 (10.5)	247.49 (12.89)
Moga	120.56	156.90 (30.14)	185.01 (17.91)	219.26 (18.5)	251.96 (14.9)	186.73 (20.36)
Ludhiana	162.96	186.73 (14.58)	198.18 (6.13)	237.11 (19.6)	266.38 (12.3)	210.27 (13.17)
Muktsar	253.90	275.53 (8.52)	302.41 (9.75)	358.13 (18.42)	463.77 (29.49)	330.74 (16.54)
Ferozpur	141.57	145.66 (2.88)	162.39 (11.48)	187.89 (15.7)	186.97 (-.22)	164.89 (7.46)
Mohali	0.00	0.00	0.00	0.00	327.17	65.434
F. Sahib	140.95	157.71 (12.00)	173.69 (10.13)	210.7 (21.3)	255.63 (21.3)	187.76 (16.18)
Faridkot	135.88	154.77 (13.90)	158.18 (2.20)	188.75 (19.3)	214.11 (13.4)	170.33 (12.21)
Average	153.05	172.95 (12.51)	196.48 (11.01)	232.80 (17.64)	302.13 (17.01)	211.48 (14.55)

*Parentheses showed growth rate.

Table 2
Income Per Employee (in Lacs)

District	2005	2006	2007	2008	2009	Avg
Region 1: Maza						
Amritsar	6.87	7.85 (14.26)	7.60 (-3.18)	7.99 (5.13)	7.41 (-7.26)	7.54 (2.24)
Gurdaspur	11.05	11.62 (5.51)	12.63 (8.69)	12.52 (-3.06)	11.25 (-9.43)	11.81 (.43)
Tarn Taran	11.11	12.35 (11.16)	12.31 (-.32)	12.65 (2.76)	12.34 (-2.45)	12.15 (2.78)
Avg.	9.67	10.61 (10.31)	10.84 (1.73)	11.05 (1.61)	10.33 (-6.38)	10.5 (1.82)
Region 2: Doaba						
Jalandhar	10.75	10.84 (.83)	10.16 (-6.27)	10.14 (-.19)	11.38 (12.23)	10.65 (1.65)
Kapurthala	10.45	10.68 (2.2)	10.31 (-3.46)	11.40 (10.57)	13.95 (22.37)	11.35 (7.92)
Hoshiarpur	8.44	8.49 (.59)	8.58 (1.06)	8.92 (3.96)	9.98 (11.88)	8.88 (4.37)
Nawasahar	15.64	16.27 (4.03)	13.60 (-16.41)	13.26 (-2.5)	16.12 (21.6)	14.97 (1.68)
Avg.	11.32	11.57 (1.91)	10.78 (-6.27)	10.93 (2.96)	12.86 (17.02)	11.46 (3.91)
Region 3: Malwa						
Mansa	20.94	22.06 (5.35)	22.80 (3.35)	23.12 (22.33)	22.42 (-3.03)	22.26 (7)
Fazilka	11.43	12.52 (9.54)	12.67 (1.19)	11.86 (-3.82)	11.49 (-3.13)	11.99 (.94)
Patiala	14.58	16.35 (12.14)	17.89 (9.42)	18.39 (2.79)	20.27 (10.22)	17.49 (8.64)
Sangrur	10.16	11.91 (17.22)	12.24 (2.77)	12.70 (3.75)	13.94 (9.76)	12.19 (8.37)
Bhatinda	15.62	11.84 (24.39)	0.04 (-99.6)	0.04 ----	0.03 ----	5.51 ----
Ropar	14.15	13.83 (-2.26)	13.95 (.86)	14.73 (5.59)	22.86 (55.19)	15.90 (14.84)
Moga	8.72	9.49 (8.83)	10.65 (12.22)	11.87 (11.46)	11.14 (-6.17)	10.37 (6.58)
Ludhiana	10.81	11.89 (9.99)	11.69 (-1.68)	12.30 (5.22)	12.85 (4.47)	11.90 (4.5)
Muktsar	20.87	22.18 (6.27)	21.85 (-1.48)	23.5 (7.55)	21.94 (-6.63)	22.06 (1.43)
Ferozepur	11.51	11.98 (4.08)	12.14 (1.33)	11.80 (-2.80)	12.20 (3.39)	11.92 (1.5)
Mohali	0.00	0.00	0.00	0.00	8.33	1.66
Faridkot	13.15	13.66 (3.87)	12.27 (-10.17)	10.61 (-13.53)	10.74 (1.22)	12.08 (-4.65)
F.Sahib	10.30	11.51 (11.74)	11.93 (3.64)	12.50 (4.77)	12.18 (-2.56)	11.68 (4.39)
Avg.	12.48	13.02 (4.79)	12.32 (-6.01)	12.57 (3.33)	13.87 (4.82)	12.84 (1.73)

Region-wise

Table 2 shows Income per employee from 2005 to 2009 in absolute terms along with their growth rate. Table showed income per employee was highest in Malwa region (Rs. 12.84 lacs), surpassed by Doaba region (Rs.11.46 lacs) at second number and Maza region (Rs. 10.5 lacs) at third number. According to average growth rate of last 5 years, income per employee in Doaba region was maximum (3.91%), followed by Maza region (1.82%) at second and Malwa region (1.73%) at third number. In 2007, Doaba and Malwa region showed

negative growth rate i.e. (-) 6.27% and (-) 6.01% respectively. Growth rate of Maza decreased from 10.37% in 2006 to 1.73% in 2007. In 2008, all the three regions showed a slight improvement in their performance but in 2009, Maza region again showed negative growth rate of (-) 6.38% but Malwa region (4.82%) and Doaba region (17.02%) both showed tremendous growth.

District-wise

From the data of 20 DCCB's, Mansa was found to be on the top with highest average income per employee (Rs. 22.26 lacs), followed by DCCB Muktsar (Rs.22.06 lacs) and DCCB Patiala (Rs. 17.49 lacs) at second and third position respectively. DCCB Bhatinda (Rs. 5.51 lacs), DCCB Amritsar (Rs. 7.54 lacs) and DCCB Hoshiarpur (Rs. 8.88 lacs) showed least income per employee during the 5 years of study. In 2009, income per employee of DCCB Ropar was maximum (Rs.22.86 lacs), followed by DCCB Mansa (Rs.22.42 lacs) and DCCB Muktsar (Rs.21.94 lacs) at second and third number respectively. DCCB Bhatinda (Rs.0.03 lacs) and DCCB Amritsar (Rs.7.41 lacs) and DCCB Chandigarh (Rs. 8.33 lacs) showed least income per employee. In 2009, DCCB Ropar showed growth rate of 55.19%, followed by DCCB Kapurthala (22.37%) and DCCB Nawasahar (21.6%). DCCB Gurdaspur (-) 9.43%, DCCB Amritsar (-) 7.26%, DCCB Fazilika (-) 3.13%, DCCB F.Sahib (-) 2.56% and DCCB Tarn taran (-) 2.45% showed negative growth rate in 2009. On an average growth rate basis, growth rate of DCCB Ropar (14.84%), DCCB Patiala (8.64%) and DCCB Sangrur (8.37%) was maximum while DCCB Faridkot showed a negative growth rate of (-) 4.65% during the period of study.

Region-wise

Table 3 shows Profit per employee from 2005 to 2009 in absolute terms along with their growth rate. Analysis showed average profit per employee of Doaba region was maximum (Rs.2.147 lacs), followed by Malwa region (Rs. 2.09 lacs) at second and Maza region (Rs. 436 lacs) at third position. In 2007, profit per employee of each region was decreased. In 2008; profit per employee of Malwa region was Rs.2.02 lacs while in 2009 it was only Rs.1.32 lacs. In 2008, Profit of Doaba region was Rs.1.89 lacs while in 2009 it remained only Rs.1.36 lacs. Profits of Maza region was Rs .567 lacs in 2008, which converted into loss of Rs. (-) .12 lacs in 2009. In 2006, growth rate of Maza region was maximum (36.2%), surpassed by Doaba (26.7%) and Malwa (26.5%). But in 2007, Malwa region was on the top by showing 14.67% growth in profit per employee, surpassed by Maza region with 8.21% while Doaba region showed negative growth rate of (-) 15.64%. Year 2008 and 2009 showed the worst position of profit per employee in all three regions. In 2008 and 2009, growth of profit per employee of Maza region [(-) 13.48%, (-) 174.28%], Doaba region [(-) 16.81%, (-) 28.81%] and Malwa region [(-) 30.44%, (-) 80.01%] was negative. On an average growth rate basis, growth in profit per employee was also negative. Doaba region showed (-) 8.62%, Malwa (-) 17.24% and Maza region (-) 35.83% average growth rate.

Table 3
Profit Per Employee (in lacs)

District	2005	2006	2007	2008	2009	Avg
Region 1: Maza						
Gurdaspur	1.19	1.23 (3.36)	1.18 (-4.06)	1.20 (1.73)	.07 (-93.8)	.974 (-23.19)
Amritsar	.48	.62 (29.1)	.145 (-76.6)	.202 (39.31)	(.53) (-362.3)	.183 (-92.62)
Tarn Taran	.448	.789 (76.1)	1.62 (105.3)	.30 (-81.48)	.10 (-66.67)	.651 (8.31)
Avg.	.706	.88 (36.2)	.98 (8.21)	.567 (-13.48)	(.12) (-174.28)	.436 (-35.83)
Region 2: Doaba						
JalandJalandhar	1.68	2.33 (38.6)	1.67 (-28.32)	1.30 (-22.15)	1.35 (3.85)	1.67 (-2)
Kapurthala	2.06	2.64 (28.15)	2.40 (-9.09)	2.08 (-13.33)	.90 (-56.73)	2.016 (-12.75)
Nawasahar	3.99	4.77 (19.5)	3.40 (-28.72)	2.61 (-23.2)	2.58 (-1.1)	3.47 (-8.38)
Hoshiarpur	1.41	1.69 (19.8)	1.75 (3.55)	1.60 (-8.57)	.62 (-61.25)	1.41 (-11.62)
Avg.	2.28	2.86 (26.5)	2.30 (-15.64)	1.89 (-16.81)	1.36 (-28.81)	2.14 (-8.69)
Region 3: Malwa						
FazFazilka	1.29	1.89 (46.5)	2.08 (10)	1.66 (-20.33)	.75 (-55.01)	1.53 (-4.71)
Patiala	1.46	2.44 (67)	3.82 (56.55)	3.17 (-17.02)	1.56 (-50.79)	2.49 (13.93)
Sangrur	1.25	1.59 (27.2)	1.68 (5.66)	1.07 (-36.30)	.98 (-8.41)	1.31 (-2.96)
Bhatinda	1.34	1.63 (21.6)	2.05 (25.76)	1.80 (-12.2)	.69 (-61.7)	1.502 (-6.63)
Ropar	3.58	4.06 (13.4)	4.33 (6.65)	4.24 (-2.08)	6.36 (50)	4.51 (16.99)
Moga	1.15	1.70 (47.8)	2.05 (20.58)	1.33 (-35.12)	.40 (-70.04)	1.32 (-9.19)
Ludhiana	2.95	3.96 (34.2)	4.11 (3.78)	1.91 (-53.53)	1.53 (-19.90)	2.89 (-8.86)
muktsar	3.91	4.35 (11.25)	5.08 (16.78)	3.96 (-22.04)	2.65 (-33.08)	3.99 (-6.77)
Ferozepur	1.15	1.23 (6.9)	1.31 (6.5)	.65 (-50.38)	(.84) (-229.2)	.7 (-66.54)
Mohali	0	0	0	0	1.03	-----
Faridkot	1.25	1.34 (7.2)	1.50 (11.94)	.142 (-90.53)	(.41) (-389)	.76 (-11.5)
F.Sahib	1.72	2.07 (20.3)	2.70 (30.43)	2.43 (-10)	2.06 (-15.23)	2.19 (6.37)
Mansa	2.37	2.80 (18.14)	2.28 (-18.57)	1.92 (-15.79)	.42 (-78.13)	1.95 (-23.58)

*Parentheses showed growth rate.

District-wise

Table 3 shows average profit per employee of DCCB Ropar was highest (Rs.4.51 lacs), followed by DCCB Muktsar (Rs.3.99 lacs) and DCCB Nawasahar (Rs.3.47 lacs) at second and third position respectively. DCCB Amritsar (Rs .183 lacs), DCCB Tarn taran (Rs .651 lacs), DCCB Ferozpur (Rs .7 lacs) and DCCB Faridkot (Rs .76 lacs) showed least average profits per employee during the period of study. In 2009, profits per employee of DCCB Ropar was maximum (Rs.6.36 lacs), followed by DCCB Muktsar (Rs.2.65 lacs) and DCCB Nawasahar (Rs.2.58 lacs) at second and third number respectively. DCCB Faridkot showed negative profit per employee (-). 41%. In 2009, growth rate of DCCB Ropar and DCCB Jalandhar was satisfactory i.e. 50% and 3.85% respectively. Growth rate of all other 18 districts was negative. On an average growth rate basis, only four DCCB showed positive

growth rate in profits per employee i.e. DCCB Ropar (16.69%), DCCB Patiala (13.93%), DCCB Tarn taran (8.31%) and DCCB F.sahib (6.37%) while DCCB Amritsar [(-) 92.62%] and DCCB Faridkot [(-) 115%] both showed worst average growth rate in profits per employee during the 5 years of study.

FINDINGS AND CONCLUSION

1. Analysis showed that performance of DCCB Muktsar, DCCB Mansa and DCCB Patiala were found to be quite satisfactory during the 5 years of study. On the other hand, DCCB Amritsar, DCCB Tarn taran and DCCB Hoshiarpur were found to be poor performers during the 5 years of study.
2. DCCB Muktsar showed the highest business per employee (Rs.330.74 lacs).
3. DCCB Mansa showed highest income per employee (Rs.22.26 lacs). So far as, business per employee (Rs.321.23 lacs) was concerned, DCCB Mansa was ranked at second position during the 5 years of study.
4. DCCB Amritsar ranked at the last number because of its least business per employee (Rs.133.10 lacs) and least income per employee (Rs.7.54 lacs). DCCB Tarn taran and Hoshiarpur shared the second least position by showing least business per employee. DCCB Tarn taran also showed least profits per employee (Rs .65 lacs). DCCB Amritsar and Tarn Taran are border areas therefore these areas are very much affected by terrorism because of which primary agriculture cooperative service societies (PACSS) were not able to recover most of their loans.
5. DCCB Ropar ranked first for highest profits per employee (Rs.4.51 lacs), followed by DCCB Ludhiana at second (Rs. 3.99 lacs) and DCCB Kapurthala at third (Rs.3.47 lacs) position.
6. Position of Malwa region was very satisfactory. Business per employee (Rs. 211.48 lacs) and income per employee (Rs. 12.84 lacs) was maximum in this region. Profits per employee (Rs.2.09 lacs) placed Malwa region on the second number during the 5 years of study.
7. Doaba region ranked at second position as business per employee (Rs.183.32 lacs) and income per employee (Rs.11.46 lacs). So far as, profits per employee (Rs.2.147 lacs) were concerned, Doaba region was ranked at first position.
8. Employees of Maza region were drawing highest salary (Rs.2.68 lacs). So far as, business per employee (Rs.158.80 lacs), income per employee (Rs.10.5 lacs) and profits per employee (Rs.436 lacs) were concerned; Maza region was ranked at third number during the 5 years of study.

INTANGIBLE ASSETS, RESEARCH AND DEVELOPMENT EXPENDITURE, KNOWLEDGE CAPITAL AND CAPITAL STRUCTURE: A STUDY OF INDIAN PHARMACEUTICAL FIRMS

**Sanjay J. Bhayani*

ABSTRACT

The present study attempts to explain the determination of variables in the capital structure in the pharmaceutical firms of India. Due to global competition pharmaceutical firms now giving more emphasise on research and development activities and use of advanced technology. This has important implications for managerial decision making. More emphasise on R & D activities and knowledge capital affects the firm cash flow and results of it influencing the firm financing decision. Previous studies have not made any focused on the pharmaceutical firms. This study has tried to understanding the role of knowledge capital and other intangible assets in capital structure decisions of Indian pharmaceutical firms. The empirical results indicate that the regression is a good fit and independent variables together determine the capital structure of firms. Further the results show that leverage is negatively related to tangibility of assets, NDTs and intangible assets. R & D expenditure and profitability are positively related to leverage. Uniqueness is not significant determinants of the capital structure. Intangible assets are important variables in the determinants of capital structure of Indian pharmaceutical firms. Using various variables of leverage, our models explain up to approximately 36% of variation in leverage.

Indian industry has grown rapidly after adoption of new industrial policy of 1991. This policy has adopted concept of liberalization, globalization and privatization. Due to use of advanced technology and rigorous research and development activity Indian pharmaceutical industry has made significant growth in last decades. Technological advances, better management practices, and improved production inputs are driving forces behind the substantial productivity gains experienced by the Indian pharmaceutical industry. Pharmaceutical industry plays significance role in Indian foreign trade also. Due to global competitions Pharmaceuticals firm now giving more importance towards research and development activates, due to this firms now shift from tangible to intangible assets such as knowledge capital. Pharmaceutical firms are characteristic of high technology firms. Pharmaceutical firms have all the characteristics of knowledge-based organizations. Knowledge is developed mostly in own research departments or is bought from other firms.

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Knowledge is substantially protected by patents. Knowledge is sold to other firms and - most important - there is a constant and urgent need to develop new knowledge in order to have successful products in time to the market. This implies that the way pharmaceutical firms develop and handle knowledge will have a large impact on their economic success. Pharmaceutical firms are also very capital-intensive. Large amounts of money have to be invested, while the returns will only come after years of research and development. Therefore, it makes sense that investors are looking for indicators of "good-knowledge-handling" in order to judge whether their investment will be a sound decision. Firms in general and high technology firms in particular, are a set of both assets in place and growth opportunities (Myers, 1977; Myers and Majluf, 1984; Rajan and Zingales, 1995). Liu (2001) reminds us that the "essence of a firm in the new economy is its ability to create, transfer, assemble, integrate, protect, and exploit knowledge capital. Knowledge capital underpins competences, and competences underpin the firm's product and service offering to the market". This has important implications for managerial decision-making. Knowledge capital motivates exploitation of growth options, which affects firm cash flow. In turn, the level and volatility of firm cash flow fundamentally influences firm financing decisions. Firm capital structure has received extensive theoretical and empirical attention, including the role of intangible assets on optimal leverage (e.g., Rajan and Zingales, 1995). A study of (Zucker, Darby, and Brewer, 1998) explores the characteristics and growth of U.S. biotechnology firms. Their findings reveal a connection between the location and growth of intellectual capital and that of U.S. biotechnology firms. It is apparent from these studies that knowledge capital can influence both the location and capital structure of biotechnology firms. Liu (2001) studied the interaction among biotechnology firms' knowledge capital, growth opportunities, earnings dynamics, and optimal leverage. Results suggest that investments in research and development and knowledge capital are related to leverage. The recent studies of (Mallikarjunappa and Goveas, 2007) on determination of capital structure of Indian pharmaceutical industry and finds that Debt Service Capacity, Non-debt tax shield and Business Risk emerge as the determinants of the capital structure of pharmaceutical firms in India.

LITERATURE REVIEW

The rational finance literature is reviewed before behavioural finance. Since Modigliani and Miller (1958)'s seminal paper on irrelevance of capital structure, several researchers have attempted to shed more light on determinant of capital structure. MM (1963) incorporated taxes in their analysis and concluded that the value of a levered firm is greater than that of an unlevered firm by the value of the tax shield caused by the presence of debt, that is, because of the tax deductibility of interest. Ezra Solomon (1963) holds view that capital structure decisions are relevant decisions and that optimal capital structure can help the firm to reduce overall cost of capital, thereby increasing its total value.

The capital structure literature has become well developed over the past four decades. More recently, knowledge is increasingly becoming recognized as both a strategic and

valuable asset of a firm, and its management is emerging as a potential source of competitive advantage in contemporary analyses (Connor and Prahalad, 2002; Grant, 2002; Hudson, 1993; Morey, Maybury, and Thuraisingham, 2000; Sporleder and Moss, 2002; Nonaka and Takeuchi, 1995). Using the logic of the various strains of capital structure theory, one may conclude that industries or firms with a large proportion of knowledge assets should be less levered in that these assets are less redeployable and may have lower liquidation value. However, the interaction among knowledge capital and capital structure largely remains an unanswered theoretical and empirical question, particularly for pharmaceuticals firms. There few studies has been conducted by many researcher to study the impact of knowledge capital and research development expenses on the decisions of capital structure of firm. Most of the studies are conducted in developed countries on mostly high technology firms like biotechnology firms, among them prominent work were done by Zucker, Darby and Brewer in their study of 751 biotechnology firms and found that both DBC start-ups and expansion subsidiaries of incumbent firms locate around intellectual human capital, namely "star" scientists who are significant contributors to the basic science. They also explored the role of venture capital in location choice since the availability of venture capital funding is believed to play a vital role in new firm entry (Lerner, 1995). A recent study explores the interaction among U.S. biotechnology firms' knowledge capital, growth options, earnings, and capital structure (Liu, 2001). The author's theoretical model suggests a positive relationship among knowledge capital and leverage, which contrasts with most previous studies. The empirical results support further that debt ratios are positively related to knowledge capital measures such as research and development (R&D) investment (in the absence of better measures), citation-weighted patent counts, and claim-weighted patent counts.

Sporleder, Moss, and Nickles, (2002) has investigated the role of intellectual capital and venture capital financing on the location choice of agricultural biotechnology firms. The results of the study suggests that the location choice (i.e., state) of agricultural DBCs is determined primarily by R&D funding. Total R&D funding per million people can proxy for the general intellectual human capital of a region as evidenced through its science and higher educational environment. Venture capital has a positive though statistically insignificant influence on location choice, while the size of a state's economy and its dependence on agriculture has negative and statistically insignificant effects.

Sporleder and Moss (2004) has tried too studying the impact of knowledge capital, intangible assets on leverage on 748 U.S. agriculture biotechnology firm. They finds that leverage is negatively related to growth and non-debt tax shields. Asset tangibility, size, profitability, and uniqueness are positively related to leverage. Using various characterizations of leverage, our models explain up to approximately 75% of the variation in leverage. Empirically generated elasticities buttress the importance of intangible assets such as knowledge capital and tax shields in capital structure choice.

Boekestein Bram (2006) conducted a study on to assess the visibility of intangible assets on the balance-sheet of 52 globally operating pharmaceutical companies. Further, how

these assets overlap with intellectual capital and whether a relation can be established between intangible assets and company performance. Results indicate that the majority of companies are specifying intangible assets and that a considerable overlap occurs with intellectual capital. Intangible assets may constitute substantially to the companies' assets. However, clear relations of intangible assets with company performance could not be established.

Shanmugasundaram (2008) investigated intra-industry variations of Capital Structure in Pharmaceutical Industry in India by analysing the relationship between six different variables and the capital structure of the firms. The variables include Gross fixed Assets to total assets, profitability in terms of ROI and Net Profit, growth, size and risk. Industry influence has been examined on the grouping of firms on the basis of process patent period and transition period of the industry. He finds that proportion of fixed assets to total assets is positively correlated with debt equity ratio while profitability was negatively correlated with debt equity ratio of pharmaceutical firms of India.

However, what determines the capital structure of pharmaceutical firms remains an unexplored empirical question. Our study is a preliminary effort toward this goal. The crucial problem facing by Indian pharmaceutical firm while raising funds is whether to raise debt or equity. So solve such problems the modest effort has been made in this study.

RESEARCH QUESTIONS

Due to change in the industrial policy of India, and changes in the financial markets during the past decade of liberalization have certainly made an impact on the financial structure of Indian Pharmaceutical firm. In the light of the empirical observations of various studies, present study attempts to shed light on certain pertinent questions such as:

- What is the impact of high technology and role of research and development activities on Capital Structure of Indian Pharmaceutical firms?
- What is relationship between leverage and various variables of capital structure?
- To what extent does one see the effect of intangible assets in the capital structure decision in Indian Pharmaceutical firms?

METHODOLOGY OF THE STUDY

The study determinants of capital structure are explored data from pharmaceutical firms listed on the Bombay Stock Exchange. The sample is selected based on the industry classification made in the PROWESS database of CMIE (Centre for Monitoring Indian Economy). The data has been collected from PROWESS database of CMIE (Centre for Monitoring Indian Economy) for the period of 2000 to 2008. The period has been chosen to allow reasonable data coverage and to enable analysis of data over medium to long-term periods. The data of research and development expenditure for whole study period is not available in the firms financial statements are omitted. Total number of firms studied in this industry is 31. Various statistical techniques are used for the analysis and interpretation of the data in the study. The exploratory analysis has tried to identify if there are significant variations in capital structure of sampled firms. To explain variations in corporate leverage, leverage ratios will be regressed against

selected items from the firms' financial statements. The most important variables which determine the capital structures of the various firms should also be identified. Following Booth et al (2001), simple pooling regression models has been used.

VARIABLES TO BE ANALYSED

Previous studies have identified profitability, growth, tangibility of assets, non-debt tax shield, uniqueness, firm size, as determinants of capital structure. These independent variables and others to be identified will be tested using U.S. Agriculture Biotechnology Firms data. As discussed in Sporleder et al (2004) it is difficult to delineate variables for testing under individual theories of capital structure. Some variables to be tested are described below.

- **Asset Tangibility:** The proxy for agency costs and the costs of financial distress is tangibility of a firm's assets, which is defined as total assets less current assets, a definition used by Rajan and Zingales (1995). Asset tangibility and leverage should be positively related in that tangible assets are both readily collateralized and liquidated/redeployed at market value. High technology firms' knowledge capital is relatively non-redeployable, hence, we expect companies with greater knowledge assets to be less levered.
- **Non-Debt Tax Shield:** DeAngelo and Marsuils (1980) suggested a model of optimal capital structure that incorporates the impact of corporate taxes, personal taxes, and non-debt related corporate tax shields. They argued that tax deductions for depreciation and investment tax credits are substitutes for the tax benefits of debt financing. As a result, I hypothesizes that firms with large non-debt tax shields relative to their expected cash flow include less debt in their capital structure.

The indicator for the non-debt tax shields is a direct estimate of non-debt tax shields over total assets. The measure is calculated from the tax payments (T), operating income (EBDIT), interest payments (i), total assets (TA) and approximate corporate tax rate during sample period (30%), using the following equation.

$$\text{Non-Debt Tax Shields (NDTAXSH)} = \frac{\text{EBDIT} - i - T / (0.3)}{\text{Total Assets}}$$

- **Uniqueness:** Uniqueness represents the differences among firms that may result in competitive advantage. Titman and Wessels (1988) argue that firms that provide unique or specialized products or services will experience thinner markets when liquidating with lower asset values recoverable by their lenders. Uniqueness is commonly measured as the ratio of either R&D expenditures or selling and administrative expenses to total assets. Following the literature, we anticipate that uniqueness and the firm's debt ratio will be negatively related and use selling and administrative expenses as a proxy for uniqueness.
- **Growth:** The growth factor is measured by the percentage change of assets or market-to-book ratio, which is the market value of equity divided by the book value

of equity or equity market value divided by net worth. Titman and Wessels (1988) suggest that equity - controlled firms to invest sub-optimally.

- **Profitability:** Firms that are profitable will use their internal funds (retained earnings) to finance their operations and investments and thus they will borrow relatively less than firms with low profitability. Therefore, I expect an inverse relationship between profitability and leverage. Titman and Wessels (1988) used operating profit rate of return (EBIT/assets) as a measure of profitability I have measure profitability as per Titman and Wessels.
- **Intangible Assets:** Intangible assets are measured as ratio of gross intangible assets to total assets.
- **Size:** Size may be justified as a potential explanatory variable of cross-sectional differences in leverage. Size is closely related to risk and bankruptcy costs. Larger firms tend to be more diversified, which means that they enclose less risk and as a consequence they have a lower probability of bankruptcy. Furthermore, larger firms may be able to reduce transaction costs associated with long-term debt issuance and they will more easily attract a debt analyst to provide information to the public about the issue. Thus, banks will be more willing to lend their funds to larger firms. Examining the effect of size in the determination of capital structure, Marsh (1982) and Bennett and Donnelly (1993) found that larger and more capital intensive companies are likely to employ more debt. So, I expect that size will be positively related to leverage. I have measure size as the natural logarithm of net sales. I have use the natural logarithm so as to measure the trend of this specific variable in the determination of capital structure rather than the contribution of the absolute size. This way, we smooth the differences that may arise between large differences in sizes among the firms.
- **Research and Development Expenditure:** Research and Development Expenditure measured as ratio of research and development expenditure to total expenses.
- **Leverage:** Three measures of financial leverage are used in this study. (i) Total debt divided by total assets (Leverage 1) (ii) Total debt divided by the sum of total debt and common equity (market value) (Leverage 2) and (iii) Short Term Debt divided by book value of equity. These ratios have been used in earlier studies such as Booth et al (2001) and Titman and Wessels (1988). Data limitations force us to measure debt ratios in terms of book values only rather than market value. However, Bowman (1980) demonstrated that the cross sectional correlation between the book value and market value of debt is very large, so the mis-specification due to using book value measure is probably reasonably small.

THE MODEL

The use of panel data models is a powerful research instrument, because it combines the cross-sectional data with time-series data, and provides results that could not be estimated and studied if I have use only time-series or cross-section data. A general model for panel

data that allows the researcher to estimate panel data with great flexibility and formulate the differences in the behavior of the cross-section elements is theoretically as follows:

$$y_{it} = x'_{it}\beta + z'_{it}a + \varepsilon_{it}$$

where y_{it} = is the dependent variable, x_i = is the matrix with the independent variables, and z_i = is a matrix which contains a constant term and a set of individual or group specific variables, which may be observed or unobserved. This model is a classical regression model. If the matrix z_i can be observed, for all individuals, then the least square method gives efficient and consistent estimators.

The pooled regression considers that z_i contains only a constant term. In this case the ordinary least square method provides an efficient and consistent estimate for the β and the α coefficients. If z_i is unobserved and correlated with the independent variables then the least squares estimator of β is biased and inconsistent, as a consequence of an omitted variable.

The hypothesis that will be tested in this paper is that each year's capital structure depends upon the asset structure, the profitability, the size of the firm and the capital structure pattern that the firm followed in the past. In my view, the firm does not wish to change dramatically its capital structure. Given the capital structure of the previous year, the firm adjusts this year's leverage in order to accomplish a long-run target capital structure.

Modelling the Indian market according to the variables described in the previous section, I estimate the following model:

$$\text{LEVERAGE}_{i,t} = \alpha + \beta_1 \text{TANG}_{i,t} + \beta_2 \text{NDTS}_{i,t} + \beta_3 \text{UNIQ}_{i,t} + \beta_4 \text{GROWTH}_{i,t} + \beta_5 \text{PROFIT}_{i,t} + \beta_6 \text{INT}_{i,t} + \beta_7 \text{SIZE}_{i,t} + \beta_8 \text{R\&D}_{i,t} + \varepsilon_{i,t}$$

where:

- $\text{TANG}_{i,t}$ = the tangibility of assets of the firm i at time t ,
- $\text{NDTS}_{i,t}$ = the non-debt tax shield of the firm i at time t ,
- $\text{UNIQ}_{i,t}$ = the uniqueness of the assets of the firm i at time t ,
- $\text{GROWTH}_{i,t}$ = the growth of the firm i at time t ,
- $\text{PROFIT}_{i,t}$ = the profitability of the firm i at time t ,
- $\text{INT}_{i,t}$ = the intangible assets of the firm i at time t ,
- $\text{SIZE}_{i,t}$ = the size of the firm i at time t ,
- R\&D = the portion of research and development expenditure of the firm i at time t ,
- $\varepsilon_{i,t}$ = the error term.

EMPIRICAL ANALYSIS

Table 1 represents descriptive statistics for the model variables. Leverage means are distinctly different across the three definitions of leverage considered in this study. The sample displays a wide degree of variability in the explanatory variables of interest. The value of mean and standard deviation of growth of firm, and profitability were 17.237 and

12.915 and 22.61 and 16.55 respectively. The value of SD indicates high deviation among the sample. Notably, 51.3 percent of these firms' assets are tangible on average, though the ratio of tangible to total assets ranges from 0.12 to 1.1 times.

Table 2 gives the correlation matrix for the whole study period. We consider two variables are correlated more intensely with each other when it produces a figure more than 0.8 (whether it is +ve or -ve). If two variables are correlated in the stated manner then they possibly create the problem of serial correlation. The results of correlation indicate no any variable are highly correlated with any of dependent variables, so all the variables are considered for regression analysis.

In the pooled regression, the data of dependent variables and independent variables of different firms for all years are considered for the study. The multiple regression models with three leverage parameters as dependent variables regressed with independent variables and results presented in table 3.

Looking at the Leverage 1 model empirical results we can say that tangibility of assets, non-debt tax shield and research and development expenditure are significantly and negatively related to leverage. The results of adjusted R² indicates the ratio of total debt to total assets, explains about 50 percent of the variation in capital structure. F value is also significant at 1 percent. The DW statistics shows there is no presence of the problem of autocorrelation.

In table 3 columns 3 indicates that for the determination of the capital structure with Total debt divided by the sum of total debt and common equity considered as dependent variables. The results of regression analysis indicate ndts, growth and size of the firm are significant factors at 1% level of significance, while profitability and intangible assets are significant at 5 percent. NDTS and intangible assets are negatively correlated and growth, size and profitability positively correlated with leverage. Here in this case there was no serial correlation prevailing because DW test value comes as 1.852, but the adjusted R², which tells how well sample regression line fits the data comes out as 0.358, which shows that sample regression explain 35% of aggregate data.

It is clear from the empirical analysis that Leverage 3 model, with leverage measured as the ratio of short term debt divided by book value of equity explains approximately 36 percent of the variation in capital structure. Tangibility of assets, intangible assets and size are statistically significant at 1 percent level. In contrast to our a priori expectations, uniqueness and leverage are positively related. We expect that firms with more unique products are more likely to spend more to advertise and promote their market offerings. However, commonly used measures of uniqueness such as ours have some well-documented shortcomings (e.g., our measure can be related to both non-debt tax shields and collateral value) and better measures continue to be both theoretically and empirically explored (Rajan and Zingales, 1995; Banerjee, Heshmati, and Wihlborg, 2000). Thus, little weight is given to the performance of this indicator in any of the three models.

The consistently positive relationship between profitability and leverage across all models is puzzling. If firms do in fact follow a pecking order, the authors expect internal finance to be preferred over debt, which in turn is more favorable to new equity issues.

More profitable firms, *ceteris paribus*, have more available internal capital and can choose to rely less on debt capital. Why do more profitable publicly traded agricultural biotechnology firms use more debt? Perhaps the answer lies in the industry context. No previous capital structure studies, except for Mallikarjunappa (2007), considered pharmaceutical firms of India. Though Mallikarjunappa (2007) found a negative relationship among the profitability of India-based Pharmaceutical firms and their debt ratios, this relationship generally was weak and statistically insignificant.

Overall evaluation of regression analysis indicates that model 1 has high influence in the determination of capital structure of Indian pharmaceutical firm, while results of model 2 and model 3 are consistent. All the three models F value is significant at 1 percent.

MAJOR FINDINGS AND IMPLICATIONS

The study provides an empirical analysis of determination of capital structure of Indian Pharmaceutical firms. The study extends our knowledge on the subject in a number of ways. Firstly, it tests the validity of capital structure theories based on the direct effect of knowledge capital on leverage of the firm, which no previous study have done. Secondly it provides empirical evidence on capital structure issues, applying an impact of intangible assets and research and development expenditure, method was employed to analyse a pooled time-series and cross-sectional data set to estimate the effects of various components effects on capital structure decision. Finally, the study adds completely new empirical evidence to the capital structure literature under the impact knowledge capital on the determination of capital structure of Indian Pharmaceutical Firms.

The result of regression analysis indicates that the all three types leverage ratio of the firm is positively related to size of the firm. Size was measured as natural logarithm of the net sales revenue. The conclusions are that larger firms employ more debt capital in comparison with smaller firms. The regression result also indicates that tangibility of assets, non-debt tax shields, research and development expenditure and intangible assets are negatively related to firm leverage. In contrast, size, growth and profitability are positively related. These results generally are reasonably consistent with previous studies of firms in other industries. In fact, the model explains approximately 36% of the variation in leverage among Indian pharmaceutical firms

The empirical evidence presented here unambiguously suggests a negative relationship among profitability and firm capital structure. Evidence here suggests that pharmaceutical firms prefer internal (equity) to external (debt) financing, and more profitable firms have more internal capital available. The present authors use the ratio of net income to total assets as a measure of profitability. The results and conclusions are consistent with the theoretical background as presented in the present paper. All the regressors in both models are statistically significant at 99%. However, the results show that the first regression model is slightly better in explaining the dependent variable in comparison with the other two models.

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Table 1
Descriptive Statistics

Variables	Mean	Std. Deviation	Minimum	Maximum
Leverage1	0.464	0.156	0.13	0.85
Leverage 2	5.201	7.125	0	52.67
Leverage 3	4.882	3.811	0.17	27.41
Tangible Assets	0.513	0.190	0.12	1.1
NDIS	0.183	0.140	-0.16	0.56
Uniqueness	0.108	0.081	0.01	0.42
Growth	17.237	22.614	-30.88	155.28
Profitability	12.915	16.555	-100.3	63.31
Intangible Assets	1.225	2.452	0	15.13
Size	4.845	1.329	-0.67	7.4
R&D	2.373	3.775	0.04	27.88

Table 2
Correlation Matrix of Pharmaceutical Firms

Variables	Leverage 1	Leverage 2	Leverage 3	Tangibility	NDIS	Uniqueness	Growth	Profitability	Intangible Assets	Size	R&D Exp.
Leverage1	1										
Leverage2	0.422**	1									
Leverage3	0.116	0.241**	1								
Tangibility	-0.098	0.106	-0.311**	1							
NDIS	-0.675**	-0.314**	0.285**	-0.150*	1						
Uniqueness	-0.223**	-0.252**	0.013	-0.069	0.312**	1					
Growth	-0.011	0.216**	0.149*	-0.193**	0.113	-0.196**	1				
Profitability	-0.526**	-0.08	0.281**	-0.073	0.761**	0.197**	0.305**	1			
Intangible Assets	0.120*	-0.012	-0.097	-0.219**	-0.139*	-0.107	0.158**	-0.265**	1		
Size	-0.172**	0.297**	0.530**	-0.103	0.381**	0.001	0.217**	0.358**	0.072	1	
R&D Exp.	-0.073	0.223**	0.024	0.183**	-0.065	-0.177**	0.241**	0.071	0.082	0.136*	1

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed).

Table 3
Results of Regression Analysis of Pharmaceutical Firms in India

Explanatory Variables	Leverage 1 Coefficient Estimates	Leverage 2 Coefficient Estimates	Leverage 3 Coefficient Estimates
Intercept	0.642 (17.955)*	-2.781 (-1.498)	1.542 (1.566)
Tangibility	-0.144 (-3.804)*	2.307 (1.173)	-6.141 (-5.889)*
NDTS	-0.812 (-10.142)*	-31.052 (-7.471)*	0.535 (0.243)
Uniqness	-0.026 (-0.293)	-5.604 (-1.21)	-1.761 (-0.717)
Growth	0 (1.164)	0.044 (2.427)*	-0.001 (-0.145)
Profitability	0 (-0.548)	0.072 (1.983)**	0.005 (0.276)
Intangible Assets	-0.003 (-0.846)	-0.304 (-1.936)**	-0.305 (-3.663)*
Size	0.012 (2.179)**	2.371 (8.14)*	1.415 (9.155)*
R&D	-0.005 (-2.452)*	0.12 (1.219)	0.024 (0.46)
R	0.72	0.614	0.62
R2	0.518	0.377	0.385
Adjusted R2	0.503	0.358	0.366
F - stat	36.094*	20.338*	21.016*
Durbin Watson	2.15	1.852	1.849

*, ** significant at 1% , and 5% level respectively.
t - statistics are given in parenthesis.

ACCOUNTABILITY OF LOAN WAIVER TOWARDS CREDIT DISCIPLINE

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ABSTRACT

The article analyses the loan waiver scheme announced by the Government in 2008 budget and its impact on credit discipline among the farming community. In addition to the analysis of several reports and experts' opinion on this subject, a study has been conducted in one of the rural districts of Andhra Pradesh, namely, Mahbubnagar. For this study, a survey is made on the small and marginal farmers who were having overdue with the District Cooperative Central Bank. While the loan waiver provides a temporary relief to the farmers suffering from debt trap contributing to the reduction of farmers suicides to some extent, repayment culture which affects the credit discipline in the long run needs the attention of Policy makers. Rural indebtedness has remained an important issue in India. In spite of the tremendous expansion of the branch network particularly in rural areas after nationalization of private sector banks and the growth of institutional credit for agriculture, the severity of agricultural indebtedness has continued to persist. The loan waiver for marginal and small farmers and the one time settlement (OTS) of loans for other farmers and their entitlement for fresh loans with a target of Rs.2,80,000 crore during 2008-09 was expected to take care of the issues relating to the accessibility dependence of the resource poor farmers on money lender. To what extent it was successful and what is the extent of its accountability towards credit discipline was felt worth examining. The purpose of this article is to analyze the loan waiver scheme of the Union Budget 2008 with an empirical investigation based on a study conducted on Overdues in DCCB, Mahbubnagar, Andhra Pradesh. It covers (i) Loan Waiver Policy - 2008 (ii) Its implications on Social, Economical and Political fields (iii) A study on overdues in District Credit Co-operative Bank at Mahbubnagar and (iv) Conclusions of the Paper.

I. LOAN WAIVER POLICY - BUDGET 2008

Presenting the fifth budget of the UPA government in 2008, the then finance minister Mr. P. Chidambaram announced the most ambitious farm loan waiver scheme with an estimated write-off of Rs. 60,000 crores covering more than 4 crore farmers. After taking into consideration the issues raised by the concerned, the scheme was amended and offered a total waiver of Rs. 72,000 crores. Its highlights are as follows:

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- Full loan waiver for small farmers and marginal farmers. Waiver will cover short term crop loans as well as all the overdue installments on the investment credit.
- For short-term production loans, the amounts disbursed up to March 31, 2007 and overdue as on December 31, 2007 and remaining unpaid until February 28, 2008 are eligible for loan waiver.
- For investment loans, the installments of such loans that are overdue, together with the interest are eligible for all loans disbursed up to March 31, 2007 and overdue as on December 31, 2007 and remaining unpaid till February 28, 2008.
- Marginal farmer is defined as cultivating agricultural land up to 1 hectare or 2.5 acres. Small farmer is defined as cultivating between 1 hectare and 2 hectares i.e. less than 5 acres. Small and marginal farmers account for between 70 to 94 percent of all farmers in most states.
- Other farmers, i.e. owning more than 5 acres or more than 2 hectares, will get one-time settlement (OTS) relief.
- Bulk of all dry and un-irrigated lands fall in districts covered by the drought prone area programme popularly known as DPAP and the desert development programme (DDP). The total number of such districts is 237. Special package for other farmers in these 237 districts.
- For other farmers in these 237 districts, the OTS relief will be 25% or Rs. 20,000, whichever is higher and not 25 percent as announced in the budget.

(Courtesy: AICC)

It is true that farmers needed some relief due to crisis in agriculture. But, it is not clear whether the loan waiver scheme is going to help farmers in the future and improve agriculture sector. Experts have raised the question as to whether this will benefit large section of the farming community for majority take credit from private money lenders and this waiver takes into account loans taken from institutional bodies like banks, rural cooperatives and credit schemes.

II. IMPLICATIONS OF THE POLICY - SOCIAL, ECONOMIC AND POLITICAL

Based on its importance, many studies were conducted to find out whether this is the best way to provide relief to agriculture, a brief account of the studies is presented below:

(1) Social Implications

- In the most desperate pockets of rural India, a confluence of factors, from poor rainfall to the new availability of consumer goods, has driven some farmers into crushing debt. The financial hardships are so extreme that thousands commit suicide every year (Robinson, 2007). In this context, almost all the political parties were vociferously clamoring for such a measure to relieve the farm sector from a "crushing" burden of debt. (Vaidyanathan, 2008).
- The loan waiver scheme seems to have created a positive impact on the farmers in Andhra Pradesh if the steep decline in farmers' suicides is any indication. Only 199

farmers had reportedly committed suicide in 2009 due to farm related losses and debts, and eight of them this year (up to March 2010) showing a sharp decline due to multi-pronged relief measures taken by the State and Central governments, as against 1,031 deaths in 2004 and 411 in 2008. However, it was also stated that in addition to the loan waiver scheme, several measures were taken like free power scheme, special packages to kin of farmers who committed suicide which might have contributed to the decrease in the suicide rates in the state (News paper reports 2010).

(2) *Economic Implications*

- According to the *National Sample Survey [59th Round, 2004-05]*, 51.4 percent or just over half of farmer households in the country did not access credit, either from institutional or non-institutional sources. Further, despite the vast network of bank branches, only 27 percent of total farm households had any loans from formal sources (of which one-third also borrow from informal sources). Among the marginal farmer category, as many as 80 percent did not have any borrowing from formal sources. Therefore, the loan waiver, as designed, will benefit only the upper quartile of farmers. As per the announcement, those farmers whose bank loans were overdue on December 31, 2007, would get a waiver, irrespective of the amount. (Mahajan, 2008)
- The *role of the informal sector and moneylenders* has been completely ignored in this scheme. Informal sources of credit outweigh the formal sources in case of farmers with up to 0.40 hectares of land. Apart from the moneylenders, there are a lot of other informal sources that farmers approach for their credit needs. Informal lending is a peculiar phenomenon in Indian agriculture, and as Arindam Banik points out, "Farmers, on an average, borrow much larger amounts from commission agents or traders than workers do from employers or tenants from landlords". Still, the problem of indebtedness due to informal sector lending is not considered in the loan waiver scheme. (Gaur, 2008)
- Another critical factor brought out in a study that it will be discouraging for those honest farmers who have taken desperate measures to pay back their installments. If farmers borrow from moneylenders in order to repay their bank loans, it would be unfair for these farmers to be excluded from the relief scheme. Those farmers who had invested out of their savings rather than borrowings would be deprived of the benefit of this scheme. (Gaur, 2008)
 - The Narasimham committee report in 1993 recommended that banks should focus on profitability and adopt prudential norms. This meant much more stringent provisioning for non-performing loans than earlier and de-recognition of interest on overdue loans.

(3) *Political Implications*

The general opinion which prevailed at the time of the loan waiver scheme was the UPA government had waited for the forthcoming election year and in order to secure the

farmers votes, announced this scheme. As rightly pointed out by Sainath (2008), why was this scheme not considered by the government in 2005 when the demand was already made or in 2006 when the Prime Minister visited Vidharba and was shaken by the widespread distress is worth noting. If such a scheme had been announced then, it would have cost much less.

The states which topped the list in waiving loans are also those where congress did surprisingly well in the polls. Andhra Pradesh which led the chart accounting for 17% (Rs 11,353.71 crore) of the total overdue written off by public sector banks and the highest number of beneficiaries (7.75 million) is where congress bagged 33 Lok Sabha seats out of a total 42 in the state. Uttar Pradesh is second among states with waivers amounting to Rs 9,095.11 crore to 54 lakh farmers according to finance ministry data. Congress claimed 21 seats in the state ahead of BSP and just two seats behind Samajwadi party. (Thakur, 2009).

In the opinion of Himanshu (2009), though the large number of beneficiaries could be justified for Uttar Pradesh (19.2% of farmer households with 14.7% beneficiaries), it is otherwise for Andhra Pradesh and Maharashtra which account for 6.8% and 7.4% of the farmer households and account for 21% and 11% respectively, of the beneficiaries. On the contrary, Bihar, Jharkand, West Bengal and Chattisgarh states together account for 21.9% of the farmer households but account for only 12.4% of the beneficiaries in the Loan waiver scheme. According to him, the high number of beneficiaries in Andhra Pradesh and Maharashtra appear out of place as compared with the indebted farmer households (44.3% of all farmer households in Andhra Pradesh reported themselves as indebted to institutional sources); the number of beneficiaries is two-and-a-half times. These numbers also look overestimated in Maharashtra, where the reported number of beneficiaries is almost twice that reported in SAS. The three states of AP, UP and Maharashtra account for 45% of the loans waived and also account for 47.2% of all beneficiaries. According to the finance ministry, at least 3.69 crore farmers got benefited from the scheme. The government claims that all eligible farmers have been covered (Himanshu, 2009).

These observations focus the importance politics played a role in the Loan waiver scheme.

(4) *Implications of the scheme on credit discipline*

The loan waiver scheme was not without flaws and according to G. V. L. Narasimha Rao, every gain you make through populism, there is also a backlash. In the first place, a blanket waiver of all loans along proposed lines can cause serious distortions and encourage indiscipline among farmers who can afford to pay, and thus severely affect the future flow of credit to the sector. (Rao, 2008)

According to taxguru.in (2008), at the time the scheme was getting implemented, many bankers had expressed concern that the farm loan waiver scheme would have an impact on farmers' credit discipline. They even said that the default rates in recent months had gone up to 25 per cent, from around 10 per cent earlier as many farmers were expecting another package.

Datar (2008), in his article claims that the scheme will prove counter-productive and reward law-breakers. He is of the opinion that it can also breed serious fraud. He goes on to quote Muhammad Yunus, Nobel laureate and founder of the Grameen bank in Bangladesh who states "The repayment of loan boosts the self-reliance, pride and confidence of an impoverished person in his own ability. To forgive a loan does just the opposite and can undo years of difficult work in trying to get that borrower to believe in his or her own ability. When Governments forgive loans extended by nationalized banks, it creates an almost untenable situation for micro-credit programmes to recover their money".

Among the chief reasons that are responsible for the falling agricultural growth and distress and indebtedness among farmers are: increasing costs of production and lack of adequate support and market prices for produce, making it unremunerative; repeated crop failures; lack of irrigation facilities; lack of adequate crop insurance; lack of institutional credit; and excessive reliance on moneylenders (Rao, 2008).

It seems that another major reason for the increasing number of defaulter farmers is the use of credit for *non-productive non-agricultural purposes*. Farmers can never repay a loan if a major portion of loan credit is used for unproductive purpose. So, the loan waiver scheme might be good for 'farmers' as individuals, but not for 'agriculture'. (Gaur, 2008).

The other contributing reason for farmers falling into debt trap is *declining profitability*, primarily due to increasing input costs. There has been no genuine effort to address this in the scheme. (Himanshu, 2008)

Dr. Radhakrishna Committee on Rural Indebtedness had identified that one of the main factors contributing to farmer suicide is indebtedness, though it is not the only one. The committee had recommended several measures but not loan waiver. Infact, two of the most important recommendations of the committee have been bypassed. The first concerns the measures for financial inclusion of the financially excluded section of the farming community. Secondly, the recommendation on creating a price risk mitigation fund to compensate farmers in situations of price collapse was also not considered. Moreover, the proposal to reduce the interest rate to 4% also seems to have missed attention (Himanshu, 2008), although states like AP had implemented Pavala Vaddi scheme for a temporary period.

According to *M. S. Swaminathan*, the loan waiver scheme should be the beginning of a process and not the end of a process. He also goes on to state that farmers working on arid lands have different problems than those with irrigation, farmers that work in rain-fed areas face various challenges, and farmers with five hectares in unirrigated areas face different challenges than those with one hectare in irrigated areas. He also states that this loan waiver must be taken as an opportunity to revive agriculture and not be an indicator of future loan waivers. (IFMR, 2008)

In the words of *Vijay Mahajan*, Chairman and Managing Director, BASIX, "the loan waiver will quite perversely lead to a shortage of formal credit rather than solve the problem of farmer indebtedness". According to him, "there are four sets of issues that surround Indian agriculture today: first, small landholding size; second, low productivity; third, high variance in yield; and fourth, high variance in prices, particularly for small and marginal

farmers. These characteristics call for some remediation." (IFMR, 2008). He also states that this scheme will spread the tendency to default on such loans, a practice that will work against the goal of financial inclusion. (Mahajan, 2008).

As per *Malcom Harper*, Chairman of M-CRIL, "the loan waiver is an expensive, populist device that won't have much effect. The government may get votes in the short-term, but I'm not sure the waiver will help them get votes in the long-term. Also, this move will destroy the credit culture, and it's a classic, misguided populist intervention". He goes on to say that the 1990 loan waiver had a very negative impact on the credit culture. He is of the opinion that three quarters of the farmers committing suicides owed money to moneylenders. (IFMR, 2008).

In the opinion of *P. Sainath*, Magsasay Award winner and Rural Affairs Editor, *The Hindu*, the loan waiver scheme has created a fresh crop of problems for the flagging agricultural credit system. Moreover, according to him no account was taken of whether landholdings were wet or dry. He also states that areas important for votes had got a larger waiver than some of the worst affected areas. Finally, he noted that non-defaulters felt excluded, with the result that loan recovery had fallen from 53 to 12 percent in Maharashtra. (The Hindu, 2008) The benefits of the loan waiver scheme would be very short-term, and the same problem of indebtedness might arise in the next season also. This is because the need for credit would never end, and due of the lack of a long-term solution in this approach, the productivity and the yield will not increase and many farmers would continue to be defaulters.

The observations of experts in respect of loan waivers, therefore, confirm that in the long run credit discipline would get affected very much. An empirical investigation at this juncture would give us a practical situation.

III. EMPIRICAL INVESTIGATION: A STUDY ON OVERDUE IN DISTRICT CENTRAL CO-OPERATIVE BANK LIMITED MAHABUBNAGAR

In order to find out the causes for overdues in DCCB Ltd., Mahabubnagar and to examine the impact of Loan waiver on credit discipline in farmers of DCCB Ltd., Mahabubnagar, a study was conducted by one of the authors, Mr. Suleiman and conclusions can be glanced here.

Hypotheses of the study

1. The farmers who took finance from moneylenders are not inclined towards the loan waiver scheme. *Rejected*
2. There is no significant difference between the opinion of literate and illiterate farmers on credit discipline in the banks. *Rejected*
3. There is no significant difference between the opinion of long term and short term loan farmers towards the loan waiver scheme. *Accepted*
4. There is no significant difference between the opinion of small farmers and other farmers towards the loan waiver scheme. *Accepted*

The study was conducted by choosing 5 respondents per mandal from a randomly chosen 20 mandals from the total 64 mandals of the district. Each respondent is a registered member of District Cooperative Central Bank which is the main instrument for giving agricultural loans to the small and marginal farmers mainly. The data collected was processed through the use of Chi-square test between the attributes and the results are presented below.

Hypothesis 1

A large number of farmers depend upon money lenders for their financial needs.

Chi-square Test was conducted to test whether the farmers who took finance from Money lenders are more inclined towards the loan waiver scheme.

Chi-Square calculated value = 6.79

Chi-Square Table value = 3.84

The null hypothesis rejected at $\alpha = 0.05$.

Hence it was concluded that the farmers who borrowed from money lenders in addition to the loan taken from DCCB Ltd., Mahabubnagar are more inclined towards the loan waiver scheme. Therefore is inferred that borrowing from money lenders is hindering the prompt payment of the loan taken from DCCB Ltd., Mahabubnagar.

Hypothesis 2

The literacy of the farmers may influence the repayment psyche. To test this statement chi-square test was conducted to test whether the literacy influences the repayment psyche.

Chi-Square calculated value = 5.22

Chi-Square Table value = 3.84

The null hypothesis rejected at $\alpha = 0.05$.

Hence it was concluded that literacy influences the repayment psyche of the farmers. The literate farmers opined that prompt repayment of the loan taken should happen to ensure the credit discipline in the banks.

Hypothesis 3

Chi-square Test was conducted to test whether the opinion of long term and short term loan farmers differ towards the loan waiver scheme.

Chi-Square calculated value = 3.3956

Chi-Square Table value = 3.84

The null hypothesis was accepted at $\alpha = 0.05$.

Hence it was concluded that opinion of long term and short term loan farmers does not differ towards the loan waiver scheme.

Hypothesis 4

Chi-square Test was conducted to test whether the opinion of small farmers and other farmers differ towards the loan waiver scheme.

The null hypothesis was accepted at $\alpha = 0.05$

Chi-Square calculated value = 0.10288

Chi-Square Table value = 3.84

Hence, it was concluded that both small farmers and other farmers do not differ in welcoming the loan waiver scheme.

Major Findings of the Study

- A large number of the respondents are illiterate and half of the respondents are members in Co-operatives for more than 15 years. Majority of the respondents have land up to 5 acres. The literate farmers opined that prompt repayment of the loan taken should happen to ensure the credit discipline in the banks. Hence, it was concluded that literacy influences the repayment psyche of the farmers.
- The crop loan amount given by DCCB Ltd., Mahabubnagar is small, which is not sufficient in many cases to meet the crop expenditure by the farmers. A large number of respondents have taken crop loan amounting up to Rs. 25,000/- and some of them have taken long-term loan. At the same time a lot of respondents had taken loan from other sources like money lenders in their local place even at high rate of interest. Thus the farmers take loans from the other sources, especially from money lenders along with loan taken from DCCB Ltd. Hence, the farmers try to repay the loan taken from money lenders in order to lessen the loan burden which carries a high rate of interest. Finally, it was concluded that farmers who take loan from the money lenders are becoming defaulters at DCCB Ltd., Mahabubnagar.
- It was found that 40 percent of the respondents have repaid the loan to the full extent and 60 percent of the respondents have repaid to some extent. Among the respondents who were irregular in repayment of the loan the number of defaulters is more. 55 percent of the respondents were beneficiaries under the loan waiver scheme announced by the Government of India in the year 2008. Both small farmers and other farmers welcome the loan waiver scheme.
- The opinion of respondents on the loan waiver scheme is good. At the same time 85 percent of the respondents opined that the loan waiver decision will influence the repayment psyche of the farmers. Some of the respondents revealed that the loan waiver policy should be examined thoroughly before announcement in such a way that it is covering all those farmers who are unable to repay the loan taken because of crop failure even in case of other farmers with more land holding mentioned in the loan waiver scheme.

The study focused only in Mehbubnagar, a poorly developed district in Andhra pradesh. However, the implications of the study can be widely applied to other parts of the state as well.

IV CONCLUSIONS

The empirical analysis presented above and the expert opinions analyzed makes one to conclude as follows:

- As rightly pointed out by eminent experts, the loan waiver scheme had a negative influence on credit discipline of the farmers. This can be seen from the fact that many farmers were shifting their accounts from private banks to nationalized banks. Moreover, the earlier scheme in 1990 proved that institutional credit system had suffered from the fact that people became unenthusiastic about repayment. The same could be inferred from the study conducted by Suleiman, where he found that literacy had an influence on the repayment psyche of the farmers.
- In addition to this, those farmers who can afford to pay may also be discouraged which will have a long term impact on the credit flow to the sector. From the words of Muhammad Yunus, it can be seen that the repayment psyche of farmers will get negatively influenced by the loan waiver scheme. This fact has been reinforced by Sainath when he states that loan recovery from non-defaulters had dropped from 53 to 12 percent which is a very good indicator of the current repayment psyche of the farmers.
- The loan waiver scheme had addressed just one among the causes for agricultural distress, that of immediate relief to the farmers, but there seems to be no effort made to follow up on providing other help in the form of controlling the cost of inputs, support for marketing the produce, crop insurance etc. which play a significant role in improving the economic status of the rural community.
- The loan waiver scheme had also not considered the fact that many farmers take loans from the non-institutional lenders at high rates of interest. As is covered in the above study in Mahbubnagar, it can be seen that farmers who took finance from the money lenders are more inclined towards the loan waiver scheme.

EPILOGUE

It can therefore be concluded that the loan waiver scheme has indeed affected the credit discipline of the farming sector. It may in the future encourage non payment awaiting such a scheme especially if an election is expected. Though the amount of money involved in the scheme is huge, it has not benefited the states which required them the most as institutional credit had not penetrated well. In comparison, some of the states seem to have enjoyed the benefit as can be seen from the reduction in suicide rates in Andhra Pradesh though the loan waiver scheme is not the only factor contributing to this.

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DOES STOCK PRICES SIGNAL CHANGE IN ACCOUNTING REVENUES?

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ABSTRACT

The study examines statistically significant relationship between quarterly share price and accounting performance of seven major Indian companies over twenty quarters between financial years 2004 to 2009. The study makes use of the standard techniques of correlation and multiple regressions for all the selected companies - from private sector as also from public sector. The findings support positive relationship between share price and accounting results for only privately managed companies. The government-owned companies' shares prices hardly move in tandem with their accounting performance. Even private companies under extensive government regulation do not reflect their performance through share price. There was even poor association between share prices and a national economic indicator like GDP. Overall the general market trend represented by Nifty was found to have even better association with share prices.

The era of privatisation and liberalisation dawned in India since early nineties. Among other transformations, it has led to the gradual shifting of capital investments from government to the private sector. This has led to increasing demand for long-term capital from the private sector. Privately owned companies have two principal sources of finance - the banking system and the capital market. Long-term funds mostly come from the capital market. This renewed focus on the capital market along with improved regulation and modernisation of the system has increased the total market capitalisation (i.e., the sum of market value of all equity shares listed in a stock exchange) from just Rs. 4,000.77 bn. in 1993-94 to Rs. 51,497.01 bn. in 2007-08. In the same time, the total number of listed companies has shot up to 7,681 in 2007-08 from 5,848 in 1998-99 [Source: Bombay Stock Exchange], while FII investments have grown from just Rs. 54.45 bn. in 2003-04 to Rs. 975.74 bn. (cumulative) in 2007-08. [Source: National Stock Exchange]

Inspite of this tremendous growth witnessed in the capital market, the present share of household ownership of shares has remained almost static at a minuscule 10.54% of financial savings in 2007-08 (Table 1). One important reason is uncertain returns, sometimes even negative, from equity investments as opposed to 'low-but-fixed' returns from bank deposits and government small savings schemes.

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The main objective is to test the fallacy of the predictive power of stock prices through the application of correlation and regression analysis. Additionally, the aim is also to study whether share prices are influenced more by the general trend represented by the market index Nifty¹ or by an important macro economic indicator like quarterly GDP (Gross Domestic Product) figures.

The study attempts to examine a so-called bridge between accounting and finance - How does stock market performance is linked with a company's own accounting results? There are numerous studies looking at price signals given by, public and private information (Tovar, 1999), ownership and performance (Fernando et al, 2003), credit rating announcements (Micu et al, 2006), composite information (Subramanyam, 1996), stock splits (Pilotte, 1997 and Raja et al, 2009), open offers and takeovers (Pandey, 2001), bonus issues (Kakati, 2001), rights issues (Srinivasan, 1997) and the like. But stock-specific studies in the Indian context are only a few in number. So this study aims to measure stock-specific association among price and revenues along with any association with Nifty and GDP values.

The study makes use of seven prominent public limited companies (Reliance Industries, State Bank of India, Indian Oil Corporation, Maruti Suzuki, ACC, Tata Moors and Tata Power; Table 2) representing seven important industrial segments over a period of five years or twenty quarters from 2004 to 2009.

The share prices of all the ten companies apart from the value of the market index, are collected from the official website of NSE (National Stock Exchange), while the key items of quarterly results - total income, operating profit, and net profit (after extraordinary items, if any) - comes from the website of BSE (Bombay Stock Exchange). The quarterly GDP figures are sourced from the internet.

A number of initially selected companies like Infosys, Hindustan Unilever, Larsen and Toubro and Ranbaxy have to be excluded from the present study as their share prices changed abruptly during the chosen period due to corporate actions like bonus issue, rights issue, private placements and stock splits.

METHODOLOGY

This study is based on a two-part analysis using bivariate correlation followed by multiple regression.

Karl Pearson's product moment correlation technique is used to map out cases of statistically significant correlation (at 1% and 5% level of significance) between quarter-end price (QEP) and quarter-end total income, operating profit, net profit, Nifty values and GDP figures (QTI, QOP, QNP, QNifty and QGDP respectively).

The formula used for this purpose is given below:

$$r = \frac{\text{Cov}(x,y)}{\sigma_x \cdot \sigma_y}$$

where, $\text{Cov}(x,y) = (1/n) \sum (X - \bar{X})(Y - \bar{Y})$

The signalling power of stock prices implies a high degree of positive correlation (close to +1) between quarterly change in stock price and quarter-end figures of TI, OP, and NP. An external dimension is added by studying the correlation between quarter-end price and quarterly Nifty and GDP figures.

Linear multiple regression technique is used next. The word 'regression' is used to denote estimation or prediction of average values of one variable for a specified value of the other variable(s), where the former is called the 'dependent' variable and the latter the 'independent' or 'explanatory' variable. It is only applicable if there is some correlation between the variables concerned. A correlation coefficient of zero ($r = 0$) makes the technique unusable.

The basic purpose of this analysis is to examine whether a model can be constructed with the selected variables that might be used to predict the dependency of stock price on earnings growth, index values and GDP announcements.

There is a set of seven multiple linear regressions carried out for each of the seven companies. They all attempt to study the dependency of quarter-end price (QEP) on five explanatory variables (QTI, QOP, QNP, QNifty, QGDP). The relevant equation for all the seven companies is as follows:

$$QEP_i = a + b.QTI + c.QOP + d.QNP + e.QNifty + f.QGDP + z$$

Where, i represents each of the seven selected companies;

a is the constant term;

$b, c, d, e,$ and f are the regression coefficients;

z is the error term.

The relevant abbreviations used in the analysis are:

QEP = Quarter-end price

QTI = Quarter-end total income

QOP = Quarter-end operating profit

QNP = Quarter-end net profit

QNifty = Quarter-end Nifty value

QGDP = Quarter-end GDP figure

In order to test the efficacy of the models, the equations are further examined for goodness-of-fit (through coefficient of determination R^2), autocorrelation (through Durbin-Watson 'd' statistic) and multicollinearity² (through Variance Inflation factor i.e., VIF). Let me now describe the technical parameters one by one.

Every coefficient or estimate of a variable has its own 'standard error' (s.e.). This is simply the square root of the variances of the estimators from sample to sample.

INTERPRETATION OF RESULTS

Table 3 exhibits the results of correlation analysis for all the seven selected stocks. The share prices of RIL, SBI, ACC, Tata Motors and Maruti exhibit statistically significant

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correlation with their earnings growth as represented by total income, operating profit, and net profit. But IOC exhibits poor correlation with earnings growth. This may be due to the administered pricing regime of petroleum products. Tata Power's share price only correlates with change in TI. However all the companies' prices were found to be highly correlated with Nifty. This may be due to their inclusion in the Nifty index with substantial weightage. Further, a change in QGDP hardly correlates with share price except for Tata Motors at 1% level and with ACC and Maruti at the 5% levels of significance.

Let us now examine the results of linear multiple regressions. The first regression on RIL (Table 4.1) has a very good fit ($R^2 = 0.94$) indicating that 94% of the variation in QEP is explained by the model. There is also absence of autocorrelation among the variables as the d-statistic is close to 2. But the problem of multicollinearity among the explanatory variables exhibited by a high average VIF and absence of statistically significant t-values for most of the variables makes the model unusable.

The same story gets repeated in cases of Table 4.2 (on SBI), Table 4.3 (on IOC), Table 4.4 (on ACC), Table 4.5 (on Maruti), and Table 4.6 (on Tata Power). But in case on Tata Motors (Table 4.7), the t-values of QOP, GDP and the constant term are found to be statistically significant.

The only variable that gives statistically significant returns in most of the models is the quarterly Nifty value. This is mainly due to the chosen companies' significant presence in the market index Nifty. The outcome signifies that the effect of any change in Nifty on share price should only be seriously considered.

CONCLUDING OBSERVATIONS

The results of Table 3 indicate that share price changes of privately managed Indian companies like RIL, Maruti etc. do follow their earnings changes as indicated by TI, OP and NP. But the picture is different for government-owned companies like SBI and IOC whose share prices are not so strongly correlated with their accounting performance. This may be due to constant government interference in their operations. The reason is also partially true in case of Tata Power as it is a privately managed company but heavily influenced by long-term government-influenced electricity sale contracts. The results of Tables 4.1 to 4.7 look at the combined effect of the five explanatory variables on share prices. The only consistent outcome of the seven regression equations indicate a statistically significant association of Nifty with share prices, i.e., share prices tend to follow the general trend more than the company's own financial performance. However with the problem of multicollinearity present in all the equations, the findings should not be blindly followed.

END NOTES

1. Nifty is the flagship fifty share index of National Stock Exchange.
2. Multicollinearity indicates linear relationship (positive or negative) among the explanatory variables in a regression equation

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Table 1
Indian Household Investments

(Rs. billion)

Year	Cash in hand	Bank & non- bank Deposits	Life Insu- rance Fund	Provident and Pension Fund	Claims on Govt.	Shares and Deben- tures	Units of UTI	Trade Debt (Net)	Total Financial Assets
1993-94	133.67	133.67	95.48	183.23	69.08	100.67	47.05	-11.90	1096.18
1994-95	159.16	159.16	113.70	214.14	131.86	134.73	39.08	-11.48	1455.01
1995-96	165.25	165.25	138.94	223.43	95.88	88.39	2.62	-2.52	1243.37
1996-97	136.43	136.43	161.21	303.90	117.83	66.31	37.76	-7.08	1585.19
1997-98	127.80	127.80	194.10	322.67	221.62	44.64	5.95	-7.70	1717.40
1998-99	218.22	218.22	234.28	464.08	282.20	51.05	18.87	-68.70	2071.03
1999-00	208.45	208.45	286.44	539.07	289.85	163.08	18.11	-10.23	2362.13
2000-01	156.32	156.32	338.61	478.82	390.07	111.48	-9.34	1.83	2483.93
2001-02	281.56	281.56	412.37	466.09	519.38	98.34	-18.57	-1.83	2965.82
2002-03	286.32	286.32	520.09	484.41	560.87	71.22	-16.18	-3.41	3225.83
2003-04	426.75	426.75	522.40	489.52	873.72	90.78	-85.86	-1.14	3773.87
2004-05	369.77	369.77	679.86	565.52	1064.2	81.13	-31.46	-2.13	4343.00
2005-06	530.71	530.71	835.40	625.81	871.68	311.79	-4.44	-2.22	5978.67
2006-07	663.23	663.23	1148.9	709.92	406.27	513.96	-3.10	-1.83	7689.67
2007-08	803.42	803.42	1288.8	602.04	-270.42	773.98	-3.25	-2.04	7346.53

[Source: RBI]

Table 2
Selected Stocks from Nifty

Sl. No.	Company Name	Year of Incorporation	Industry Name
1.	Associated Cement Company Ltd.	1936	Cement
2.	Indian Oil Corporation Ltd.	1959	Refinery
3.	Maruti Udyog Ltd.	1981	Cars and multi utility vehicles
4.	Reliance Industries Ltd.	1966	Refinery
5.	State Bank of India	1955	Banking services
6.	Tata Motors Ltd.	1945	Commercial vehicles
7.	Tata Power Company Ltd.	1919	Electricity generation

Table 3
Pearson's Correlation coefficients (r)

Variables	RIL	SBI	IOC	ACC	Maruti	Tata Power	Tata Motors
	QEP	QEP	QEP	QEP	QEP	QEP	QEP
QTI	0.856**	0.495*	-0.058	0.548*	0.496*	0.700**	0.386
QOP	0.896**	0.285	0.173	0.657**	0.738**	0.278	0.743**
QNP	0.88**	0.501*	0.153	0.704**	0.733**	0.398	0.564**
QNifty	0.938**	0.94**	0.447*	0.845**	0.832**	0.870**	0.470*
QGDP	0.071	0.126	0.257	0.516*	0.487*	-0.041	0.793**

** = significant at 0.01 level of significance (2-tailed)

* = significant at 0.05 level of significance (2-tailed)

Table 4.1
Result of Regression 1

QEP _{RIL}	= - 546.89	+ 0.02	+ 0.16	- 0.10	+ 0.40	- 45.89
		QTI	QOP	QNP	QNifty	QGDP
s.e.		520.5	0.01	0.24	0.28	44.46
t-value		- 1.05	1.60	0.66	- 0.37	- 1.03
p-value		0.31	0.13	0.52	0.72	0.32
Table Value (5% level of significance)		2.15	2.15	2.15	2.15	2.15

R²= 0.94; d.f. = 14; d-statistic= 1.96; Average VIF= 45.15; F= 61.35 (0.00)

[R² = coefficient of determination; s.e. = standard error of variables

t-value = Student's t value; p-value = probability of occurrence

d = Durbin Watson d-statistic; VIF = variance inflation factor,

* = statistically significant value]

Table 4.2
Result of Regression 2

QEP _{SBI}	= 246.32	- 0.04	-0.11	+ 0.51	+ 0.40	- 39.31
		QTI	QOP	QNP	QNifty	QGDP
s.e.		324.87	0.04	0.07	0.21	32.69
t-value		0.76	- 1.12	- 0.19	2.39	11.68*
p-value		0.46	0.18	- 1.43	0.03	0.25
Table Value (5% level of significance)		2.15	2.15	2.15	2.15	2.15

R²= 0.96; d.f. = 14; d-statistic= 1.77; Average VIF= 10.72; F= 59.88 (0.00)

[R² = coefficient of determination; s.e. = standard error of variables

t-value = Student's t value; p-value = probability of occurrence

d = Durbin Watson d-statistic; VIF = variance inflation factor,

* = statistically significant value]

Table 4.3
Result of Regression 3

QEPIOC	= 515.06	- 0.005	- 0.002	- 0.0004	+ 0.08	- 9.85
		QTI	QOP	QNP	QNifty	QGDP
s.e.	168.31	0.001	0.02	0.02	0.03	17.27
t-value	3.06*	-2.26	- 0.10	0.02	2.94*	- 0.57
p-value	0.01	0.04	0.92	0.99	0.01	0.58
Table Value (5% level of significance)	2.15	2.15	2.15	2.15	2.15	2.15

R2= 0.45; d.f.= 14; d-statistic= 2.10; Average VIF= 5.45; F= 2.25 (0.11)

[R2 = coefficient of determination; s.e. = standard error of variables

t-value = Student's t value; p-value = probability of occurrence

d = Durbin Watson d-statistic; VIF = variance inflation factor,

* = statistically significant value]

Table 4.4
Result of Regression 4

QEPACC	= - 318.94	- 0.23	+ 0.84	- 0.07	+ 0.14	+ 61.80
		QTI	QOP	QNP	QNifty	QGDP
s.e.	390.04	0.31	0.93	0.91	0.05	34.52
t-value	- 0.82	- 0.74	0.90	- 0.07	2.66*	1.79
p-value	0.43	0.47	0.38	0.94	0.02	0.10
Table Value (5% level of significance)	2.15	2.15	2.15	2.15	2.15	2.15

R2= 0.81; d.f.= 14; d-statistic= 1.81; Average VIF= 10.56; F= 11.67 (0.00)

[R2 = coefficient of determination; s.e. = standard error of variables

t-value = Student's t value; p-value = probability of occurrence

d = Durbin Watson d-statistic; VIF = variance inflation factor,

* = statistically significant value]

Table 4.5
Result of Regression 5

QEPMaruti	= - 268.56	+ 0.09	- 1.07	+ 0.82	+ 0.13	+ 64.72
		QTI	QOP	QNP	QNifty	QGDP
s.e.	259.03	0.04	0.66	0.70	0.05	26.46
t-value	- 1.04	2.02	- 1.62	1.18	2.64*	2.45*
p-value	0.32	0.06	0.13	0.26	0.02	0.03
Table Value (5% level of significance)	2.15	2.15	2.15	2.15	2.15	2.15

R2= 0.81; d.f.= 14; d-statistic= 1.64; Average VIF= 6.95; F= 12.19 (0.00)

[R2 = coefficient of determination; s.e. = standard error of variables

t-value = Student's t value; p-value = probability of occurrence

d = Durbin Watson d-statistic; VIF = variance inflation factor,

* = statistically significant value]

Table 4.6
Result of Regression 6

QEPTataP	= 36.27	+ 0.16	+ 0.55	- 0.76	+ 0.25	- 57.17
		QTI	QOP	QNP	QNifty	QGDP
s.e.	255.67	0.13	0.66	0.64	0.04	22.53
t-value	0.14	1.29	0.83	- 1.18	6.76*	-2.54*
p-value	0.89	0.22	0.42	0.26	0.00	0.02
Table Value (5% level of significance)	2.15	2.15	2.15	2.15	2.15	2.15

R2= 0.90; d.f.= 14; d-statistic= 1.19; Average VIF= 3.18; F= 26.27 (0.00)

[R2 = coefficient of determination; s.e. = standard error of variables

t-value = Student's t value; p-value = probability of occurrence

d = Durbin Watson d-statistic; VIF = variance inflation factor,

* = statistically significant value]

Table 4.7
Result of Regression 7

QEP _{TataM}	= - 567.47	- 0.06	+ 1.29	- 0.12	+ 0.008	+ 73.63
		QTI	QOP	QNP	QNifty	QGDP
s.e.	194.87	0.04	0.46	0.24	0.04	24.47
t-value	- 2.91*	-1.89	2.79*	- 0.48	0.19	3.01*
p-value	0.01	0.08	0.01	0.64	0.85	0.01
Table Value (5% level of significance)	2.15	2.15	2.15	2.15	2.15	2.15

R2 = 0.81; d.f.= 14; d-statistic= 1.75; Average VIF= 3.92; F = 12.25 (0.00)

[R2 = coefficient of determination; s.e. = standard error of variables

t-value = Student's t value; p-value = probability of occurrence

d = Durbin Watson d-statistic; VIF = variance inflation factor,

* = statistically significant value]

PREFERRED INVESTMENT AVENUES AMONG THE PEOPLE: AN EMPIRICAL ANALYSIS

**Leena B. Dam*

ABSTRACT

The present age investor has a surfeit of options to choose from while making his investment decision. Keeping pace with the changing times, the financial institutions are also launching new age products to meet the growing needs. In light of this, the traditional means of investment have not lost its appeal. Through this study, an analysis has been made into the preferred investment avenues of the people. The study reveals that insurance products rank the highest while making any investment decision. The results also highlight that certain factors like qualification, source of awareness etc make a significant impact while deciding on the avenues for investment.

With the plethora of options available, investment is like a cafeteria approach where one can pick and choose as per the individual need. This has resulted in more specialized products coming up in the market targeting various sections of income group. Nevertheless, with these innovations, the charm of investment in banks and property has not lost its vain. Property as a model for investment has been picking up more in recent times.

The present study identifies the preferred investment avenues among the individual investors using a self assessment test. It also attempts to study the relationship between personal and demographic profile of the investors and the investment avenues chosen by them. Finally it offers implication for future research.

The present study is based on primary sources of data. The data has been collected by the distribution of a close ended questionnaire to 150 respondents out of which 100 respondents have replied. The responses have been collected from the people of the city of Pune. The data has been analysed using the percentage and chi-square test with the help of SPSS package.

Profile of the respondents: The analysis of the profile indicates that the age group of 31-40 years constitutes the largest group amongst the respondents. It accounted for 36 percent of the sample size followed by 28 percent amongst the age group of 41-50 years. Classification based on qualification revealed that graduates constituted the maximum 48 percent of the sample size followed by professional constituting 26 percent of the sample. 57 percent of the people were grouped the income bracket of above 3 lakh and below 5 lakh followed by 32 percent below 3 lakh income. Further, the classification based on percentage of income

invested, shows that 42 percent invested above 10 percent and below 20 percent of their income. On the investment horizon criteria, 40 percent of the sample invested for the long term while 32 percent invested for the short term. Friends and relatives constituted the major source of awareness for investment (36 percent). On factors to be considered before investment, past performance was considered to be the most vital indicator by the respondents. The maximum percentage (38) of the respondents felt safe to park their money with the help of sub brokers and agents. The expectation of return on investment was the highest among people in the category of above 10 and below 15 percent.

RESULTS AND DISCUSSION

Table 1
Age and preferred investment avenue

Age	Share Market	Mutual Fund	Insurance	Bank	Property	Total
Between 21-30 years	8 (33.3%)	5(20.8%)	6(25%)	4(16.7%)	1(4.2%)	24
Between 31- 40 years	10(27.8%)	8(22.2%)	13(36.11%)	3(8.3%)	2(5.5%)	36
Between 41-50 years	6(21.4%)	7(25%)	12(42.8%)	2(7.1%)	1(3.5%)	28
Above 50 years	1(8.3%)	2(16.7%)	6(50%)	1(8.3%)	2(16.7%)	12
Total	25	22	37	10	6	100
Chi-square			8.414			
df			12			
p			0.751			

Source: Primary data

Firstly an attempt has been made to check whether age influenced the investment avenues of the people. From table 1 it is visible that maximum people between the age group of 31 and above felt safe by investing in the insurance products. Whereas majority people in the age group of 21-30 years invested in the stock market. Respondents amongst the age group of 31-40 years choose share market as their next preferred source of investment after insurance. On the other hand respondents between 41-50 years chose mutual funds next to insurance as their preferred alternative investment. Investment in property scored the lowest amongst all age group of the sample under study. Using chi-square test, the p value of 0.751 reveals that the association between age and preferred investment avenue is not significant as the p value is more than 0.05.

Table 2 reflects the position of qualification and preferred investment avenue. Respondents with education only upto High school invested mostly in insurance followed by banks and property. Graduates invested mostly in mutual fund followed by insurance and banks having equal share of preference. Post graduates invested mostly in share market followed by insurance, mutual fund, bank and property. Professionals too invested mostly in share market followed by mutual fund and insurance. Using chi-square test, the p value

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of 0.0038 reveals that the association between qualification and preferred investment avenue is extremely significant as the p value is less than 0.001.

Table 2
Qualification and preferred investment avenue

Qualification	Share Market	Mutual Fund	Insurance	Bank	Property	Total
High School	0(0%)	0(0%)	2(50%)	1(25%)	1(25%)	4
Graduate	2(4.17%)	18(37.5%)	10(20.8%)	10(20.8%)	4(8.3%)	48
Post Graduate	8(57.1%)	4(14.3%)	3(21.4%)	2(14.3%)	1(7.1%)	14
Professional	9(34.61%)	7(26.92%)	6(23.1%)	2(7.7%)	2(7.7%)	26
Others	0(0%)	1(12.5%)	5(62.5%)	0(0%)	2(25%)	8
Total	19	30	26	15	10	100
Chi-square						23.11
df						16
p						0.0038

Source: Primary data

Table 3
Income and preferred investment avenue

Income Group	Share Market	Mutual Fund	Insurance	Bank	Property	Total
Above 1 lakh & below 3 lakh	6(18.8%)	8(25%)	12(37.5%)	4(12.5%)	2(6.3%)	32
Above 3 lakh & below 5 lakh	14(24.6%)	13(22.8%)	17(29.8%)	6(10.5%)	7(12.3%)	57
Above 5 lakh & below 10 lakh	3(27.3%)	1(9.1%)	2(18.1%)	1(9.1%)	4(36.4%)	11
Total	23	22	31	11	13	100
Chi-square						8.301
df						8
p						0.404

Source: Primary data

Income is considered to be a primary decisive factor for the preference of investment avenues. It is seen from table 3 that most respondents below the income of 5 lakh invested in insurance while the majority in the income group of 5-10 lakh, invested in the share market. However, using chi-square test, the p value arrived at was 0.327 which shows that the association between income and preferred investment avenues of the people is not significant.

Table 4
Investment horizon and preferred investment avenue

Investment Horizon	Share Market	Mutual Fund	Insurance	Bank	Property	Total
Short term	5(15.6%)	10(31.3%)	6(18.8%)	11(34.4%)	0(0%)	32
Long term	8(20%)	9(22.5%)	15(37.5%)	4(10%)	4(10%)	40
Both	7(25%)	7(25%)	10(35.7%)	2(7.1%)	2(7.1%)	28
Total	20	26	31	17	6	100
Chi-square			8.863			
df			8			
p			0.00011			

Source: Primary data

The time period for which the investment is being made is a crucial factor determining the avenue for investment. Therefore analysis is made to see how the time horizon influences the investment decision. From table 4 it is visible that in the short term only a small percentage of the respondents invested in the share market and there is no investment in the property. Short term investment scores the highest in the investments done in the banks. In the long term, the investment in the insurance sector was the highest followed by mutual fund, share market, bank and property. Respondents who invested in both the time horizon also invested the maximum in insurance. Further the chi-square at p-value of 0.00011 indicates that the relationship between investment horizon and preferred investment avenue is extremely significant.

Table 5
Source of awareness and preferred investment avenues

Source of Awareness	Share Market	Mutual Fund	Insurance	Bank	Property	Total
Friends and relatives	5(13.9%)	7(19.4%)	10(27.8%)	5(13.9%)	9(25%)	36
Advertisements	4(15.4%)	6(23.1%)	8(30.8%)	5(19.2%)	3(11.5%)	26
Brokerage firms	3(18.8%)	6(37.5%)	6(37.5%)	1(6.3%)	0(0%)	16
Others	6(27.2%)	6(27.2%)	5(22.7%)	3(13.6%)	2(9.1%)	22
Total	18	25	29	14	14	100
Chi-square			10.804			
df			12			
p			0.546			

Source: Primary data

The source of awareness is another important criteria deciding on the avenues for investment. Table 5 reveals that for investment in insurance, friends and relatives are the

primary source of information. Advertisements, brokerage firms and other sources have almost a similar impact for investment in mutual funds. Therefore the p value of 0.546 reflects that there is no significance between the different sources of awareness and the preferred investment avenues.

Table 6
Factors considered before investment and preferred investment avenue

Factors considered before investment	Share Market	Mutual Fund	Insurance	Bank	Property	Total
Past performance	8(23.5%)	12(35.3%)	7(20.6%)	3(8.8%)	4(11.8%)	34
Portfolio	9(37.5%)	8(33.3%)	3(12.5%)	4(16.7%)	0(0%)	24
Fundamental/ technical analysis	4(25%)	6(37.5%)	5(31.3%)	1(6.3%)	0(0%)	16
Market sentiment	5(27.8%)	2(11.1%)	2(11.1%)	4(22.2%)	5(27.8%)	18
Others	2(25%)	1(12.5%)	2(25%)	1(12.5%)	2(25%)	8
Total	28	29	19	13	11	100
Chi-square			20.327			
df			16			
p			0.205			

Source: Primary data

Table 6 shows the different factors that are given considerable importance before investment. Past performance and the fundamental/ technical analysis ranks the highest in case of investment decisions in mutual funds. Portfolio selection and market sentiments rule while making investment in share market. However, the p-value of 0.205 shows that there is no significant association between the different attributes while making investment decision.

Table 7
Channel of investment and preferred investment avenue

Channel of investment	Share Market	Mutual Fund	Insurance	Bank	Property	Total
Self	1(3.6%)	2(16.7%)	1(3.6%)	3(25%)	5(41.7%)	12
Stock broking company	15(44.1%)	18(52.9%)	1(2.9%)	0(0%)	0(0%)	34
Sub brokers/ agents	9(23.7%)	10(26.3%)	12(31.6%)	1(2.6%)	6(15.8%)	38
Financial Institutions	5(31.3%)	4(25%)	4(25%)	2(12.5%)	1(6.2%)	16
Total	30	34	18	6	12	100
Chi-square			44.454			
df			12			
p			0.000012			

Source: Primary data

The developments in the financial markets have given rise to a number of specialized service providers who act as the intermediary between the financial institution and the investors. Hence, attempt has been made to analyse the relationship between the various channels of investment and the preferred investment avenues. From the study it is found that very few people make self investment. Sub brokers/agents dominate the investment choice among investors in the mutual fund, insurance and stock market investment. Stock broking companies also play a major role in channelizing the investment in mutual fund and share market. Using chi-square test, a p-value of 0.000012 is arrived at in Table 7. This shows that the various channels of investment are extremely significant for making the investment decision.

Table 8
Expectation of return on investment and preferred investment avenue

Expectation of return on investment	Share Market	Mutual Fund	Insurance	Bank	Property	Total
Below 5 percent	1(12.5%)	3(37.5%)	4(50%)	1(12.5%)	0(0%)	8
Above 5 & below 10%	6(20%)	9(30%)	7(23.3%)	5(16.7%)	3(10%)	30
Above 10 & below 15%	14(31.8%)	9(20.5%)	8(18.2%)	5(11.4%)	7(15.9%)	44
Above 15 & below 20%	5(27.8%)	1(5.6%)	2(11.1%)	0(0%)	10(55.5%)	18
Total	26	22	21	11	20	100
Chi-Square			26.784			
df			12			
p			0.0082			

Source: Primary data

The return expectation plays a dominant role in any investment made. Attempt has been made to study the relationship between various levels of return expectation from the different sources of investment. From table 8, it is discernible that property ranks the highest in terms of high return on investment. Return of 10-15 percent is expected mostly by investors from the share market and the mutual fund. From insurance, people expect mostly a return in the range of 5-10 percent. The p-value of 0.0082 shows that the association between expectation of return on investment and preferred investment avenues is extremely significant.

CONCLUSION

The study reveals that in most cases investors across all categories found them to be safer with taking up insurance policies. Among the different variables taken in the study, investment in insurance has the benefit of life protection, tax advantage and making provision for the future. That possibly could explain the reason why most people feel secured by investing in insurance. This is followed by investment in mutual fund and the stock market.

IAA NEWS

Election of Delhi Chapter

The election of Delhi Chapter, IAA were held on 13/02/2010 at Delhi School of Economics, Delhi University.

- Chief Patron : Professor B.P. Singh
Patron : Professor K.V. Bhanumurthy, Head, Dept. of Commerce, Delhi University
President : Professor Shirin Rathore
Vice President : Dr. P.C. Jain, Principal, Shri Ram College of Commerce
Secretary : Dr. Anil Kumar, Asso. Professor, Shri Ram College of Commerce
Joint Secretary : Dr. Surendra Singh, Asso. Professor, College of Vocational Studies
Treasurer : Dr. Hemchand Jain, Asso. Professor, Deen Dayal Upadhaya College
-

IAA General House Meeting

A meeting of the IAA General House will be held at the Venue of 33rd Annual Conference, Trivandrum with Prof. G.L. Dave in the Chair on 14th Nov. 10 at 12.30 p.m. to transact the following agenda:

1. Consideration of minutes of Gwalior AGM.
 2. Consideration of the Accounts of the Association
 3. Topics for the next IAA Annual Conference
 4. Election of Executive Members as per the Constitution
 5. And any other item with the permission of the Chair.
- All the members are requested to attend the meeting.
-

IAA Executive Committee Meeting

A meeting of the IAA Executive Committee will be held at the Venue of 33rd Annual Conference, Trivandrum with Prof. G.L. Dave in the Chair on 13th Nov. 10 at 8.30 p.m. to transact the following agenda.

1. Consideration of the minutes of Gwalior EC meeting
 2. Nomi of 3 EC members for panel to nominate Jr. Vice President
 3. Consideration of the election members on vacancies as per rules.
 4. Co-option of members to EC.
 5. And any other item with the permission of the Chair.
- All the Executive Members are requested to attend the meeting.
-

Report of the of the National Conference on "Corporate Social Responsibility" organized by I.A.A., Midnapore Branch

A national conference was organized by Indian Accounting Association, Midnapore Branch in association with Centre for Management Studies (CMS) of University of Burdwan at CMS Auditorium, Golapbag, Burdwan on March 27th and 28th, 2010. The theme of the conference has been "Corporate Social Responsibility" with one plenary session and two technical sessions. The conference was inaugurated by Prof. G. L. Dave, former Professor of Accounting, J. N. V. University, Jodhpur and the President of Indian Accounting Association. Prof. Amit Mallik, former Vice Chancellor, University of Burdwan, and President, Indian Accounting Association, Midnapore Branch chaired the inaugural session. Prof. Arup Kr.

Chattopadhyay, Dean of the Faculty of Arts and Commerce, University of Burdwan and Prof. Dilip Roy, Director, CMS, University of Burdwan were also present in the inaugural programme. In his inaugural address, Prof. Dave enlightened the audience about the role of social audit, an existing concept in the field of Accounting in broader sense and linked it to the modern concept of CSR which is covered mainly under the domain of corporate governance. A Life Members' Directory (of 113 life members) of the Branch was released in this occasion too by him in presence of over one hundred delegates. Prof. Arindam Gupta, Secretary, I.A.A., Midnapore Branch and joint organizing secretary welcomed all the guests, dignitaries and delegates. Prof. Dilip Roy introduced the theme of the conference before the audience and Dr. B. B. Parida, the joint organizing secretary offered the vote of thanks.

Prof. Sudipti Banerjea, Professor of Commerce, University of Calcutta was the keynote speaker in the Plenary session which was chaired by Prof. G. L. Dave. He simply mesmerized the audience by his excellent delivery on the issue. He elaborated the concept by saying that CSR was the deliberate inclusion of public interest into corporate decision-making, and the honouring of a triple bottom line: People, Planet, Profit. He went on elaborating the historical perspectives and key drivers of CSR. Finally he came to explanation of the corporate reporting practices and CSR in practice.

Prof. Sudipti Banerjea also chaired the post-lunch first technical session in which a total fifteen papers were presented on different aspects of CSR. Prof. A. Das Mohapatra, Professor of Business Administration, Sambalpur University, Orissa chaired the technical session on the second day. He nicely introduced the theme from the viewpoint of corporate reporting practices. Then an altogether twelve papers were presented. Faculty members from different colleges and universities of Tripura, U.P. and West Bengal and a few people from the industry presented their papers in the two-day conference.

Brief report of the AGM, 2010 and

Election of Executive Committee members for the year, 2010-11

Annual general meeting of the members took place on the second day of the conference, i.e., 28th March, 2010 at 2-30 P.M.. Prof. Amit Mallik, the president of the Branch chaired over the meeting. Prof. G. L. Dave, the all India President was also present.

Resolved that the present President namely Prof. Amit Mallik, present Secretary namely Prof. Arindam Gupta and present Treasurer namely Dr. Anupam Parua be re-elected to continue for another year (year 2010-2011). Dr. C. R. Sarkar, Head, Dept. of Commerce, University of Burdwan, Burdwan, CA Prithul Chakraborty, Professor, Centre for Management Studies, JIS College of Engineering, Kalyani, Dr. Kajal Baran Jana, Assistant Professor, Dept. of Commerce, Tamralipta Mahavidyalaya, Tamluk, Dr. Siddhartha Sankar Saha, Reader, Dept. of Accounting and Finance, St. Xavier's College (Autonomous), Kolkata, Dr. Susanta Mitra, Reader, Dept. of Commerce, Khandra College, Khandra, Mr. Koushik Kr. Dutta, Assistant Professor, Dept. of Commerce, Suri Vidyasagar College, Birbhum, Dr. Partha Sarkar, Senior Lecturer and Teacher-in-Charge, M.B.A. (Human Resources) Dept., Centre for Management Studies, University of Burdwan and Ms. Arundhati Basu, Proprietress, A. Basu & Co., Cost Accountants, Salt Lake, Kolkata were elected as the other executive committee members.

Prof. Arindam Gupta
Secretary, I.A.A., Midnapore Branch and Jt. Organizing Secretary

**XXXIII All India Accounting Conference & International Seminar
on Accounting Education And Research
November 13 -14, 2010**

**Jointly organized by
Department of Commerce, University of Kerala &
Indian Accounting Association Kerala Branch**

The Department of Commerce, University of Kerala and The Kerala Branch of Indian Accounting Association consider it as a privilege and matter of great pride to host the XXXIII All India Accounting Conference during November 13-14,2010. The Conference would provide a forum for interaction on issues relating to accounting policies and standards, besides providing vital inputs for research in accounting. It would create an interface among professionals, academicians and experts in the field of accounting education from India and abroad. We cordially invite you to participate in the seminar and contribute Papers in the technical sessions based on the themes identified. We request you to take advantage of the opportunity to interact with eminent scholars, researchers and distinguished speakers from India and abroad.

Seminar Venue

The seminar would be hosted at the city centre of the university which is 2.5 km from Thiruvananthapuram Central Railway Station and 10km from Thiruvananthapuram International Airport. Separate help desks would function from 12th November 7am onwards at the Railway Station, Airport and University City campus.

International Seminar on Accounting Education and Research

Chairman: Prof. B. Banerjee, Department of Commerce, University of Calcutta, Kolkatha

Technical Session I : Convergence of Accounting Standards

Chairperson: **Prof. Shirin Rathore**, University of Delhi, Delhi

Technical Session II : Goods and Services Tax

Chairperson : **K.Ch.A.V.S.N Murthy**, Institute of Cost & Works Accountants of India, Hyderabad

Technical Session III : Corporate Governance and Business Ethics

Chairperson:**Prof. Ranjan K Bal**, Department of Commerce, Utkal University, Bhubaneswar

Paper Contribution

The Papers must be in usual standard format with an abstract and particulars about authors. It must be sent to the Conference Secretary/Organising Secretary (two hard copies with one soft copy in MS Word, Font: Times New Roman, 12 Size and 1.5 line spacing) latest by October 10, 2010. Papers would be subjected to blind review by a technical committee before accepting them for presentation at the conference. Further, the accepted Papers would be classified into two categories: High Quality Papers and Satisfactory Papers. High Quality Papers would be allowed 12 minutes for presentation, while only the summary of the

Indian Journal of Accounting

Satisfactory Papers will be allowed to be presented in three minutes. Papers received on or before the stipulated time alone will be considered for presentation. The papers are to be sent to the Conference Secretary/Organising Secretary at the following addresses:

Dr. K. Sasikumar,
Conference Secretary
Professor & Head, Department of Commerce
University of Kerala, Thiruvananthapuram
Mob: 09895021279 E-mail: deptcommercekeralauniversity

Registration/Delegate Fee

Rs.600/- for members of IAA (up to 20.10.2010)
Rs. 700/- for members of RDA, IAARF (up to 20.10.2010)
Rs 800/- for spot delegates (after 20.10.2010)
Rs. 900/- for non-members(up to 20.10.2010)
Rs. 1500/- for corporate delegates
Rs 500/- for accompanying person
\$ 150 for foreign delegates (Rs. 1500 from delegate of SAARC)

- Registration fee to be remitted through crossed bank draft only in favour of "Indian Accounting Association (Kerala Branch)" payable at Thiruvananthapuram along with the enclosed registration form duly filled in.
- Accommodation will be arranged for outside delegates only who confirm and remit the full fee up to October 20, 2010.
- The Conference kit will not be given to accompanying person.

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Proposals for Young Researcher Award - 2010

IAA invites proposals on Research Work done during the last five years in the area of Accounting by scholars/faculty members of not more than 35 years of age as on 31-12-2009, for the consideration of IAA Young Researcher Award-2010. Proposals are invited only from the life members of IAA. Proposals may be submitted on or before 31st October 2010 to

Dr. D. Prabhakar Rao

General Secretary-Indian Accounting Association
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