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Islamic Banks in Bangladesh

Highlights

Balkan's Stock Market

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Discovering Thoughts, Inventing Future

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Quality of Disclosure of Islamic Banks in Bangladesh: Evidence from a Survey

By Md. Hafij Ullah
International Islamic University Chittagong, Bangladesh

Abstract - Accounting and financial reports of the corporations are primarily prepared for the external users of the information and therefore such reports should be designed, in form and content, according to the needs of the external users. Hence the perceptions of the users of accounting information regarding various aspects of the reports are to be assessed frequently to improve the quality of accounting information of the public limited companies. The present study is an attempt to justify the qualitative characteristics of accounting infor-mation of Islamic banks in Bangladesh on the basis of the opinion of the users of that information; to test whether there is any significant difference in opinion of them in this regard and to identify whether there is any problem of quality in accounting information provided by Islamic banks in Bangladesh.

Keywords : qualitative characteristics, accounting infor-mation, disclosure, islamic bank, bangladesh.

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Md. Hafij Ullah

Abstract - Accounting and financial reports of the corporations are primarily prepared for the external users of the information and therefore such reports should be designed, in form and content, according to the needs of the external users. Hence the perceptions of the users of accounting information regarding various aspects of the reports are to be assessed frequently to improve the quality of accounting information of the public limited companies. The present study is an attempt to justify the qualitative characteristics of accounting information of Islamic banks in Bangladesh on the basis of the opinion of the users of that information; to test whether there is any significant difference in opinion of them in this regard and to identify whether there is any problem of quality in accounting information provided by Islamic banks in Bangladesh.

Keywords : qualitative characteristics, accounting information, disclosure, islamic bank, bangladesh.

I. Introduction

Quality may be defined as 'minimum standards designed to ensure satisfaction from a product or service' (Black, 2002). Hanson (2007) defined quality as 'a measure of conformance of a product or service to certain specifications of standards.' Following these definitions, quality disclosure is conceptualized as disclosure practices that meet 'the minimum standards of financial reporting set by regulatory bodies and regulations for the benefit of relevant accounting information to stakeholders (Iyoha, F.O., 2011).' Following this conceptualization, quality of disclosure practice is decomposed into a disclosure practice that demonstrates relevance, reliability and comparability. According to Hanson (2007), relevance, reliability and comparability are qualities associated with information that is 'timely, useful, verifiable, and neutral, has predictive value and makes a difference to a decision maker.'

The quality of disclosure practice is essential to the needs of users who require quality accounting information for investment and other decision making purposes (Iyoha, F.O., 2011). Accounting information is regarded as useful when it faithfully represents the 'economic situation' of an organization in terms of relevance, reliability and comparability (Spiceland, Sepe and Tomassini, 2001). Useful accounting information which derives from qualitative financial statements, help in efficient allocation of resources by reducing dissemination of asymmetric information and improving pricing of securities (Chambers and Penman, 1984, and Ahmed, 2003). In an environment of quality disclosure practice, there are no deferral of loss recognition, extra reserves are not created and volatility in income is not smoothed away to create an artificial and misleading picture of balanced and consistent growth. Therefore, high-quality accounting practice should produce financial statements that report events timely and faithfully in the period in which they occur (Iyoha, F.O., 2011).

The present study is an endeavor to evaluate the qualitative characteristics of accounting information provided by Islamic banks in Bangladesh. For this purpose, next section discusses the objectives of the study followed by methodology of the study. Then relevant literatures are presented followed by the qualitative characteristics of accounting information and then the analyses of the perceptions of the respondents were discussed. Finally, the study is concluded giving the summery of the findings of the detail analyses.

II. Objectives of the Study

The main objective of the study is to evaluate the quality of accounting information of the Islamic banks in Bangladesh. To achieve the main objective, the specific objectives were setout as below:

i. To know about the qualitative characteristics of accounting information, in general.
ii. To evaluate the quality of the information provided by Islamic banks in Bangladesh.
iii. To test whether there is significance difference of opinion of different respondent groups regarding quality of accounting information of the sample banks.
iv. To identify whether there is any problems of quality in accounting information of the Islamic banks in Bangladesh.

III. Methodology of the Study

The study is mainly based on primary data, that is, opinion survey of the different respondent groups who use the information of Islamic banks in making decision. Secondary data were also used for relevant literature review.

a) Questionnaire Survey

The questionnaire survey of the study includes a target sample of 150 in total consisting of 30 professional accountants, 30 accounting professors, 30 bank

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executives from different Islamic banks, 30 stock brokers and 30 investors in Islamic banking shares. As per thumb rule, for each question there should have 5 samples for which reason 150 sample were being taken here for about 30 questions. The survey was conducted during the months February through June of 2012.

Table 1 : Showing the target sample and rate of collection the questionnaire

Sl. No.	User Group	Target Sample	No. of Collections	Rate of Collection (%)	% of the Target Sample
1	Professional Accountant (P.A.)	30	19	63.33	15.70
2	Accounting Professor (A.P.)	30	21	70.00	17.36
3	Bank Executives (B.E.)	30	30	100.00	24.79
4	Stock Broker (S.B.)	30	22	73.33	18.18
5	Investor (I.V.)	30	29	96.67	23.97
	Total	150	121	80.67	100.00

From Table 1, we observe the size of target sample and rate of collection from the different groups of the respondents. The achievement of target is highest in case of bank executives that is 100%, the second highest collection is from investors that is 96.67% and lowest achievement of target was in case of professional accountants that is only 63.33%. The overall achievement of target of collecting questionnaire was 80.67% and this is good in compare to that of other similar studies. The percentage (%) of the sample shows that percentage of the bank executive category is the highest that is 24.79% compared with the other four categories. The second highest category in the sample is investor of 23.97% and the lowest percentage is in case of professional accountants of 15.70% among all the category of the respondents. The achievement of target of collection of questionnaire is above the rate mentioned by Ahmed, A.A., (2009), Ali, Khan, Fatima and Masud (2008) and Moser and Kalton (1971) as being sufficient for a study leading to policy making.

b) Data Analysis

The collected data were analyzed using SPSS software version 17.0 and statistical technique $\chi 2$ test is used to justify whether there is any significant difference of opinion of the respondents regarding the qualitative characteristics of the information of the Islamic banks in Bangladesh.

IV. Literature Review

Accounting and financial reports of the corporations are primarily prepared for the external users of the information and therefore such reports should be designed, in form and content, according to the needs of the external users (Radebough, and Gray, 1993). Hence, the perceptions of the users of accounting information regarding various aspects of the reports are to be assessed frequently to improve the quality of the accounting and reporting practices of the public companies (Epstein, 1975). Iyoha, F.O., (2011) conducted a study on 61 Nigerian industries including 17 banking, 16 insurance, 5 conglomerates, 9 petroleum marketing, 3 agriculture, 7 food/beverage and 4 health industries for evaluation of the quality of accounting practice for which he collected opinion from a total of 154 respondents consisting 43 compilers and 111 users of information. Iyoha, F.O., (2011) found that there is a significant difference in the quality of accounting practice among industrial sectors in Nigeria in terms of relevance and reliability. In terms of relevance which deals with timeliness of financial reporting, the banking sector was found to be more compliant than other sectors in the Nigerian economy. In terms of reliability of accounting practice, the banking sector was found to be less transparent in financial reporting even though other industrial sectors were also involved in earnings manipulation. In a study on the pharmaceutical industries in Bangladesh, Hossain, M.S., (2010) conducted a survey on the perceptions of 140 respondents including 60 users of financial statements (investors), 48 managers of the sample companies, 8 employees of regulatory agencies, 12 professional accountants and 12 accounts preparers regarding the qualitative characteristics of the accounting information. Hossain, M.S., (2010) found that perceptions among the corporate managers, regulators and professional accountants are more or less similar and their satisfaction level is high but investors' perceptions is at low level. He found and commented that the perceptions of the sample investors vary in a significant manner from other users. Ahmed, A.A., (2009) conducted a study on only 12 general banking companies of Bangladesh. In his study, a survey was conducted on only 61 samples consisting 9 financial analysts, 12 professional accountants, 10 stock brokers, 13 accounting professors and 17 bank loan officers were taken for evaluating the qualitative characteristics of accounting information of the sample banks. The study found that among the reasons, a majority of the respondents use financial reports for reading and academic interest and for holding or selling shares in their private capacity; annual reports provide adequate and reliable data which are comparable, readable as well as relevant. But the respondents were different in opinion regarding compliance of IAS by the banking companies in Bangladesh. In another study by Ali,

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Khan, Fatima and Masud (2008) provide a useful survey of the attitudes of individual respondents on the different aspects of Bangladeshi annual corporate financial reports. They evaluate the opinions of 25 individual investors and found firstly, that British American Tobacco (BAT) Bangladesh Co. Ltd. makes very poor disclosures on corporate governance on a voluntary basis and secondly, the users of annual reports are in favor of such disclosure. They also found that the disclosures were not sufficient in justifying the goal of corporate governance. In a study in Jordan, Abu-Nasser and Rutherford (1996) exposed the view of 224 external users including individual shareholders, institutional shareholders, bank loan officers, stock brokers and academics of corporate reports. In terms of the usage of the annual report, Abu-Nasser and Rutherford (1996) found bank loan officers to be the heaviest users of the annual reports in Jordan while individual shareholders and the academics were found to be the least. They also found that the income statement and balance sheet to be the most widely read parts of the annual corporate reports by all groups of the users. They found that though the annual reports are the most important source of information to all users but the users are poorly satisfied over the qualitative characteristics of the information. Anderson and Epstein (1995) conducted another study on Australian individual investors for evaluating the usage of annual corporate reports. They found that Australian investors use corporate annual reports as third important basis of making investment decision after stock brokers' advice and financial newspapers and magazines. They found that investors perceive income statement to be more useful than directors' report but investors read directors' reports more thoroughly than income statement and investors want more explained and simplified information and more information regarding pending litigation, unasserted claims, management audit and information on change of auditor in annual reports. In that study the authors did not statistically determine whether the difference between the pattern of readership of annual reports' sections and the perceived usefulness of such sections of any significance in the Australian environment. Recognizing the needs for research in this area Anderson (1981) conducted a study on 188 institutional investors in Australia to justify the importance of annual reports in making investment decision. He found that Australian institutional investors depend mostly on annual reports for making investment decision followed by visits to the companies. Institutional investors mostly read balance sheet, profit and loss account, notes to the accounts and chairman's statement respectively. The study found that the institutional investors want more information regarding company's product, current value of long term assets and remuneration of the directors in annual reports. But the study did not statistically justify whether there is any significance difference between actual and perceived importance of using annual reports. Baker and Halsem (1973) performed a one of the pioneering studies in this area regarding identification of information needs and sources of such information of the individual investors. The study found that most of the individual investors rely heavily on stock brokers' advice as the main source of information regarding companies for making investment decision but only 8% of them use financial statement for this purpose. The authors also found that the individual investors gives emphasis on getting information regarding the future expectations of the company but less importance on the dividend performance.

V. Qualitative Characteristics of Accounting Information

The SFAC No. 2 of the FASB examined the characteristics that make accounting information useful. These characteristics are stated below (Porwal, 2010):

a) Understandability

It is the quality of information that permits reasonably informed users to perceive its significance, i.e. to understand the content and significance of financial statements and reports.

b) Relevance

Relevant information is crucial in making the correct investment decision. Accounting information has relevance if it makes a difference in a decision.

c) Predictive Value

The quality of information that helps users to increase the likelihood of correctly forecasting the outcome of past or present events.

d) Feedback Value

The quality of information that enables users to confirm or correct prior expectations.

e) Timeliness

Having information available to decision maker before it loses its capacity to influence decisions.

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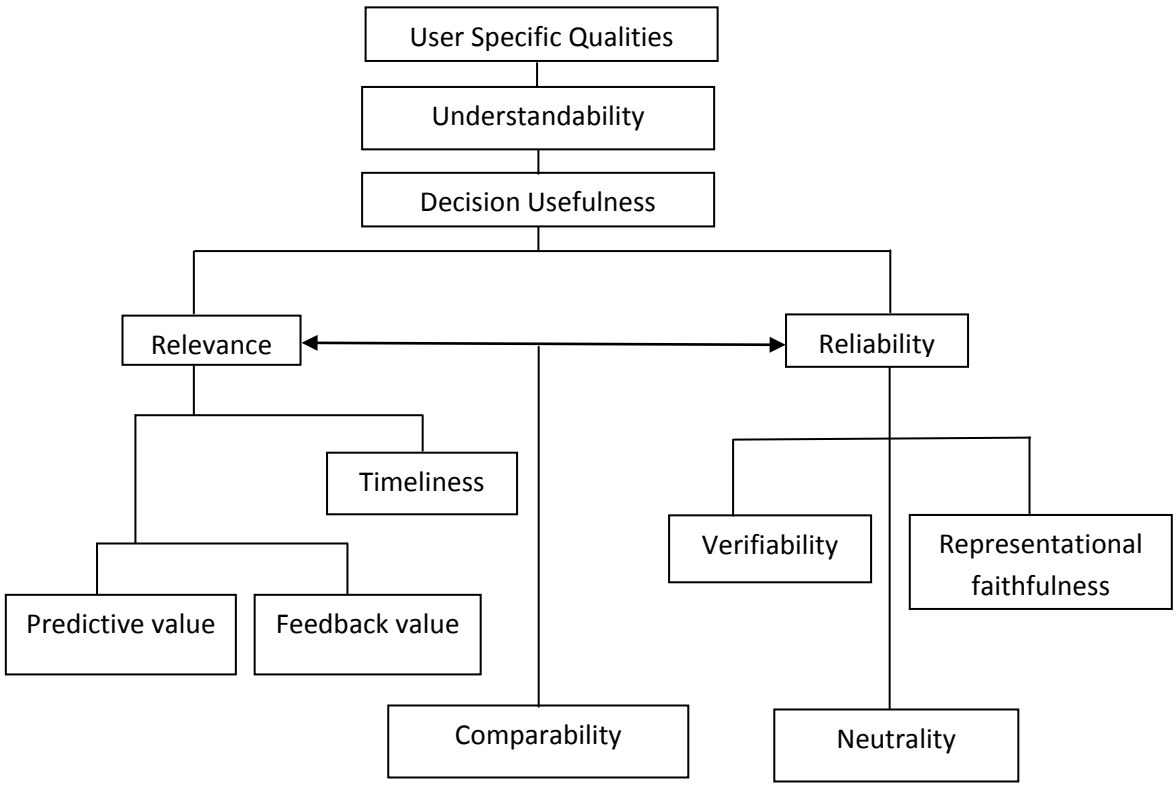

Source : Financial Accounting Standards Board (1980)

Graph 1 : Showing the hierarchy of qualitative characteristics of accounting information

f) Reliability

Information is reliable if it is free from error and bias, and faithfully represents what it purports to represent. If the information is not reliable, then no investor can rely on it to make an investment decision.

g) Verifiability

The ability through consensus among measurers to ensure that information represents what it purports to represent or that the chosen method of measurement has been used without error or bias.

h) Neutrality

It is absence in reported information of bias intended to attain a predetermined result or to induce a particular mode of behavior. The information should not favor one set of interest over others.

i) Representational Faithfulness

Correspondence or agreement between a measure or description and the phenomenon that it purports to represent. From the accounting point of view, it is correspondence between the accounting figures and descriptions and the resources or events that these figures and descriptions represent.

j) Comparability

The quality of information that enables users to identify similarities in and differences between two sets of economic phenomena.

k) Consistency

Consistency means conformity from period to period with unchanging policies and procedures. Accounting changes hinder the comparison of operation results between periods as the accounting used to measure those results differ.

VI. Evaluation of the Quality of Disclosure of Islamic Banks

a) Educational Qualifications of the Respondents

The highest level of educational qualifications of the respondents is stated in the Table 2. As per the Table, maximum 79.3% of the respondents have Masters Degree, secondly 15.7% of them have only Bachelor Degree and only 5.0% of them have PhD Degree. More specifically, all PhD Degree holders are from accounting professors, 96.7% of the bank executives and 89.5% of the professional accountants have Masters degree but maximum bachelor degree holders are from the investors.

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Table 2 : Showing the educational qualifications of the respondents

Educational Qualifications		Respondent Group					Total
		P. A.	A. P.	B. E.	S. B.	I. V.	
Bachelor	Count	2	0	1	5	11	19
	% within Res_Grop	10.5%	.0%	3.3%	22.7%	37.9%	15.7%
Masters	Count	17	15	29	17	18	96
	% within Res_Grop	89.5%	71.4%	96.7%	77.3%	62.1%	79.3%
Ph.D.	Count	0	6	0	0	0	6
	% within Res_Grop	.0%	28.6%	.0%	.0%	.0%	5.0%
Total	Count	19	21	30	22	29	121
	% within Res_Grop	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

N.B.: P.A.= Professional Accountant, A.P.= Accounting Professor, B.E.= Bank Executive, S.B.= Stock Broker and I.V. = Investor.

b) Professional Educational Qualification of the Respondents

Professional educational qualifications require to make a person specialized in a particular field. It is better to have professional degree on accounting for better understanding and evaluation of the quality of financial accounting reports. The study reveals that 60.3% of the respondents have no or other professional educational qualifications and out of the respondents having professional education 23.9% of them either have CA or CMA or both CA and CMA degree. All professional accountants have professional education; maximum 68.4% of the professional accountants have only CA degree; 56.7% of the bank executives have MBM or Banking Diploma but 100% of the stock brokers and 93.1% of the investors have no or other professional education.

Table 3 : Showing the professional educational qualification of the respondents

Professional Education		Respondent Group					Total
		P. A.	A. P.	B. E.	S. B.	I. V.	
CA	Count	13	2	1	0	0	16
	% within Res_Grop	68.4%	9.5%	3.3%	.0%	.0%	13.2%
CMA	Count	5	4	0	0	0	9
	% within Res_Grop	26.3%	19.0%	.0%	.0%	.0%	7.4%
Both CA and CMA	Count	1	1	2	0	0	4
	% within Res_Grop	5.3%	4.8%	6.7%	.0%	.0%	3.3%
MBM/ Banking Diploma	Count	0	0	17	0	2	19
	% within Res_Grop	.0%	.0%	56.7%	.0%	6.9%	15.7%
Others or None	Count	0	14	10	22	27	73
	% within Res_Grop	.0%	66.7%	33.3%	100.0%	93.1%	60.3%
Total	Count	19	21	30	22	29	121
	% within Res_Grop	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

c) Age Distribution of the Respondents

The age of the respondents in the study varied from below 25 years to above 55 years. Table 4 reveals that maximum 30.6% of the respondents having the age of 30-35 years, 21.5% of them fall in the age of 35-40 years and 16.5% of them are in the age of 25-30 years. Further, only 5.8% of the respondents having age of more than 50 years. More specifically 42.1% of the professional accountants are in the age of 25-30 years, 40.9% of the stock brokers, 36.7% of the bank executives and 33.3% of the accounting professors are in the age of 30-35 years.

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Table 4 : Showing age distribution of the respondents

Age Group		Respondent Group					Total
		P. A.	A. P.	B. E.	S. B.	I. V.	
Below 25	Count	0	0	2	1	0	3
	% within Res_Grop	.0%	.0%	6.7%	4.5%	.0%	2.5%
25-30	Count	8	1	4	6	1	20
	% within Res_Grop	42.1%	4.8%	13.3%	27.3%	3.4%	16.5%
30-35	Count	4	7	11	9	6	37
	% within Res_Grop	21.1%	33.3%	36.7%	40.9%	20.7%	30.6%
35-40	Count	4	3	8	2	9	26
	% within Res_Grop	21.1%	14.3%	26.7%	9.1%	31.0%	21.5%
40-45	Count	3	5	1	2	4	15
	% within Res_Grop	15.8%	23.8%	3.3%	9.1%	13.8%	12.4%
45-50	Count	0	3	3	2	5	13
	% within Res_Grop	.0%	14.3%	10.0%	9.1%	17.2%	10.7%
50-55	Count	0	1	1	0	2	4
	% within Res_Grop	.0%	4.8%	3.3%	.0%	6.9%	3.3%
Above 55	Count	0	1	0	0	2	3
	% within Res_Grop	.0%	4.8%	.0%	.0%	6.9%	2.5%
Total	Count	19	21	30	22	29	121
	% within Res_Grop	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

d) Working Experience of the Respondents

To identify the working experience of the respondents, few options of range of working experience varying from less than 5 years to more than 20 years were provided in the questionnaire. The results tabulated in the Table 5 reveals that 38.0% of the respondents have less than 5 years of working experience, 31.4% have experience of 5-10 years, 15.7% of them have experience of 10-15 years, about 10% of them have experience of 15-20 years and finally only 5% of them have more than 20 years of experience in their respective area.

Table 5 : Showing working experience of the respondents

Working Experience		Respondent Group					Total
		P. A.	A. P.	B. E.	S. B.	I. V.	
Less than 5 years	Count	10	4	14	13	5	46
	% within Res_Grop	52.6%	19.0%	46.7%	59.1%	17.2%	38.0%
5-10 years	Count	5	7	9	7	10	38
	% within Res_Grop	26.3%	33.3%	30.0%	31.8%	34.5%	31.4%
10-15 years	Count	3	3	4	1	8	19
	% within Res_Grop	15.8%	14.3%	13.3%	4.5%	27.6%	15.7%
15-20 years	Count	1	5	2	1	3	12
	% within Res_Grop	5.3%	23.8%	6.7%	4.5%	10.3%	9.9%
Above 20 years	Count	0	2	1	0	3	6
	% within Res_Grop	.0%	9.5%	3.3%	.0%	10.3%	5.0%
Total	Count	19	21	30	22	29	121
	% within Res_Grop	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

e) Accounting Qualification of the Respondents

Table 6 shows that 30.6% of the respondents served or serving as account executives; 28.1% of them hold accounting qualifications, that is, accounting degree like bachelor or masters in accounting; 17.4% of them serving as accounting professor and 16.5% of them attended appropriate courses in accounting. Rationally, 100% professional accountants served or serving as account executive and 100% accounting professors serving as accounting teaching position.

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Table 6 : Showing accounting qualification of the respondents

Accounting Qualifications		Respondent Group					Total
		P. A.	A. P.	B. E.	S. B.	I. V.	
Worked / Working as a bookkeeper	Count	0	0	4	1	1	6
	% within Res_Grop	.0%	.0%	13.3%	4.5%	3.4%	5.0%
Attended appropriate course(s) in Accounting	Count	0	0	7	2	11	20
	% within Res_Grop	.0%	.0%	23.3%	9.1%	37.9%	16.5%
Hold Accounting Qualifications	Count	0	0	12	13	9	34
	% within Res_Grop	.0%	.0%	40.0%	59.1%	31.0%	28.1%
Served/Serving as an Account Executive	Count	19	0	7	6	5	37
	% within Res_Grop	100.0%	.0%	23.3%	27.3%	17.2%	30.6%
Serving as Accounting teaching position	Count	0	21	0	0	0	21
	% within Res_Grop	.0%	100.0%	.0%	.0%	.0%	17.4%
None	Count	0	0	0	0	3	3
	% within Res_Grop	.0%	.0%	.0%	.0%	10.3%	2.5%
Total	Count	19	21	30	22	29	121
	% within Res_Grop	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

f) Opinion of the Respondents Regarding Purposes of using Islamic Banking Reports

Users of accounting information use financial accounting reports for a number of reasons. In the questionnaire of the study, the respondents were asked to identify the purpose of using Islamic banking reports. The results of the opinion survey in this regard are as given below:

Table 7 : Showing opinion of the respondents regarding purposes of using Islamic banking reports

Purpose of using Islamic Banking Report		Respondent Group					Total
		P. A.	A. P.	B. E.	S. B.	I. V.	
For reading and academic interest	Count	2	18	1	0	0	21
	% within Res_Grop	10.5%	85.7%	3.3%	.0%	.0%	17.4%
To decide buying, holding or selling shares personally	Count	2	1	7	2	28	40
	% within Res_Grop	10.5%	4.8%	23.3%	9.1%	96.6%	33.1%
To decide buying, holding or selling shares for organization	Count	1	2	5	2	0	10
	% within Res_Grop	5.3%	9.5%	16.7%	9.1%	.0%	8.3%
To grant investment (Loan)	Count	1	0	5	6	0	12
	% within Res_Grop	5.3%	.0%	16.7%	27.3%	.0%	9.9%
To make decisions on behalf of clients or employer	Count	11	0	10	2	1	24
	% within Res_Grop	57.9%	.0%	33.3%	9.1%	3.4%	19.8%
To advise clients	Count	2	0	2	10	0	14
	% within Res_Grop	10.5%	.0%	6.7%	45.5%	.0%	11.6%
Total	Count	19	21	30	22	29	121
	% within Res_Grop	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

As per the opinion of the respondents stated in Table 7, the highest number (that is 33.1%) of them use Islamic banking reports to decide buying, holding or selling shares personally followed by making decisions on behalf of clients or employer (19.8%) and reading and academic interest (17.4%). More specifically 57.9% of the professional accountants use Islamic banking reports for making decisions on behalf of clients or employer; 85.7% of the accounting professor use for reading and academic interest; 45.5% of the stock brokers use for advising their clients and 96.6% of the investors use for making decision to decide buying, holding or selling shares personally.

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g) Opinion of the Respondents regarding Mostly Read Part of Islamic Banking Reports

An annual report contains a number of parts and different parts provide different types and nature of information of difference importance. The respondents were asked which part of the reports of the Islamic banks they read most. The results of the opinion of the respondents in this regard are tabulated in Table 8:

Table 8 : Showing opinion of the respondents regarding mostly read part of Islamic banking reports

Mostly read parts of the reports		Respondent Group					Total
		P. A.	A. P.	B. E.	S. B.	I. V.	
Balance Sheet	Count	3	7	5	4	5	24
	% within Res_Grop	15.8%	33.3%	16.7%	18.2%	17.2%	19.8%
Income Statement	Count	4	6	4	5	7	26
	% within Res_Grop	21.1%	28.6%	13.3%	22.7%	24.1%	21.5%
Directors' Report	Count	1	2	3	2	2	10
	% within Res_Grop	5.3%	9.5%	10.0%	9.1%	6.9%	8.3%
Notes to the Accounts	Count	8	4	2	0	1	15
	% within Res_Grop	42.1%	19.0%	6.7%	.0%	3.4%	12.4%
Ratios and Future Projections	Count	3	2	15	11	13	44
	% within Res_Grop	15.8%	9.5%	50.0%	50.0%	44.8%	36.4%
Chairman's Statement	Count	0	0	1	0	1	2
	% within Res_Grop	.0%	.0%	3.3%	.0%	3.4%	1.7%
Total	Count	19	21	30	22	29	121
	% within Res_Grop	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Table 8 reveals that 36.4% of the respondent mostly read ratios and future projections part of Islamic banking reports and a similar percentage of 21.5% and 19.8% of them mostly read income statement and balance sheet respectively and only 12.4% of the respondents mostly read notes to the accounts for making decision. Among the professional accountants 42.1% emphasized on notes to the accounts and 33.3% of the accounting professors on balance sheet but maximum bank executives, stock brokers and investors emphasized on ratios and future projections.

In order to test whether there are significant differences among the opinion of the respondents, we conducted $\chi 2$ test using SPSS software. Accordingly we develop a null hypothesis as follows:

H_0 1 : There is no significance difference among the opinions of the respondents regarding mostly read part of the Islamic banking reports.

The $\chi 2$ value obtained using SPSS software is 35.715 at .017 level of significance and hence the null hypothesis is rejected which means that there is significant differences among the opinion of the respondents regarding mostly read part of the Islamic banking reports.

h) Opinion of the Respondents regarding Comparative Reliability of the Islamic Banking Information

The respondents were asked whether the information provided by conventional banks is comparatively more reliable than that of Islamic banks. The results of the opinion of the respondents in this regard are stated in Table 9:

Table 9 : Showing opinion of the respondents regarding comparative reliability of the Islamic banking information

Comparative Reliability		Respondent Group					Total
		P. A.	A. P.	B. E.	S. B.	I. V.	
Yes	Count	6	2	4	7	5	24
	% within Res_Grop	31.6%	9.5%	13.3%	31.8%	17.2%	19.8%
No	Count	13	19	26	15	24	97
	% within Res_Grop	68.4%	90.5%	86.7%	68.2%	82.8%	80.2%
Total	Count	19	21	30	22	29	121
	% within Res_Grop	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

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From the Table 9 it is observed that 80.20% of the respondents think that there is no difference in comparative reliability of the information provided by Islamic banks and conventional banks but 19.80% of the them opined that the information provided by conventional banks are more reliable than that of Islamic banks.

To test whether there are significant differences among the opinion of the respondents, we conducted $\chi 2$ test using SPSS software. Accordingly we develop a null hypothesis as follows:

H_0 2 : There is no significance difference among the opinions of the respondents regarding comparative reliability of the information provided by Islamic banks and conventional banks.

The $\chi 2$ value obtained using SPSS software is 5.959 at .202 level of significance and hence the null hypothesis is accepted which means that there is no significant differences among the opinion of the respondents regarding comparative reliability of the information provided by Islamic banks and conventional banks in Bangladesh.

i) Opinion of the Respondents regarding Compliance of BAS, BFRS, Companies Act, Banking Companies Act and SEC rules, etc.

Compliance of BAS, BFRS, Companies Act, Banking Companies Act and SEC rules, etc. is mandatory to be followed in accounting and reporting by the organizations. The respondents were asked regarding compliance of these standards/rules by the Islamic banks. The results of the opinion of the respondents in this regard are tabulated in Table 10:

Table 10 : Showing opinion of the respondents regarding compliance of BAS, BFRS, Companies Act, Banking Companies Act and SEC rules, etc.

Compliance of BAS, BFRS, Companies Act, Banking Companies Act, and SEC Rules, etc.		Respondent Group					
		P. A.	A. P.	B. E.	S. B.	I. V.	Total
Strongly Agree	Count	5	11	16	3	6	41
	% within Res_Grop	26.3%	52.4%	53.3%	13.6%	20.7%	33.9%
Agree	Count	10	9	12	15	20	66
	% within Res_Grop	52.6%	42.9%	40.0%	68.2%	69.0%	54.5%
Neutral	Count	2	0	1	3	1	7
	% within Res_Grop	10.5%	.0%	3.3%	13.6%	3.4%	5.8%
Disagree	Count	2	1	1	1	2	7
	% within Res_Grop	10.5%	4.8%	3.3%	4.5%	6.9%	5.8%
Total	Count	19	21	30	22	29	121
	% within Res_Grop	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Table 10 shows that only 11.60% of the respondents under study either neutral or disagree in case of compliance of IAS/BAS, IFRS/BFRS, Companies Act, Banking Companies Act, and SEC Rules, etc. by Islamic banks in Bangladesh but 88.40% of them agreed in this regard out of which 33.90 respondents agreed strongly.

In order to test whether there are significant differences among the opinion of the respondents, we conducted $\chi 2$ test using SPSS software. Accordingly we develop a null hypothesis as follows:

H_0 3 : There is no significance difference among the opinions of the respondents regarding compliance of IAS/BAS, IFRS/BFRS, Companies Act, Banking Companies Act, and SEC Rules, etc.

The $\chi 2$ value obtained using SPSS software is 19.592 at .075 level of significance and therefore the null hypothesis is accepted which means that there is no significant differences among the opinion of the respondents regarding compliance of IAS/BAS, IFRS/BFRS, Companies Act, Banking Companies Act, and SEC Rules, etc.

j) Opinion of the Respondents regarding Compliance of AAOIFI Financial Accounting Standards

AAOIFI developed some financial accounting standards that are needed to be followed in case of accounting and reporting by Islamic organizations. The respondents were asked regarding compliance of AAOIFI financial accounting standards by the Islamic banks. The results of the opinion of the respondents in this regard are tabulated in Table 11:

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Table 11 : Showing Opinion of the Respondents regarding Compliance of AAOIFI Financial Accounting Standards

Compliance of AAOIFI Standards		Respondent Group					Total
		P. A.	A. P.	B. E.	S. B.	I. V.	
Strongly Agree	Count	3	4	12	0	1	20
	% within Res_Grop	15.8%	19.0%	40.0%	.0%	3.4%	16.5%
Agree	Count	10	12	16	9	16	63
	% within Res_Grop	52.6%	57.1%	53.3%	40.9%	55.2%	52.1%
Neutral	Count	4	4	1	11	10	30
	% within Res_Grop	21.1%	19.0%	3.3%	50.0%	34.5%	24.8%
Disagree	Count	2	1	1	2	2	8
	% within Res_Grop	10.5%	4.8%	3.3%	9.1%	6.9%	6.6%
Total	Count	19	21	30	22	29	121
	% within Res_Grop	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

It is observed from the Table 11 that 6.6% respondents disagreed and 24.8% opined neutral in case of complying AAOIFI standards by Islamic banks in Bangladesh. On the other hand 16.5% of them strongly agreed and 52.1% simply agreed in this regard.

To test whether there are significant differences among the opinion of the respondents, we conducted $\chi 2$ test using SPSS software. Accordingly we develop a null hypothesis as follows:

H_0 4 : There is no significance difference among the

The $\chi 2$ value obtained using SPSS software is 31.358 at .002 level of significance and therefore the null hypothesis is rejected which means that there is significant differences among the opinion of the respondents regarding compliance of AAOIFI financial accounting standards by Islamic banks in Bangladesh. The reason may be of having no or poor idea regarding AAOIFI by the respondents other than bank executives.

k) Opinion of the Respondents regarding Adequacy of Disclosure by Islamic Banks

Decision makers always beg for information without which accurate decision making is almost impossible. Hence, companies should disclose adequate information in their reports so that the users can find all necessary information for making decision. The results of the responses regarding whether Islamic banks disclose adequate information in the annual reports or not are presented in the following table:

Table 12 : Showing opinion of the respondents regarding adequacy of disclosure by Islamic banks

Adequacy of Disclosure		Respondent Group					Total
		P. A.	A. P.	B. E.	S. B.	I. V.	
Strongly Agree	Count	1	0	2	0	0	3
	% within Res_Grop	5.3%	.0%	6.7%	.0%	.0%	2.5%
Agree	Count	7	15	18	15	18	73
	% within Res_Grop	36.8%	71.4%	60.0%	68.2%	62.1%	60.3%
Neutral	Count	6	5	7	5	9	32
	% within Res_Grop	31.6%	23.8%	23.3%	22.7%	31.0%	26.4%
Disagree	Count	5	1	3	2	2	13
	% within Res_Grop	26.3%	4.8%	10.0%	9.1%	6.9%	10.7%
Total	Count	19	21	30	22	29	121
	% within Res_Grop	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Table 12 reveals that only 2.5% of the respondents strongly agreed and 60.3% simply agreed that the information disclosed in the annual reports of the Islamic banks are adequate but a significant number that is 26.4% of the opined neutral and 10.7% disagreed in this point. Therefore, it may infer from here that

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respondents expect more disclosure of information in the annual reports of Islamic banks.

To test whether there are significant differences among the opinion of the respondents, we conducted $\chi 2$ test using SPSS software. Accordingly we develop a null hypothesis as follows:

H_0 5 : There is no significance difference among the opinions of the respondents regarding adequacy of disclosure by Islamic banks in Bangladesh.

The $\chi 2$ value obtained using SPSS software is 13.066 at .364 level of significance and therefore the null hypothesis is accepted which means that there is no significant differences among the opinion of the respondents regarding adequacy of disclosure by Islamic banks in Bangladesh.

l) Opinion of the Respondents regarding Effectiveness of the Information of the Islamic Banks

The results of the opinion of the respondents regarding effectiveness of the information provided by Islamic banks in their annual reports are as presented below in Table 13:

Table 13 : Showing opinion of the respondents regarding effectiveness of the information of the Islamic banks

Effectiveness of Information		Respondent Group					Total
		P. A.	A. P.	B. E.	S. B.	I. V.	
Strongly Agree	Count	1	5	11	1	6	24
	% within Res_Grop	5.3%	23.8%	36.7%	4.5%	20.7%	19.8%
Agree	Count	14	12	16	12	14	68
	% within Res_Grop	73.7%	57.1%	53.3%	54.5%	48.3%	56.2%
Neutral	Count	2	3	1	7	7	20
	% within Res_Grop	10.5%	14.3%	3.3%	31.8%	24.1%	16.5%
Disagree	Count	2	1	2	2	2	9
	% within Res_Grop	10.5%	4.8%	6.7%	9.1%	6.9%	7.4%
Total	Count	19	21	30	22	29	121
	% within Res_Grop	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

From the above Table, it can be observed that 24% of the respondents under study either neutral or disagreed regarding the effectiveness of the information provided by Islamic banks but 76% of them either strongly agreed or agreed that the information is effective in making decision.

In order to test whether there are significant differences among the opinion of the respondents, we conducted $\chi 2$ test using SPSS software. Accordingly we develop a null hypothesis as follows:

H_0 6 : There is no significance difference among the opinions of the respondents regarding effectiveness of the information of Islamic banks.

Using SPSS software the obtained value of $\chi 2$ is 18.833 at .093 level of significance and therefore the null hypothesis is accepted which means that there is no significant differences among the opinion of the respondents regarding the effectiveness of the information provided by Islamic banks in Bangladesh.

m) Opinion of the Respondents regarding Usefulness of the Information of the Islamic Banks

The results of the responses of the respondents regarding usefulness of the information provided by Islamic banks in their annual reports are as presented below in Table 14:

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Table 14 : Showing opinion of the respondents regarding usefulness of the information of the Islamic banks

Usefulness of the Information		Respondent Group					Total
		P. A.	A. P.	B. E.	S. B.	I. V.	
Strongly Agree	Count	3	4	11	2	4	24
	% within Res_Grop	15.8%	19.0%	36.7%	9.1%	13.8%	19.8%
Agree	Count	12	14	16	14	19	75
	% within Res_Grop	63.2%	66.7%	53.3%	63.6%	65.5%	62.0%
Neutral	Count	2	2	1	5	5	15
	% within Res_Grop	10.5%	9.5%	3.3%	22.7%	17.2%	12.4%
Disagree	Count	2	1	2	1	1	7
	% within Res_Grop	10.5%	4.8%	6.7%	4.5%	3.4%	5.8%
Total	Count	19	21	30	22	29	121
	% within Res_Grop	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

From the above table, it is seen that 19.8% respondents strongly agreed and 62.0% merely agreed that the information of Islamic banks are useful in making decision but 12.4% responded neutral and 5.8% disagreed in this regard.

To test whether there are significant differences among the opinion of the respondents, we conducted $\chi 2$ test using SPSS software. Accordingly we develop a null hypothesis as follows:

H_0 7 : There is no significance difference among the opinions of the respondents regarding usefulness of the information of Islamic banks.

Using SPSS software the obtained value of $\chi 2$ is 12.544 at .403 level of significance and therefore the null hypothesis is accepted which means that there is no significant differences among the opinion of the respondents regarding the usefulness of the information provided by Islamic banks in Bangladesh.

n) Opinion of the Respondents regarding Understandability of the Information of the Islamic Banks

The results of the opinion of the respondents regarding understandability of the information provided by Islamic banks in their annual reports are stated in Table 15:

Table 15 : Showing opinion of the respondents regarding understandability of the information of the Islamic banks

Understandability of the Report		Respondent Group					Total
		P. A.	A. P.	B. E.	S. B.	I. V.	
Strongly Agree	Count	3	6	11	1	2	23
	% within Res_Grop	15.8%	28.6%	36.7%	4.5%	6.9%	19.0%
Agree	Count	12	10	16	10	19	67
	% within Res_Grop	63.2%	47.6%	53.3%	45.5%	65.5%	55.4%
Neutral	Count	3	4	2	8	6	23
	% within Res_Grop	15.8%	19.0%	6.7%	36.4%	20.7%	19.0%
Disagree	Count	1	1	1	3	2	8
	% within Res_Grop	5.3%	4.8%	3.3%	13.6%	6.9%	6.6%
Total	Count	19	21	30	22	29	121
	% within Res_Grop	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Table 15 shows that 19.0% strongly agreed and 55.4% agreed that the information provided by Islamic banks in their annual reports is understandable. On the other hand, 19.0% responded neutrally and 6.6% of them disagreed in this point.

In order to test whether there are significant differences among the opinion of the respondents, we conducted $\chi 2$ test using SPSS software. Accordingly we develop a null hypothesis as follows:

H_0 8 : There is no significance difference among the opinions of the respondents regarding understandability of the information of Islamic banks.

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We obtained value of $\chi 2$ is 20.414 at .060 level of significance using SPSS software and therefore the null hypothesis is accepted which means that there is no significant differences among the opinion of the respondents regarding the understandability of the information provided by Islamic banks in Bangladesh.

o) Opinion of the Respondents regarding Relevancy of the Information of the Islamic Banks

The respondents were asked regarding relevancy of the information of the Islamic banks. The results of the responses of the respondents regarding relevancy of the information provided by Islamic banks in their annual reports are stated in Table 16:

Table 16 : Showing opinion of the respondents regarding relevancy of the information of the Islamic banks

Relevancy of Information		Respondent Group					Total
		P. A.	A. P.	B. E.	S. B.	I. V.	
Strongly Agree	Count	1	7	10	1	4	23
	% within Res_Grop	5.3%	33.3%	33.3%	4.5%	13.8%	19.0%
Agree	Count	14	8	18	14	19	73
	% within Res_Grop	73.7%	38.1%	60.0%	63.6%	65.5%	60.3%
Neutral	Count	4	5	2	6	5	22
	% within Res_Grop	21.1%	23.8%	6.7%	27.3%	17.2%	18.2%
Disagree	Count	0	1	0	1	1	3
	% within Res_Grop	.0%	4.8%	.0%	4.5%	3.4%	2.5%
Total	Count	19	21	30	22	29	121
	% within Res_Grop	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

From the Table 16, we observe that 2.5% of the respondents disagreed and 18.2% responded neutrally in case of relevancy of the information of the Islamic banks in Bangladesh but 60.3% of them agreed and 19.0% strongly agreed in this case.

To test whether there are significant differences among the opinion of the respondents, we conducted $\chi 2$ test using SPSS software. Accordingly we develop a null hypothesis as follows:

H_0 9 : There is no significance difference among the opinions of the respondents regarding relevancy of the information of Islamic banks.

We obtained value of $\chi 2$ is 18.481 at .102 level of significance using SPSS software and therefore the null hypothesis is accepted which means that there is no significant differences among the opinion of the respondents regarding the relevancy of the information provided by Islamic banks.

p) Opinion of the Respondents regarding Predictive Value of the Information of the Islamic Banks

The results of the opinion of the respondents regarding predictive value of the information provided by Islamic banks in their annual reports are tabulated in Table 17:

Table 17 : Showing opinion of the respondents regarding predictive value of the information of the Islamic banks

Predictive Value		Respondent Group					Total
		P. A.	A. P.	B. E.	S. B.	I. V.	
Strongly Agree	Count	1	2	6	2	3	14
	% within Res_Grop	5.3%	9.5%	20.0%	9.1%	10.3%	11.6%
Agree	Count	7	13	19	6	15	60
	% within Res_Grop	36.8%	61.9%	63.3%	27.3%	51.7%	49.6%
Neutral	Count	9	5	2	10	9	35
	% within Res_Grop	47.4%	23.8%	6.7%	45.5%	31.0%	28.9%
Disagree	Count	2	1	3	4	2	12
	% within Res_Grop	10.5%	4.8%	10.0%	18.2%	6.9%	9.9%
Total	Count	19	21	30	22	29	121
	% within Res_Grop	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

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Table 17 shows that 11.6% of the respondents under study agreed strongly and 49.6% agreed that the information of the annual reports of the Islamic banks has predictive value. On the other hand, 28.9% of them opined neutral and 9.9% of them disagreed in this regard.

In order to test whether there are significant differences among the opinion of the respondents, we conducted $\chi 2$ test using SPSS software. Accordingly we develop a null hypothesis as follows:

H_0 10 : There is no significance difference among the opinions of the respondents regarding predictive value of the information of Islamic banks.

We obtained value of $\chi 2$ is 19.408 at .079 level of significance using SPSS software and therefore the null hypothesis is accepted which means that there is no significant differences among the opinion of the respondents regarding the predictive value of the information provided by Islamic banks in Bangladesh.

q) Opinion of the Respondents regarding Feedback Value of the Information of the Islamic Banks

The respondents were asked regarding feedback value of the information of the Islamic banks. The results of the responses of the respondents regarding feedback value of the information provided by Islamic banks in their annual reports are tabulated in Table 18:

Table 18 : Showing opinion of the respondents regarding feedback value of the information of the Islamic banks

Feedback Value		Respondent Group					Total
		P. A.	A. P.	B. E.	S. B.	I. V.	
Strongly Agree	Count	0	0	3	2	2	7
	% within Res_Grop	.0%	.0%	10.0%	9.1%	6.9%	5.8%
Agree	Count	9	14	21	9	16	69
	% within Res_Grop	47.4%	66.7%	70.0%	40.9%	55.2%	57.0%
Neutral	Count	7	5	6	9	9	36
	% within Res_Grop	36.8%	23.8%	20.0%	40.9%	31.0%	29.8%
Disagree	Count	3	2	0	2	2	9
	% within Res_Grop	15.8%	9.5%	.0%	9.1%	6.9%	7.4%
Total	Count	19	21	30	22	29	121
	% within Res_Grop	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

From the above table, it can be observed that 7.4% of the respondents under study disagreed and 29.8% opined neutral position regarding feedback value of the information provided in annual reports of the Islamic banks but 5.8% of them strongly agreed and 57.0% merely agreed in this point.

In order to test whether there are significant differences among the opinion of the respondents, we conducted $\chi 2$ test using SPSS software. Accordingly we develop a null hypothesis as follows:

H_0 11 : There is no significance difference among the opinions of the respondents regarding feedback value of the information of Islamic banks.

We obtained value of $\chi 2$ is 12.965 at .372 level of significance using SPSS software and therefore the null hypothesis is accepted which means that there is no significant differences among the opinion of the respondents regarding the feedback value of the information provided by Islamic banks in Bangladesh.

r) Opinion of the Respondents regarding Timeliness of the Information of the Islamic Banks

The results of the opinion of the respondents regarding timeliness of the information provided by Islamic banks in their annual reports are presented in Table 19:

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Table 19 : Showing opinion of the respondents regarding timeliness of the information of Islamic banks

Timeliness of Information		Respondent Group					Total
		P. A.	A. P.	B. E.	S. B.	I. V.	
Strongly Agree	Count	4	11	17	4	9	45
	% within Res_Grop	21.1%	52.4%	56.7%	18.2%	31.0%	37.2%
Agree	Count	13	9	13	16	15	66
	% within Res_Grop	68.4%	42.9%	43.3%	72.7%	51.7%	54.5%
Neutral	Count	1	0	0	2	3	6
	% within Res_Grop	5.3%	.0%	.0%	9.1%	10.3%	5.0%
Disagree	Count	1	1	0	0	2	4
	% within Res_Grop	5.3%	4.8%	.0%	.0%	6.9%	3.3%
Total	Count	19	21	30	22	29	121

Table 19 reveals that 37.2% of the respondents strongly and 54.5% merely opined that Islamic banks provide information timely but only 8.3% of them either neutral or disagree in this case.

To test whether there are significant differences among the opinion of the respondents, we conducted $\chi 2$ test using SPSS software. Accordingly we develop a null hypothesis as follows:

H_0 12 : There is no significance difference among the opinions of the respondents regarding timeliness of the information of Islamic banks.

Using SPSS software the obtained value of $\chi 2$ is 19.582 at .075 level of significance and therefore the null hypothesis is accepted which means that there is no significant differences among the opinion of the respondents regarding timeliness of the information provided by Islamic banks.

s) Opinion of the Respondents regarding Reliability of the Information of the Islamic Banks

The respondents were asked regarding reliability of the information of the Islamic banks. The results of the responses of the respondents regarding reliability of the information provided by Islamic banks in their annual reports are tabulated in Table 20:

Table 20 : Showing opinion of the respondents regarding reliability of the information of the Islamic banks

Reliability of Information		Respondent Group					Total
		P. A.	A. P.	B. E.	S. B.	I. V.	
Strongly Agree	Count	3	7	16	4	5	35
	% within Res_Grop	15.8%	33.3%	53.3%	18.2%	17.2%	28.9%
Agree	Count	9	11	11	12	18	61
	% within Res_Grop	47.4%	52.4%	36.7%	54.5%	62.1%	50.4%
Neutral	Count	6	2	2	4	3	17
	% within Res_Grop	31.6%	9.5%	6.7%	18.2%	10.3%	14.0%
Disagree	Count	1	1	1	2	3	8
	% within Res_Grop	5.3%	4.8%	3.3%	9.1%	10.3%	6.6%
Total	Count	19	21	30	22	29	121
	% within Res_Grop	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

From the above table, it can be observed that 20.6% of the respondents either neutral or disagreed in case of giving opinion regarding the reliability of the information provided by Islamic banks but 28.9% strongly agreed and 50.4% of them merely agreed in this point.

In order to test whether there are significant differences among the opinion of the respondents, we conducted $\chi 2$ test using SPSS software. Accordingly we develop a null hypothesis as follows:

H_0 13 : There is no significance difference among the opinions of the respondents regarding reliability of the information of Islamic banks.

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Using SPSS software the obtained value of $\chi 2$ is 19.372 at .080 level of significance and therefore the null hypothesis is accepted which means that there is no significant differences among the opinion of the respondents regarding reliability of the information provided by Islamic banks in Bangladesh.

t) Opinion of the Respondents regarding Verifiability of the Information of the Islamic Banks

The respondents were asked regarding the verifiability of the information provided by the Islamic banks. The results of the opinion of the respondents in this regard are presented in Table 21:

Table 21 : Showing opinion of the respondents regarding verifiability of the information of the Islamic banks

Verifiability of Information		Respondent Group					Total
		P. A.	A. P.	B. E.	S. B.	I. V.	
Strongly Agree	Count	1	4	11	1	5	22
	% within Res_Grop	5.3%	19.0%	36.7%	4.5%	17.2%	18.2%
Agree	Count	11	13	16	12	14	66
	% within Res_Grop	57.9%	61.9%	53.3%	54.5%	48.3%	54.5%
Neutral	Count	5	2	1	5	7	20
	% within Res_Grop	26.3%	9.5%	3.3%	22.7%	24.1%	16.5%
Disagree	Count	2	2	2	4	3	13
	% within Res_Grop	10.5%	9.5%	6.7%	18.2%	10.3%	10.7%
Total	Count	19	21	30	22	29	121
	% within Res_Grop	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Table 21 shows that 18.2% of the respondents strongly agreed and 54.5% agreed that the information provided by Islamic banks in their annual reports is verifiable but 16.5% of them are neutral and 10.7% of them disagreed in this case.

To test whether there are significant differences among the opinion of the respondents, we conducted $\chi 2$ test using SPSS software. Accordingly we develop a null hypothesis as follows:

H_0 14 : There is no significance difference among the opinions of the respondents regarding verifiability of the information of Islamic banks.

Using SPSS software the obtained value of $\chi 2$ is 18.163 at .111 level of significance and therefore the null hypothesis is accepted which means that there is no significant differences among the opinion of the respondents regarding verifiability of the information provided by Islamic banks in Bangladesh.

u) Opinion of the Respondents regarding Faithfulness of the Information of the Islamic Banks

The respondents were asked regarding faithfulness of the information of the Islamic banks. The results of the responses of the respondents regarding faithfulness of the information provided by Islamic banks in their annual reports are tabulated in Table 22:

Table 22 : Showing opinion of the respondents regarding faithfulness of the information of the Islamic banks

Faithfulness of Information		Respondent Group					Total
		P. A.	A. P.	B. E.	S. B.	I. V.	
Strongly Agree	Count	2	7	13	3	5	30
	% within Res_Grop	10.5%	33.3%	43.3%	13.6%	17.2%	24.8%
Agree	Count	10	12	16	13	17	68
	% within Res_Grop	52.6%	57.1%	53.3%	59.1%	58.6%	56.2%
Neutral	Count	6	1	1	4	5	17
	% within Res_Grop	31.6%	4.8%	3.3%	18.2%	17.2%	14.0%
Disagree	Count	1	1	0	2	2	6
	% within Res_Grop	5.3%	4.8%	.0%	9.1%	6.9%	5.0%
Total	Count	19	21	30	22	29	121
	% within Res_Grop	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

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From the Table 22, it is seen that 24.8% of the respondents strongly agreed and 56.2% simply agreed that the information of Islamic banks is faithful. But 20% of the respondents opined either neutral or disagree in case of faithfulness of the information.

In order to test whether there are significant differences among the opinion of the respondents, we conducted $\chi 2$ test using SPSS software. Accordingly we develop a null hypothesis as follows:

H_0 15 : There is no significance difference among the opinions of the respondents regarding faithfulness of the information of Islamic banks.

We obtained value of $\chi 2$ is 19.106 at .086 level of significance using SPSS software and therefore the null hypothesis is accepted which means that there is no significant differences among the opinion of the respondents regarding the faithfulness of the information provided by Islamic banks in Bangladesh.

v) Opinion of the Respondents regarding Neutrality of the Information of the Islamic Banks

The results of the opinion of the respondents regarding neutrality of the information provided by Islamic banks in their annual reports are stated in Table 23:

Table 23 : Showing opinion of the respondents regarding neutrality of the information of the Islamic banks

Neutrality of Information		Respondent Group					Total
		P. A.	A. P.	B. E.	S. B.	I. V.	
Strongly Agree	Count	2	5	11	1	2	21
	% within Res_Grop	10.5%	23.8%	36.7%	4.5%	6.9%	17.4%
Agree	Count	10	8	15	12	17	62
	% within Res_Grop	52.6%	38.1%	50.0%	54.5%	58.6%	51.2%
Neutral	Count	5	7	2	6	7	27
	% within Res_Grop	26.3%	33.3%	6.7%	27.3%	24.1%	22.3%
Disagree	Count	2	1	2	3	3	11
	% within Res_Grop	10.5%	4.8%	6.7%	13.6%	10.3%	9.1%
Total	Count	19	21	30	22	29	121
	% within Res_Grop	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Table 23 reveals that out of the respondents under study 17.4% strongly agreed and 51.2% merely agreed that the information of the Islamic banks is neutral but 22.3% of them opined neutral and 9.1% disagreed in this regard.

To test whether there are significant differences among the opinion of the respondents, we conducted $\chi 2$ test using SPSS software. Accordingly we develop a null hypothesis as follows:

H_0 16 : There is no significance difference among the opinions of the respondents regarding neutrality of the information of Islamic banks.

We obtained value of $\chi 2$ is 18.525 at .101 level of significance using SPSS software and therefore the null hypothesis is accepted which means that there is no significant differences among the opinion of the respondents regarding the neutrality of the information provided by Islamic banks.

w) Opinion of the Respondents regarding Comparability of the Information of the Islamic Banks

The respondents were asked regarding comparability of the information of the Islamic banks. The results of the responses of the respondents regarding comparability of the information provided by Islamic banks in their annual reports are tabulated in Table 24:

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Table 24 : Showing opinion of the respondents regarding comparability of the information of the Islamic banks

Comparability of Information		Respondent Group					Total
		P. A.	A. P.	B. E.	S. B.	I. V.	
Strongly Agree	Count	1	3	10	1	3	18
	% within Res_Grop	5.3%	14.3%	33.3%	4.5%	10.3%	14.9%
Agree	Count	15	13	16	13	19	76
	% within Res_Grop	78.9%	61.9%	53.3%	59.1%	65.5%	62.8%
Neutral	Count	2	4	3	8	7	24
	% within Res_Grop	10.5%	19.0%	10.0%	36.4%	24.1%	19.8%
Disagree	Count	1	1	1	0	0	3
	% within Res_Grop	5.3%	4.8%	3.3%	.0%	.0%	2.5%
Total	Count	19	21	30	22	29	121
	% within Res_Grop	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

From the Table 24, it can be observed that 2.5% of the respondents thought negatively and 19.8% opined their neutral position regarding comparability of the information of the Islamic banks but 14.9% shows their strong positive position and 62.8% shows simple positive stance in this point.

In order to test whether there are significant differences among the opinion of the respondents, we conducted $\chi 2$ test using SPSS software. Accordingly we develop a null hypothesis as follows:

H_0 17 : There is no significance difference among the opinions of the respondents regarding comparability of the information of Islamic banks.

Using SPSS software the obtained value of $\chi 2$ is 19.324 at .081 level of significance and therefore the null hypothesis is accepted which means that there is no significant differences among the opinion of the respondents regarding comparability of the information provided by Islamic banks in Bangladesh.

x) Opinion of the Respondents regarding Consistency of the Information of the Islamic Banks

The results of the opinion of the respondents regarding consistency of the information provided by Islamic banks in their annual reports are presented in Table 25:

Table 25 : Showing opinion of the respondents regarding consistency of the information of the Islamic banks

Consistency of Information		Respondent Group					Total
		P. A.	A. P.	B. E.	S. B.	I. V.	
Strongly Agree	Count	1	5	9	1	3	19
	% within Res_Grop	5.3%	23.8%	30.0%	4.5%	10.3%	15.7%
Agree	Count	13	13	19	15	16	76
	% within Res_Grop	68.4%	61.9%	63.3%	68.2%	55.2%	62.8%
Neutral	Count	3	1	2	5	7	18
	% within Res_Grop	15.8%	4.8%	6.7%	22.7%	24.1%	14.9%
Disagree	Count	2	2	0	1	3	8
	% within Res_Grop	10.5%	9.5%	.0%	4.5%	10.3%	6.6%
Total	Count	19	21	30	22	29	121
	% within Res_Grop	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

It can be observed from the Table 25 that 15.7% of the respondents strongly agreed and 62.8% of them merely agreed that Islamic banks provide consistence information in their annual reports but 6.6% of them disagreed and 14.9% opined neutral in this case.

In order to test whether there are significant differences among the opinion of the respondents, we conducted $\chi 2$ test using SPSS software. Accordingly we develop a null hypothesis as follows:

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H_0 18 : There is no significance difference among the opinions of the respondents regarding consistency of the information of Islamic banks.

Using SPSS software the obtained value of $\chi 2$ is 17.691 at .125 level of significance and therefore the null hypothesis is accepted which means that there is no significant differences among the opinion of the respondents regarding consistency of the information provided by Islamic banks.

y) Opinion of the Respondents regarding Effectiveness of Accounting Information Systems of the Islamic Banks

The respondents were asked regarding effectiveness of accounting information systems of the Islamic banks. The results of the responses of the respondents in this regard are presented in Table 26:

Table 26 : Showing opinion of the respondents regarding effectiveness of accounting information systems of the Islamic banks

Effectiveness of Accounting Information Systems		Respondent Group					Total
		P. A.	A. P.	B. E.	S. B.	I. V.	
Strongly Agree	Count	1	4	9	1	5	20
	% within Res_Grop	5.3%	19.0%	30.0%	4.5%	17.2%	16.5%
Agree	Count	11	11	14	15	13	64
	% within Res_Grop	57.9%	52.4%	46.7%	68.2%	44.8%	52.9%
Neutral	Count	6	4	7	5	11	33
	% within Res_Grop	31.6%	19.0%	23.3%	22.7%	37.9%	27.3%
Disagree	Count	1	2	0	1	0	4
	% within Res_Grop	5.3%	9.5%	.0%	4.5%	.0%	3.3%
Total	Count	19	21	30	22	29	121
	% within Res_Grop	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Table 26 shows that 27.3% of the respondents surveyed opined neutral and 3.3% of them disagreed regarding the effectiveness of accounting information systems of the Islamic banks. On the other hand 52.9% of them simply and 16.5% strongly agreed in this regard.

To test whether there are significant differences among the opinion of the respondents, we conducted $\chi 2$ test using SPSS software. Accordingly we develop a null hypothesis as follows:

H_0 19 : There is no significance difference among the opinions of the respondents regarding effectiveness of the accounting information systems of Islamic banks.

We obtained value of $\chi 2$ is 15.318 at .225 level of significance using SPSS software and therefore the null hypothesis is accepted which means that there is no significant differences among the opinion of the respondents regarding the effectiveness of accounting information systems of the Islamic banks in Bangladesh.

z) Opinion of the Respondents regarding Compliance of Rules regarding Appointment of Auditors of the Islamic Banks

Quality of information also depends on the quality of audit firms and compliance of rules regarding their appointment. The respondents were asked regarding compliance of rules regarding appointment of auditors of the Islamic banks. The results of the responses of the respondents in this regard are tabulated in Table 27:

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Table 27 : Showing opinion of the respondents regarding appointment of auditors of the Islamic banks

Appointment of Auditors		Respondent Group					Total
		P. A.	A. P.	B. E.	S. B.	I. V.	
Strongly Agree	Count	3	9	13	8	4	37
	% within Res_Grop	15.8%	42.9%	43.3%	36.4%	13.8%	30.6%
Agree	Count	13	11	16	13	24	77
	% within Res_Grop	68.4%	52.4%	53.3%	59.1%	82.8%	63.6%
Neutral	Count	1	1	1	1	1	5
	% within Res_Grop	5.3%	4.8%	3.3%	4.5%	3.4%	4.1%
Disagree	Count	2	0	0	0	0	2
	% within Res_Grop	10.5%	.0%	.0%	.0%	.0%	1.7%
Total	Count	19	21	30	22	29	121
	% within Res_Grop	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

On the basis of the Table 27, it can be said that 30.6% of the respondents strongly agreed and 63.6% of them merely agreed that regarding compliance of all rules and regulations of appointment of auditors by the Islamic banks. But 5.8% of them opined either neutral or disagree in this point.

In order to test whether there are significant differences among the opinion of the respondents, we conducted $\chi 2$ test using SPSS software. Accordingly we develop a null hypothesis as follows:

H_0 20 : There is no significance difference among the opinions of the respondents regarding appointment of auditors of Islamic banks.

We obtained value of $\chi 2$ is 20.532 at .058 level of significance using SPSS software and therefore the null hypothesis is accepted which means that there is no significant differences among the opinion of the respondents regarding compliance of all rules and regulations of appointment of auditors by the Islamic banks.

aa) Opinion of the Respondents regarding Quality of Audit of the Islamic Banks

Quality audit is expected to produce quality information. The respondents were asked regarding quality of audit of the Islamic banks. The results of the responses of the respondents in this regard are presented in Table 28:

Table 28 : Showing opinion of the respondents regarding quality of audit of the Islamic banks

Quality of Audit		Respondent Group					Total
		P. A.	A. P.	B. E.	S. B.	I. V.	
Strongly Agree	Count	2	10	9	2	3	26
	% within Res_Grop	10.5%	47.6%	30.0%	9.1%	10.3%	21.5%
Agree	Count	13	10	19	18	22	82
	% within Res_Grop	68.4%	47.6%	63.3%	81.8%	75.9%	67.8%
Neutral	Count	2	1	1	1	3	8
	% within Res_Grop	10.5%	4.8%	3.3%	4.5%	10.3%	6.6%
Disagree	Count	2	0	1	1	1	5
	% within Res_Grop	10.5%	.0%	3.3%	4.5%	3.4%	4.1%
Total	Count	19	21	30	22	29	121
	% within Res_Grop	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

From the Table 28, it can be observed that 21.5% of the respondents agreed strongly and 67.8% of them simply agreed regarding quality audit of the financial reports of the Islamic banks but 10.7% of them opined differently in this regard.

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To test whether there are significant differences among the opinion of the respondents, we conducted $\chi 2$ test using SPSS software. Accordingly we develop a null hypothesis as follows:

H_0 21: There is no significance difference among the opinions of the respondents regarding quality audit of the financial reports of Islamic banks.

We obtained value of $\chi 2$ is 18.890 at .091 level of significance using SPSS software and therefore the null hypothesis is accepted which means that there is no significant differences among the opinion of the respondents regarding quality audit of the financial reports of the Islamic banks in Bangladesh.

VII. Findings of the Study

On the basis of the analysis of the perceptions of the respondents, the findings of the study may be stated as below:

a) Most of the respondents think that there is no difference in comparative reliability of the information provided by Islamic banks and conventional banks but few professional accountants and stock brokers think that the information provided by conventional banks are more reliable than that of Islamic banks.

b) Maximum respondents thought that in maintaining quality of disclosure, Islamic banks in Bangladesh could maintain high quality in case of timeliness, faithfulness, usefulness, relevance and reliability of information.

c) In maintaining quality of disclosure, Islamic banks in Bangladesh could maintain moderate quality in case of consistency, comparability, effectiveness, understandability and verifiability of information.

d) Maximum respondents thought that Islamic banks in Bangladesh could not maintain high quality of information in case of predictive value, feedback value, adequacy, neutrality and effectiveness of accounting information system.

e) Islamic banks highly comply BAS, BFRS, Companies Act, banking Companies Act, SEC rules, etc. in preparing books of accounts and also comply rules of appointment of auditors and quality of audit in case of reporting of the information to its stakeholders. But the opinion of the respondents is not satisfactory and indifferent regarding complying AAOIFI financial accounting standards.

f) The highest number of the respondents uses Islamic banking reports to decide buying, holding or selling shares personally followed by making decisions on behalf of clients or employer and reading and academic interest. More specifically, maximum professional accountants use Islamic banking reports for making decisions on behalf of clients or employer; maximum accounting professors use for reading and academic interest; maximum stock brokers use for advising their clients and almost all investors use for making decision to decide buying, holding or selling shares personally.

g) Maximum of the respondents mostly read ratios and future projections part of Islamic banking reports followed by income statement and balance sheet for making decision. Specifically, maximum professional accountants emphasize on notes to the accounts and maximum accounting professors read balance sheet but maximum bank executives, stock brokers and investors emphasized on ratios and future projections.

VIII. Conclusion

Quality of disclosure is a must to make accurate decision by the users of the accounting information. As per the present study, the quality of Islamic banking disclosure process and accounting information may be said to be satisfactory. As the quality has no highest limit and as there are some lack of quality in few cases, Islamic banks should try to improve the quality in those areas.

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Value Relevance of Reported Earnings under Conservative Accounting Versus under Mark to Market Accounting

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Abstract - This paper compares the value relevance of earnings under two different accounting methods (namely, conservative accounting and mark to market accounting) in a competitive security market. It proves that the reported earnings are value relevant under both types of accounting methods. Furthermore, if the proportion of earnings fixated traders lies in the upper range of the interval [0,1], the reported earnings under conservative accounting are more value relevant than the ones under mark to market. Otherwise, the reported earnings under mark to market are more value relevant than the ones under conservative accounting.

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I. Introduction

The value relevance of earnings is referred to the association between earnings and security market values. This association was explored as early as in 1968 by Ball and Brown (1968), who examine the usefulness of accounting income numbers to investors. In the past two decades, a large number of empirical articles examine this association in different contexts. For example, Alford et al. (1993) find empirical evidence that this association between earnings and stock returns is stronger in countries where capital is traditionally raised in capital markets and there are weaker links between financial and tax reporting. Chan and Seow (1996) examine this association under foreign GAAP versus U.S. GAAP. They find a stronger association using foreign GAAP earnings than using earnings adjusted to U.S. GAAP. Ali and Hwang (1999) examine the relationship between value relevance and country specific factors related to financial reporting. They find that the value relevance of financial reports is lower for countries where the financial systems are bank-oriented rather than market-oriented.

Recently, in the literature, a group of articles focuses on examining the value relevance of accounting information under mark to market accounting. Barlev and Haddad (2003) advocate that historical cost accounting hides the real financial position and the fair value accounting is more value relevant than historical cost accounting. Ahmed and Takeda (1995) supports fair value accounting in their examination of the relation between unrealized or realized gain/losses and bank returns in normal period. Beatty et al. (1996) also find empirical evidence supporting fair value accounting in analyzing the bank share prices around the adoption of SFAS 115. Petroni and Wahlen (1995) argue that property-liability share prices can be explained by fair value of equity investments and U.S. Treasury investments, even after controlling for historical costs. Venkatachalam (1996) shows that the fair value estimates for derivative help explain cross-sectional variation in bank share prices and that the fair values have incremental explanatory power over and above notional amounts of derivatives. Gebhardt et al. (2004) find strong evidence in favor of fair value accounting within the German banking sector, although there are additional problems to overcome when extending fair value measurements to more classes of financial assets and liabilities.

Another group of articles in the literature examines the value relevance of accounting information under conservative accounting. For example, Kousenidis, Ladas and Negakis (2010) examine how conservatism affects value relevance of earnings. They use the data in Greece from the period 1989 to 2003. Their empirical evidence suggests that conservatism helps earnings to exhibit sufficient information content for security prices through alleviating measurement errors in earnings. Brown et al. (2006) find evidence in their international study among 20 countries that conservatism is associated with a higher level of value relevance in countries with high accrual intensity. However, the empirical results of Balachandran and Mohanram (2005) indicate that accounting conservatism is not related with the value relevance of accounting information. In their study on whether conservatism has caused the value relevance of accounting information to decline, the data over a twenty-five year period from 1978-2002 is used. They find that the value relevance of accounting information has declined only for firms with the least conservative accounting and changed insignificantly for firms with the most conservative accounting. Hellman (2008) in his study of how the conservatism principle is applied in Europe under IFRS, reports that the mixing of consistent and temporary conservatism practice can reduce the value relevance of earnings information.

So far, in the literature, the empirical evidence has not suggested a consensus on which accounting

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standard provide more value relevant accounting information. This paper takes an analytical approach to formally investigate whether earnings under conservative accounting is more value relevant than the ones under mark to market accounting.

Specifically, this paper sets up a one-period model of a competitive security market with one risk-free asset and one risky asset. The payoff of the risky asset is normally distributed. Rational traders have correct prior knowledge about the normal distribution of the risky asset's payoff. Earnings fixated traders; on the other hand, underestimate the mean and variance of the asset's payoff under historical cost accounting. The reason for this is as follows. Due to the nature of U.S. accounting standards being conservative, accounting earnings numbers do not incorporate the expected future profits from the positive net present value projects until they are realized while the expected future losses from the negative net present value projects are incorporated in the current accounting earnings numbers. The failure of the historical cost recognition rules to recognize the expected future profits of positive net present value projects in current accounting earnings implies that accounting earnings numbers underestimate the mean and variance of the asset's payoff (economic earnings). This means that earnings fixated traders who are fixated on accounting earnings would underestimate the mean and variance of the asset's payoff.

Under an alternative accounting of mark to market, earnings fixated traders are indistinguishable from rational traders. Also, with mark to market, the payoff of the assets is the same as the accounting earnings number generated under mark to market accounting.

Before any trade takes place, an informational signal about the risky asset's payoff is released to the market. Based on the informational signal received, rational and earnings fixated traders both rationally update their estimates of the mean and variance of the asset's payoff given their prior knowledge. The utilities of both rational and earnings fixated traders are exponential function of their wealth. In this competitive market, both types of traders behave as price takers. They trade against each other or against noise traders whose demand is completely random. The demand for risky asset of both rational and earnings fixated traders is generated from the maximization of their utilities.

Note that the notion of earnings fixated traders is originated from the Functional Fixation Hypothesis in the financial markets. This hypothesis claims that investors who are unfamiliar with different accounting methods of generating accounting output rely on reported accounting numbers for their investment strategies without paying attention to the procedures used in producing these numbers. There are some empirical evidence showing the existence of such fixated traders. For example, Bradshaw et al. (2001), Khurana et al. (2003) and Hermann et al. (2007) show that analysts do not pay enough attention to the differential persistence of earnings components and they tend to focus on total earnings. Brown et al. (2000) present evidence that neither analysts nor investors make proper use of note disclosure in financial reports.

This paper proves that the reported earnings are value relevant under both conservative accounting and mark to market accounting. Furthermore, if the proportion of earnings fixated traders lies in the upper range of the interval [0, 1], the reported earnings under conservative accounting are more value relevant than the ones under mark to market. Otherwise, the reported earnings under mark to market are more value relevant than the ones under conservative accounting.

The remainder of the paper consists of three sections. The next section presents the model. The results are discussed in Section three. Section four concludes the paper.

II. The Model

This section constructs a one-period model of a competitive asset market. There is one risk-free asset and one risky asset. The payoff for the risk-free asset is one and the payoff for the risky asset (denoted as θ) is normally distributed with the mean of $\overline{\theta}$ and variance of σ_{θ}^{2}. There are three types of traders: earnings fixated traders, rational traders and noise traders.

Earnings fixated traders are functionally fixated on accounting earnings and they view the accounting earnings numbers as the asset's payoff (economic earnings). Since conservatism in accounting requires more verifiability for the recognition of gains than for the recognition of losses, the accounting earnings numbers do not incorporate the expected future profits from the positive net present value projects until they are realized while the expected future losses from the negative net present value projects are incorporated in the current accounting earnings numbers. The failure of the historical cost recognition rules to recognize the expected future profits of positive net present value projects in current accounting earnings implies that accounting earnings numbers underestimate the mean and variance of the asset's payoff (economic earnings). Denote earnings fixated traders' prior belief about the mean and variance of the risky asset's payoff as $\overline{\theta}_c$ and σ_c^2, respectively, where $\overline{\theta}_c < \overline{\theta}$ and $\sigma_c^2 < \sigma_{\theta}^2$. Rational traders have correctly estimated the mean and variance of the asset's payoff.

An informational signal about the risky asset's payoff is released to the market before any trade takes place. The informational signal (denoted as S) is modeled according to $S = \theta + \epsilon$ where ϵ is normally

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distributed with the mean of zero and variance of σ_{ϵ}^{2}. The random variables θ and ϵ are independent.

Based on the informational signal received, rational traders update their prior beliefs about the asset's payoff according to

$$E_r(\theta|S) = \overline{\theta} + \eta_r\left(S - \overline{\theta}\right), \quad (1)$$

and

$$Var_r(\theta|S) = \sigma_\theta^2 - \frac{\sigma_\theta^4}{\sigma_\theta^2+\sigma_\epsilon^2} = \eta_r\sigma_\epsilon^2, \quad (2)$$

respectively, where the subscript r indicates rational traders and $\eta_r = \frac{\sigma_\theta^2}{\sigma_\theta^2+\sigma_\epsilon^2}$ The derivations of equation (1) and (2) are presented in the appendix. Similarly, given their prior beliefs about the mean and variance of the asset's payoff, earnings fixated traders rationally update their conditional mean and variance about the asset's payoff according to

$$E_c(\theta|S) = \overline{\theta}_c + \eta_c\left(S - \overline{\theta}_c\right), \quad (3)$$

and

$$Var_c(\theta|S) = \sigma_c^2 - \frac{\sigma_c^4}{\sigma_c^2+\sigma_\epsilon^2} = \eta_c\sigma_\epsilon^2, \quad (4)$$

respectively, where the subscript c indicates earnings fixated traders and $\eta_c = \frac{\sigma_c^2}{\sigma_c^2+\sigma_\epsilon^2}$. Note that $\eta_c < \eta$ (due to $\sigma_c^2 < \sigma_\theta^2$). The derivations of equations (3) and (4) presented in the appendix.

The utility functions of both rational and earnings fixated traders are exponential functions of their wealth. Their initial wealth for both rational and earnings fixated traders are assumed to be w. Since the asset market is assumed to be perfectly competitive, rational and earnings fixated traders both behave as price takers. In other words, they take the risky asset price as given. Denote trader $i's$ demand for the risky asset as X_i, where $i = r, c$. Trader $i's$ wealth at the end of the period is the summation of their initial wealth and profits from trading the risky asset in the period. That is, $w_i = w + X_i(\theta - p)$, where p is the asset price. Trader $i's$ demand for the risky asset is generated from the maximization of $U(w_i) = -e^{-aw_i}$, where $a > 0$ and a is the coefficient of absolute risk aversion. With normality assumption, the demand for the risky asset for trader i $(i = r, c)$ that maximizes his or her exponential utility function is obtained from solving the following optimization problem:

$$\max_{X_i} E_i(w_i|S) - \frac{a}{2}Var_i(w_i|S), \quad (5)$$

$$s.t. \quad w_i = w + X_i(\theta - p).$$

Substituting equations (1) through (4) into the optimization problem (5), the demand for the risky asset for trader i (where $i = r, c$) is solved as,

$$X_i = \frac{\overline{\theta}_i + \eta_i\left(S - \overline{\theta}_i\right) - p}{a\eta_i\sigma_\epsilon^2}, \quad (6)$$

Where $\overline{\theta}_r = \overline{\theta}$.

Noise traders' demand for the risky asset is modeled to be normally distributed with the mean of zero and variance of σ_x^2.

The supply of the risky asset is assumed to be zero. The risky asset price in this competitive market is determined by the market clearing condition below:

$$fX_c + (1-f)X_r + x = 0, \quad (7)$$

Where f denotes the proportion of earnings fixated traders in the population of rational and earnings fixated traders.

III. The Result

This section compares the value relevance of the reported earnings under conservative accounting and market to market accounting. It proves that the reported earnings are value relevant under both types of accounting methods. In addition, it also proves that the reported earnings under one of the accounting methods can be more value relevant than the ones under the other accounting method provided that the right model parameter value restrictions are imposed. Substituting equation (6) into (7), the asset price is solved as the following:

$$p = \overline{\theta}(1-\eta_r) - \frac{f\eta_r(\overline{\theta} - \overline{\theta}_c + \overline{\theta}_c\eta_c - \overline{\theta}\eta_r)}{\eta_c - f\eta_c + f\eta_r} + \frac{\eta_c\eta_r(S + ax\sigma_\epsilon^2)}{\eta_c - f\eta_c + f\eta_r} \quad (8)$$

$$= \frac{\theta\eta_c(\eta_r(f-1) - f + 1) + f\theta_c\eta_r(1-\eta_c) + \eta_c\eta_r(S + ax\sigma_\epsilon^2)}{\eta_c - f\eta_c + f\eta_r}. \quad (9)$$

Taking a derivative of equation (8) with respect to $\overline{\theta}_c$ yields the following:

$$\frac{dp}{d\overline{\theta}_c} = \frac{f\eta_r(1-\eta_c)}{\eta_c - f\eta_c + f\eta_r}. \quad (10)$$

Note from equation (10) a positive association between earnings under conservative accounting and the asset price due to $\eta_c < 1$.

Under an alternative accounting of mark to market, earnings fixated traders become indistinguishable to rational traders. In other words, $\overline{\theta}_c = \overline{\theta}$, $\eta_c = \eta_r$

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and $f = 0$. Hence, using equation (8), the asset price (denoted as p') is solved as

$$p' = \overline{\theta}(1 - \eta_r) + \eta_r(S + ax\sigma_\epsilon^2). \quad (11)$$

Taking a derivative of equation with respect to earnings under mark to market accounting results in the following:

$$\frac{dp'}{d\overline{\theta}} = 1 - \eta_r, \quad (12)$$

which is positive due to $\eta_r < 1$. This means that an increase in earnings under markto market leads to an increase in the asset price.

Note from equations (10) and (12), $\frac{dp}{d\overline{\theta}_c} > \frac{dp'}{d\overline{\theta}}$ if $1 > f > \frac{\eta_c - \eta_c\eta_r}{\eta_c + \eta_r^2 - 2\eta_c\eta_r}$; and $\frac{dp}{d\overline{\theta}_c} < \frac{dp}{d\overline{\theta}}$ if $f < \frac{\eta_c - \eta_c\eta_r}{\eta_c + \eta_r^2 - 2\eta_c\eta_r}$.

This means that if the proportion of earnings fixated traders lies in the upper range of the interval [0, 1], the reported earnings under conservative accounting are more value relevant than the ones under mark to market. Otherwise, the reported earnings under mark to market are more value relevant than the ones under conservative accounting.

IV. Concluding Remarks

This paper compares the value relevance of earnings under two different accounting methods (namely, conservative accounting and mark to market accounting) in a competitive security market. The earnings information under conservative accounting is transmitted into the market through the trading of earnings fixated traders. The results of the model suggests that under certain model parameter restrictions, the asset price incorporates more information from the earnings number generated from conservative accounting; on the other hand, under other model parameter restric-tions, the asset price incorporate more information from earnings generated from mark to market accounting.

The future research agenda in this direction is to investigate the impact of accounting standards on the value relevance of earnings under other market settings. One example of such market setting is the one that involves traders acting strategically instead of taking price as given.

V. Appendix

Theorem 1: If the random variables X^* and Y^* are jointly normally distributed, then

$$E(X^*|Y^* = Y) = EX^* + \frac{Cov(X^*,Y^*)}{Var(Y^*)}(Y - EY^*) \text{ and } Var(X^*|Y^* = Y) = Var(X^*) - \frac{[Cov(X^*,Y^*)]^2}{Var(Y^*)}$$

(See Hoel, p.200).

Derivation of equation (1) and (2): Notice that $S = \theta + \epsilon$, where θ is normally distributed with mean $\overline{\theta}$ and standard deviation of σ_θ and ϵ is also normally distributed with mean zero and standard deviation of σ_ϵ; furthermore, θ and ϵ are independent. Hence, the following are true, (a) S and θ are jointly normal distributed;

(b) $Var_r(S) = \sigma_\theta^2 + \sigma_\epsilon^2$; (c) $Cov_r(\theta, S) = \sigma_\theta^2$.

Result (c) comes from the following

$$Cov_r(\theta, S) = E_r\left[(\theta - \overline{\theta})(S - \overline{S})\right] = E_r(\theta S) - \overline{\theta}^2 = E_r(\theta(\theta + \epsilon)) - \overline{\theta}^2 = E_r\theta^2 - \overline{\theta}^2 = \sigma_\theta^2.$$

With the results (a), (b) and (c), equations (1) and (2) follows from Theorem 1.

Derivation of equation (3) and (4): Notice that $S = \theta + \epsilon$, where θ is estimated by conservatism traders as normally distributed with mean $\overline{\theta}_c$ and standard deviation of σ_c; and ϵ is also normally distributed with mean zero and standard deviation of σ_ϵ; furthermore, θ and ϵ are independent. Hence, the following are true, (a) S and θ are jointly normal distributed;

(b) $Var_c(S) = \sigma_\theta^2 + \sigma_\epsilon^2$; (c) $Cov_c(\theta, S) = \sigma_\theta^2$.

Result (c) comes from the following:

$$Cov_c(\theta, S) = E_c\left[(\theta - \overline{\theta}_c)(S - \overline{S})\right] = E_c(\theta S) - \overline{\theta}_c^2 = E_c(\theta(\theta + \epsilon)) - \overline{\theta}_c^2 = E_c\theta^2 - \overline{\theta}_c^2 = \sigma_c^2.$$

With the results (a), (b) and (c), equations (1) and (2) follows from Theorem 1.

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A Comparative Analysis and Implementation of Activity Based Costing (ABC) and Traditional Cost Accounting (TCA) Methods in an Automobile Parts Manufacturing Company: A Case Study

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Abstract - Activity based costing (ABC) is a method for determining true costs; which has become an important aspect of manufacturing/service organizations and can be defined as a methodology that measures the cost and performance of activities, resources and cost objects. It can be considered as an alternative method to traditional cost accounting systems. In this paper we have shown a comparative analysis of application of ABC method with traditional cost accounting (TCA) method in an automobile parts manufacturing company; which would like to increase the sales due to increased demand. For this reason the company needs to know the true cost of the parts prior to deciding as which item is to be produced more.

Keywords : *activity based costing, cost drivers, traditional cost accounting.*

GJMBR-D Classification : *JEL Code: M00*



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Nitin Kumar [α] & Dalgobind Mahto [σ]

Abstract - Activity based costing (ABC) is a method for determining true costs; which has become an important aspect of manufacturing/service organizations and can be defined as a methodology that measures the cost and performance of activities, resources and cost objects. It can be considered as an alternative method to traditional cost accounting systems. In this paper we have shown a comparative analysis of application of ABC method with traditional cost accounting (TCA) method in an automobile parts manufacturing company; which would like to increase the sales due to increased demand. For this reason the company needs to know the true cost of the parts prior to deciding as which item is to be produced more. In this case study the results are obtained between the two cost accounting methods by comparing TCA margin % and ABC margin % and these results are used to identify the low-priced and over-priced parts of the company.

Keywords : *activity based costing, cost drivers, traditional cost accounting.*

I. Introduction

In recent years, companies have reduced their dependency on traditional accounting systems by developing activity-based cost management systems. Traditional costing systems have a tendency to assign indirect costs based on something easy to identify (such as direct labor hours). This method of assigning costs can be very inaccurate because there is no actual relationship between the cost pool and the cost driver. This can make indirect costs allocation inaccurate.

Initially, managers viewed the ABC approach as a more accurate way of calculating part costs. But ABC has emerged as a tremendously useful guide to management action that can translate directly into higher profits. The Activity Based Costing (ABC) is designed to assign costs to activities which enable more accurate cost information.

ABC reveals the links between performing particular activities and the demands those activities make on the organization's resources, so it can give managers a clear picture of how parts, brands, customers, facilities, regions, or distribution channels both generate revenues and consume resources. The profitability picture that emerges from the ABC analysis helps managers focus their attention and energy on improving activities.

a) Resources and Various Cost Drivers

An activity is a specific task or action of work done. It can be a single action or an aggregation of several actions. For example: moving inventory from workstation 'A' to workstation 'B'. B is an activity that may require only one action. Production set-up is an activity that may include several actions.

i. *Activity Driver*

The best single quantitative measure of the frequency and intensity of the demand placed on an activity by cost objects or other activity. It is used to assign activity costs to cost objects or to other activities.

ii. *Activity Work*

This is performed by people, equipment, technologies or facilities. Activities are usually described by the 'action-verb-adjective-noun' grammar convention. Activities may occur in a linked sequence and activity-to-activity assignments may exist.

iii. *Cost Object*

Any part, service, customer, contract, project, process or other work unit for which a separate cost measurement is desired.

iv. *Resource*

A resource is an economic element needed or consumed in performing activities. For example: Salaries and supplies are resources needed or used in performing manufacturing activities.

v. *Resource Driver*

The best single quantitative measure of the frequency and intensity of the demand placed on a resource by other resources, activities, or cost objects. It is used to assign resource costs to activities, and cost objects, or to other resources.

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vi. *Resources Economic*

Elements that are applied or used in the performance of activities or directly support cost object. They include people, materials, supplies, equipment, technologies and facilities.

b) Explanations to Resources and Various Cost Drivers

A cost driver is a factor that causes or relates to a change in the cost of an activity. Because cost drivers cause or relate to cost changes, measured or quantified amounts of cost drivers are excellent bases for assigning resource costs to activities and for assigning the cost of activities to cost objects. A cost driver is either a resource consumption cost driver or an activity consumption cost driver.

A resource consumption cost driver is a measure of the amount of resources consumed by an activity. It is the cost driver for assigning a resource cost consumed by or related to an activity to a particular activity or cost pool. Examples of resource consumption cost drivers are the number of items in a purchase or sales order, changes in part design, size of factory buildings, and machine hours.

An activity consumption cost driver measures the amount of an activity performed for a cost object. It is used to assign activity cost pool costs to cost objects. Examples of activity consumption cost drivers are the number of machine hours in the manufacturing of part X, or the number of batches used to manufacture Part Y.

Value-added activity: Value-added activities change the form, fit or function of a part or service. These are things for which the customer is willing to pay.

Non-Value-added activity: Activities that do not add value to the process are called non-value added activities. These activities do not help create conformance to the customer's specifications, and are something for which the customer would be unwilling to pay for. The difference of value added activities and non value added activities are tabulated in table 1.

Table 1 : Difference Between Value Added activity and Non Value Added Activity

Point	Value Added activity	Non Value Added Activity
1.	Providing worth or merit to an activity as defined by the customer.	No merit or worth to an activity as defined by the customer.
2.	Activities must be performed to meet customer's wants and needs.	The activity does not need to be done to generate output.
3.	Actions are value added if the customer cares, if something is physically changing for the best and you do the step right the first time.	It does not add value to the service or part.
4.	Value added activities essentially change the part or service and the customer is willing to pay for them.	In essence it is something the customer is not willing to pay for.
5.	Providing worth or merit to an activity as defined by the customer.	No merit or worth to an activity as defined by the customer.

II. Aims and Objectives of the Study

With ABC, an organization can firmly estimate the cost elements of entire parts and services. That may help inform a company's decision to either. Identify and eliminate those parts and services that are unprofitable and lower the prices of those that are overpriced. Or identify and eliminate production or service processes that are ineffective and allocate processing concepts that lead to the very same part at a better yield. In a business organization, the ABC methodology assigns an organization's resource costs through activities to the parts and services provided to its customers. ABC is generally used as a tool for understanding part and customer cost and profitability based on the production or performing processes. As such, ABC has predominantly been used to support strategic decisions such as pricing, outsourcing, identification and measurement of process improvement initiatives.

Therefore, a study has been carried out to apply this technique in order to derive maximum advantage in a manufacturing setup. The basic intents are as follows:

(i) To study the ABC technique in comparison with traditional cost accounting method.
(ii) To remove the distortions caused by traditional costing systems in direct and indirect costing.
(iii) To determine the cost variables.
(iv) To develop a methodology for optimization of cost.

This work is in continuous to the previous paper "**Current Trends of Application of Activity Based Costing (ABC): A Review**" which is published in "Global Journal of Management and Business Research" Vol. 13, Issue 3, Version 1.0, pp. 11-24, Year 2013.

III. Implementation of the ABC Method: A Case Study

ABC is an economic model that identifies the cost pools or activity centers in an organization and assigns costs to cost drivers based on the number of each activity used. Since the cost drivers are related to the activities, they occur on several levels:

(i) Unit level drivers which assume the increase of the inputs for every unit that is being produced.

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(ii) Batch level drivers which assume the variation of the inputs for every batch that is being produced.

(iii) Product level drivers which assume the necessity of the inputs to support the production of each different type of part.

(iv) Facility level drivers are the drivers which are related to the facility's manufacturing process. Users of the ABC system will need to identify the activities which generate cost and then match the activities to the level bases used to assign costs to the parts.

While using the ABC system, the activities which generate cost must be determined and then should be matched to the level drivers used to assign costs to the products.

The implementation of the ABC system has the following steps:

Step 1) Identifying the activities such as machining, inspection etc.

Step 2) Determining the activity costs

Step 3) Determining the cost drivers such as machining hours, number of setups, labour hours etc.

Step 4) Collecting the activity data

Step 5) Computing the product cost

In this case study we are comparing two types of techniques of cost accounting by collecting and analyzing the data of a company which is a pressed component manufacturer. It produces three parts for automobile industry. The Company now has an opportunity to increase its sales due to increased demand. So, it would like to know the true costs of these parts prior to deciding as which item is to be produced more. The calculations are in following steps:

1. Current prices, direct labour hour to produce each of the items, their material costs, and annual production quantities are as under and are shown in Table 2.

Table 2 : Current prices of items and their direct labour hours

S.NO.	Object	Part A	Part B	Part C
1.	Material cost (₹)	400	250	300
2.	Direct labour hours	5	3.7	4.5
3.	Annual quantity	18,000	16,000	18,500
4.	Selling Price/each (₹)	1,200	850	1,150

2. The company has recorded following expenses last year on its General Ledger Statement and it is shown in Table 3.

Table 3 : Expenses on general ledger statement

(a)	Direct labour (₹)	1,67,50,000.00	
(b)	Direct material (₹)	24,58,000.00	
(c)	All other indirect expenses (₹)	Salaries & wages	35,43,650
		Fringe benefits	9,48,328
		Utilities	5,17,837
		Income tax	1,58,121
		Equipment rental	4,30,491
		Postage	31,195
		Depreciation	2,93,233
		Property tax	74,868
		Maintenance	1,18,541
		Property insurance	56,151
		Tools	93,585
		Total	**62,66,000**

3. Calculation of Part Costs by Traditional Cost Accounting (TCA)

- Total labour hours required:

Part A : 18,000 × 5 = 90,000 hrs
Part B : 16,000 × 3.7 = 59,200 hrs
Part C : 18,500 × 4.5 = 83,250 hrs
Total labour hours = 2, 32,450 hrs

- Direct labour hour cost = 1,67,50,000/2,32,450 = 72.05 ₹/hr
- Total indirect cost = 62,66,000 ₹
- Over cost/labour hour = 62,66,000.00/2,32,450 = 26.95 ₹/hr

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Table 4 : Part Cost Calculation

S.NO.	Expenses	Part A	Part B	Part C
1.	Direct material (₹)	400	250	300
2.	Direct labour (₹)	360.25 (72.05×5)	266.59 (72.05×3.7)	324.23 (72.05×4.5)
3.	Overhead (₹)	134.75 (26.95×5)	99.72 (26.95×3.7)	121.28 (26.95×4.5)
4.	Total cost (₹)	895	616.31	745.51
5.	Price (₹)	1200	850	1150
6.	Margin (₹)	305	233.69	404.49
7.	Margin %	25.41	27.50	35.18

TCA indicates that Part "C" has the best margin % i.e. 35.18%.
Part cost calculation and margin % of parts is shown in graphs in Fig. 1 and Fig. 2 respectively by TCA method.

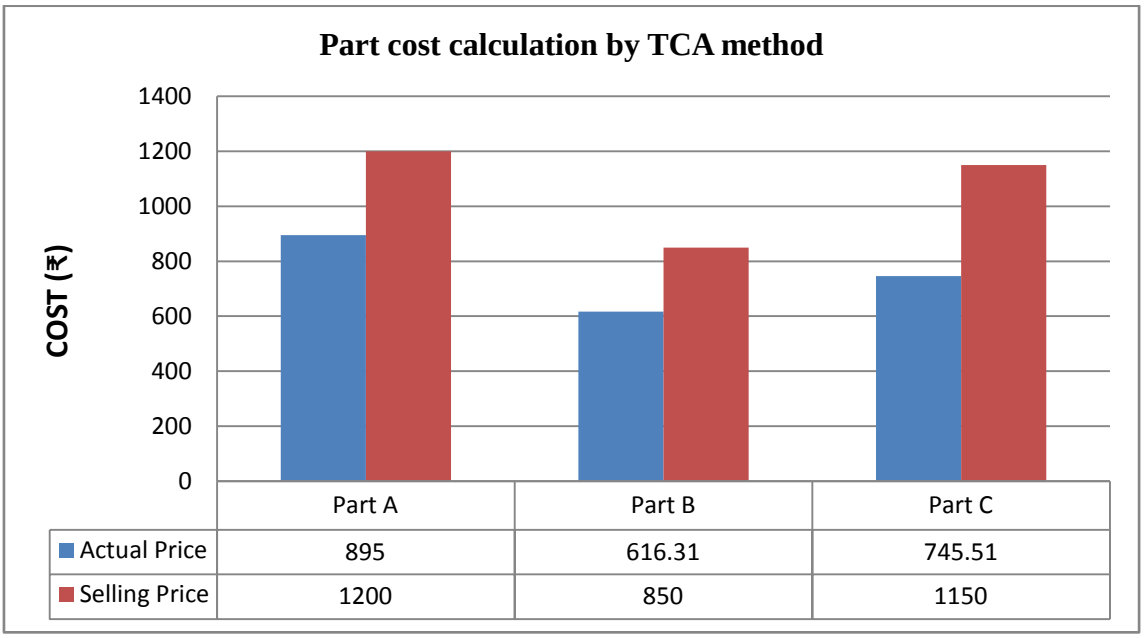

Figure 1 : Part cost calculation by TCA method

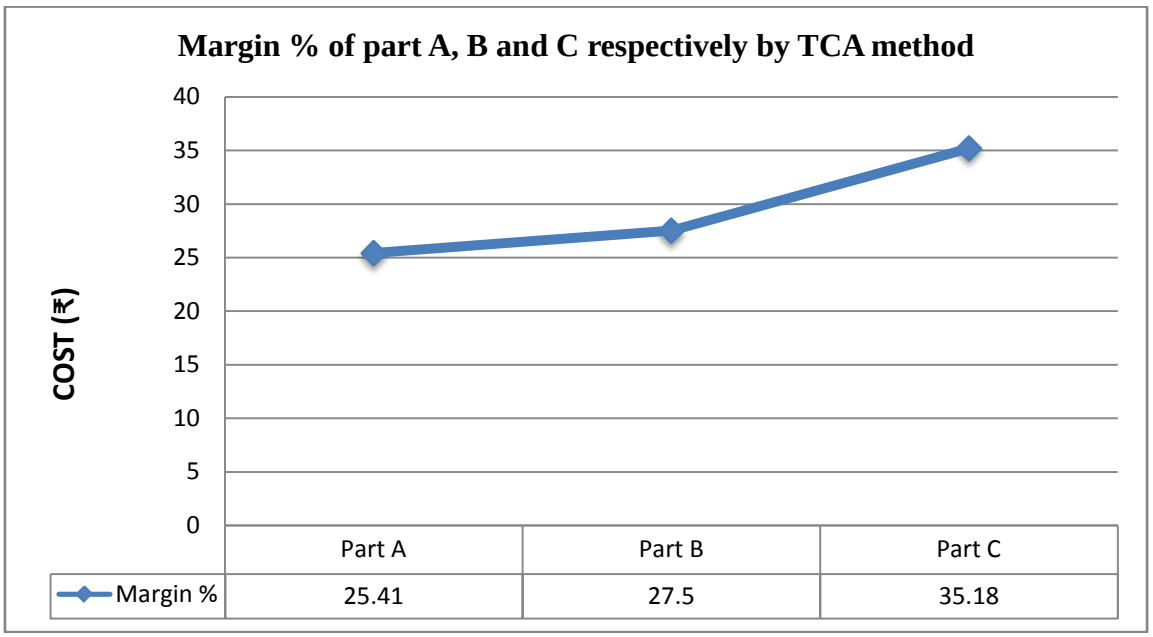

Figure 2 : Margin % of part A, B and C respectively by TCA method

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4. *"True Cost" calculation of parts by Activity Based Costing (ABC) :* The three parts being evaluated are Part "A", Part "B" and Part "C". Basic information about these parts is given in Table 5

Table 5 : Basic data of part A, B and C respectively

S.NO.	Object	Part A	Part B	Part C
1.	Direct material	400	250	300
2.	Direct labour hour	5	3.7	4.5
3.	Annual quantity	18,000	16,000	18,500
4.	Selling price (₹)	1,200 each	850 each	1,150 each

5. After interviewing the staff of company, the following statistical information about the three parts was gathered; some of the information was received from the Company's records and is given in Table 6

Table 6 : Statistical information about the three parts

S.NO.	Object	Part A	Part B	Part C	Total
1.	Customer orders	1,800	2,000	2,500	63,00
2.	Parts manufactured	18,000	16,000	18,500	52,500
3.	Work orders	110	100	120	330
4.	Set-ups	110	100	120	330
5.	Machine hours/unit	5	3.7	4.5	
6.	Material cost/unit (₹)	400	250	300	
7.	Labour hours/unit	5	3.7	4.5	
8.	Total labour hours	18,000	16,000	18,500	
9.	Selling price/part (₹)	1,200	850	1,150	

6. *Activity determination :* The staff questionnaire revealed that for indirect work the company has 25 employees and they are in the following work groups as shown in Table 7

Table 7 : Activity Determination

S.NO.	Activity	No. of people	% of Total
1.	Processing orders	12	24%
2.	Scheduling orders	10	20%
3.	Die maintenance and storage	14	28%
4.	Inspection	08	16%
5.	Shipping (dispatch) orders	06	12%
6.	Total	50	100%

7. *Calculation of unit activity costs :* It is given in Table 8

Table 8 : Unit activity costs

S.NO.	Activities	Activity cost	Activity driver	Quantity	Cost/unit (₹)
1.	Processing orders	15,03,840	No. of orders	6,300	238.70
2.	Scheduling orders	12,53,200	No. of work orders	330	3,797.57
3.	Set-up machines	17,54,480	No. of set-ups	330	5,316.60
4.	Inspection lots	10,02,560	No. of lots	330	3,038.06
5.	Shipping part	7,51,920	No. of shipments	6,300	119.35

Note : Activity Costs Calculation
Total indirect cost from general ledger × % activity
e.g., Processing orders = 62, 66,000 × 0.24
= 15, 03,840

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8. *Activity Cost Worksheet :* It is given in Table 9

Table 9 : Activity cost worksheet

		Part A				Part B			Part C		
S.No.	Activity	Cost (₹)	Vol.	Total Cost (₹)	Unit Cost (₹)	Vol.	Total Cost (₹)	Unit Cost (₹)	Vol.	Total Cost (₹)	Unit Cost (₹)
1.	Processing Orders	238.70	1,800	4,29,660	23.87	2,000	4,77,400	29.83	2,500	5,96,750	32.25
2.	Scheduling Orders	3,797.57	110	4,17,732.7	23.20	100	3,79,757	23.73	120	4,55,708.4	24.63
3.	Set-up machines	5,316.60	110	5,84,826	32.49	100	5,31,660	33.22	120	6,37,992	34.48
4.	Inspection lots	3,038.06	110	3,34,186.6	18.56	100	3,03,806	18.98	120	36,45,67.2	19.70
5.	Shipping parts	119.35	1,800	2,14,830	11.93	2,000	2,38,700	14.91	2,500	2,98,375	16.12
6.		Total			110.05			119.67			127.18

9. *Calculation of "true" costs of parts :* It is given in Table 10

Table 10 : True cost calculation of parts

S.No.	Expenses	Part A	Part B	Part C
1.	Direct material (₹)	400	250	300.00
2.	Direct labour (₹)	360.25	266.59	324.23
3.	Overhead distribution (activity cost basis) (₹)	110.05	119.67	127.18
4.	Total cost (₹)	870.03	636.26	751.41
5.	Selling price (₹)	1200	850	1150
6.	Margin (₹)	329.97	213.74	398.59
7.	Margin %	27.49%	25.14%	34.66%

True cost calculation and Margin % of parts by ABC method is shown in graphs in Fig. 3 and Fig 4, respectively.

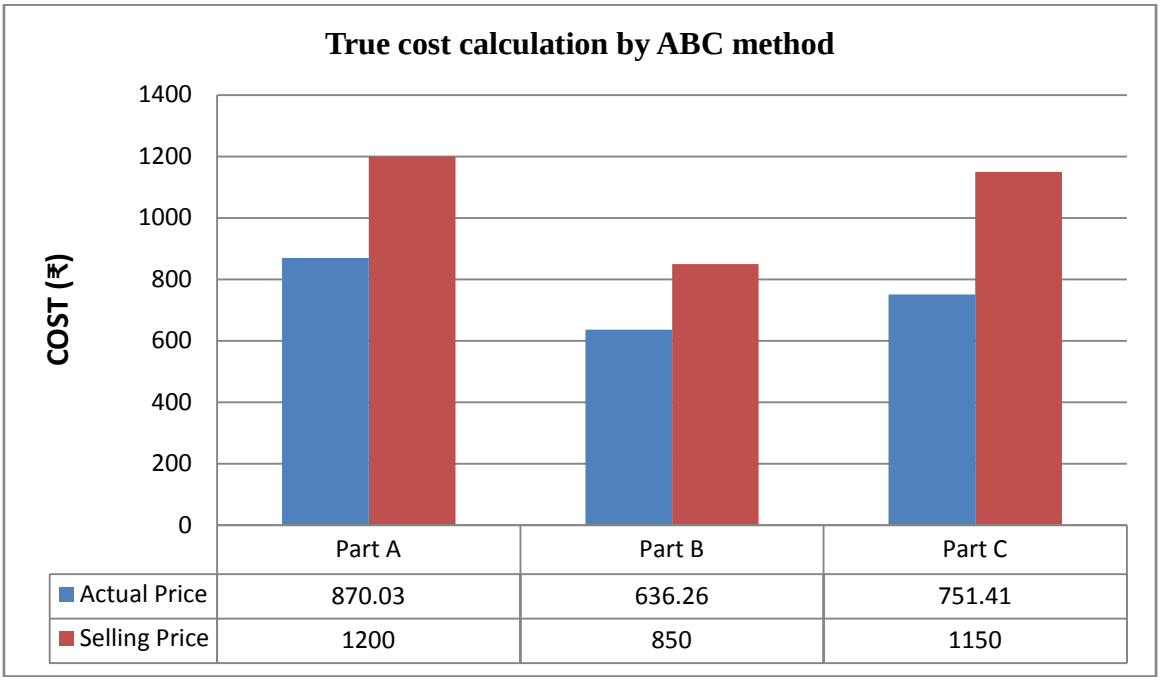

Figure 3 : True cost calculation by ABC method

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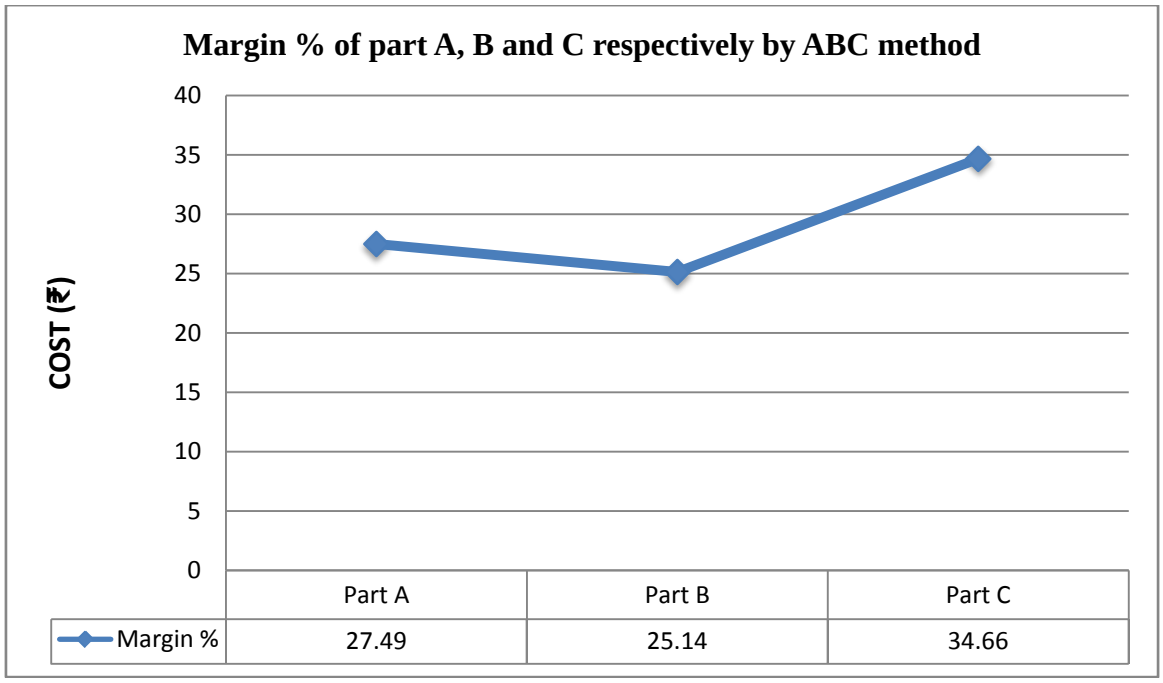

Figure 4 : Margin % of part A, B and C respectively by ABC method

10. *Comparison of TCA costs and True costs :* It is shown in Table 11

Table 11 : Comparison of TCA costs and True costs

PART	Selling price (₹)	TCA cost (₹)	TCA margin (₹)	TCA margin%	True cost (₹)	True cost margin (₹)	True cost margin%
Part "A"	1,200	895	305	25.41%	870.03	329.97	27.49%
Part "B"	850	616.31	233.69	27.50%	636.26	213.74	25.14%
Part "C"	1,150	745.51	404.49	35.18%	751.41	398.59	34.66%

Comparison between TCA cost and True cost and Comparison between TCA margin % and True cost margin % is shown in graphs in Fig. 5 and Fig. 6, respectively.

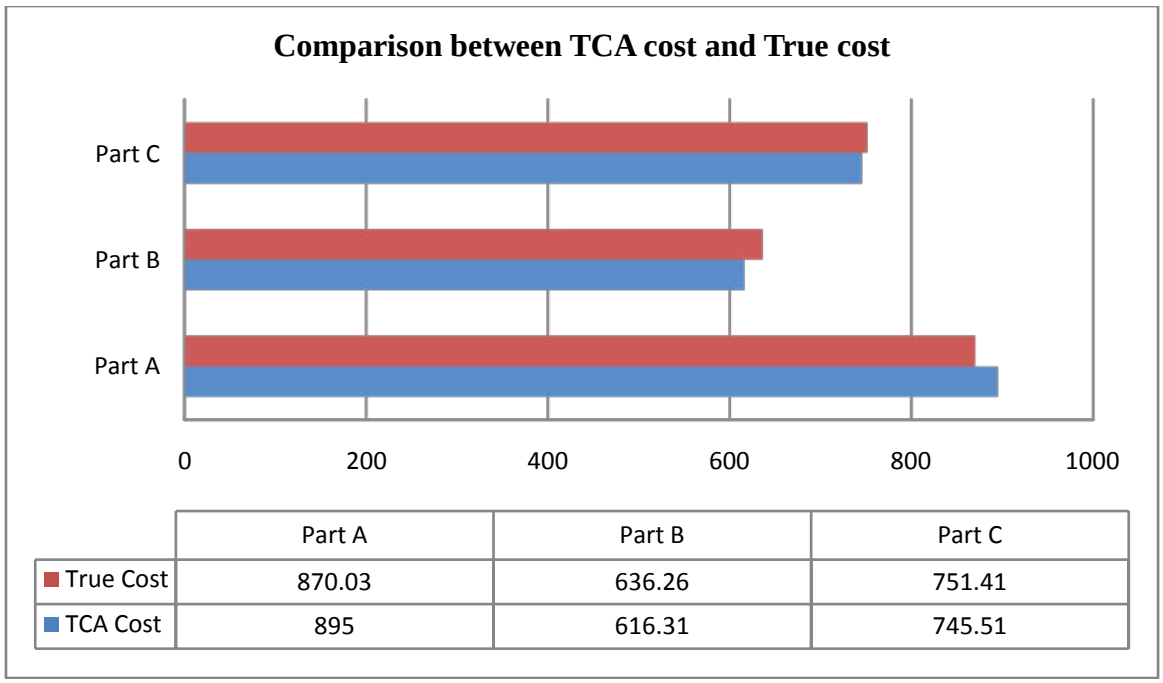

Figure 5 : Comparison between TCA cost and True cost

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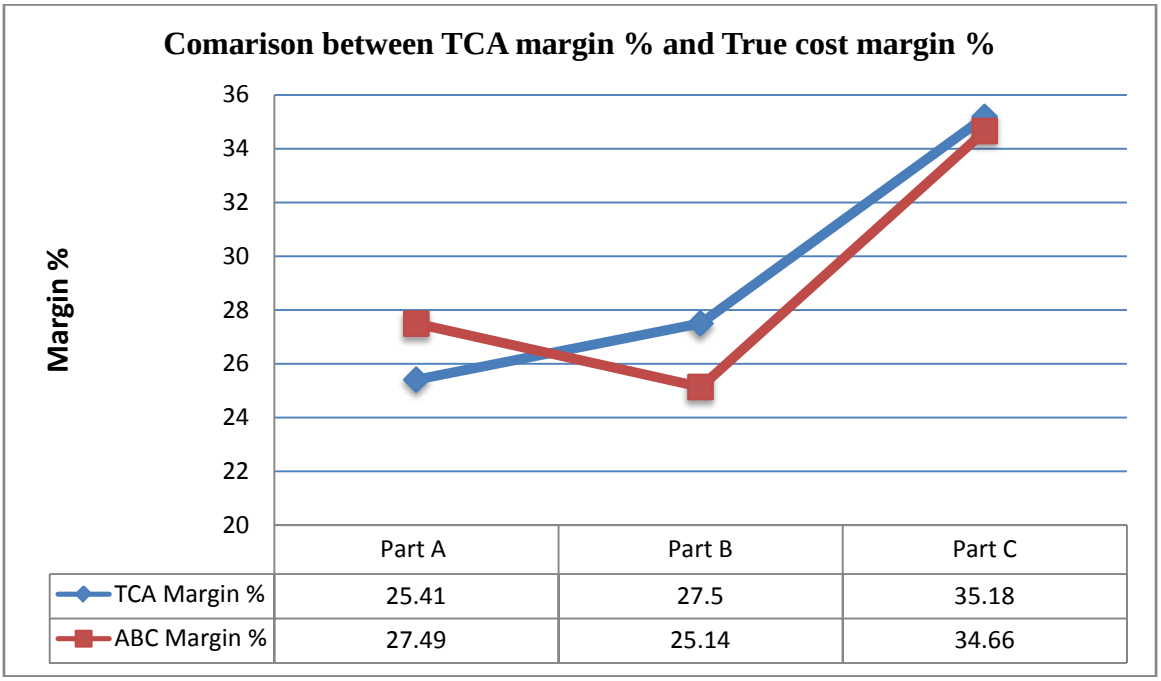

Figure 6 : Comparison between TCA margin % and True cost margin %

IV. Conclusion

The following conclusions have been made by analyzing the data using traditional cost accounting (TCA) method and true cost calculation by activity based costing (ABC) method:

- In the case of Part 'A' cost calculations, TCA shows a margin % of 25.41 but by calculating it through ABC method, it shows a margin % of 27.49. So there is a difference of 2.08 %. Consequently, we can analyze that Part 'A' shows 2.08% more profit as compared to TCA cost calculation.
- In the case of Part 'B' cost calculations, TCA shows a margin % of 27.50 but it is just 25.14% by calculating it through ABC method. Hence, it has been concluded that the cost calculation by TCA method is declining in profit by 2.36% in actual.
- For Part 'C', TCA indicates that Part 'C' has the best margin % i.e. 35.18%. On the other hand True cost calculation by ABC method also shows that the part C has the best margin % but it is less than the TCA margin %, which is 34.66 %.
- At last, we can conclude that as compared to traditional cost accounting method, Activity based costing method gives us the true costs of the parts.

Hence, the company can get benefited by increasing its sales according to the demand of the products by keeping in view the true costs of the parts which is calculated by ABC method and not the TCA method. Also it can easily decide that which item or part is to be produced more to achieve its goal.

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Limiting Auditors' Defenses in Negligence Lawsuits: Recent Developments in the Audit Interference Rule

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Abstract - The objectives of this article are to: (1) define the audit interference rule (hereinafter "A.I.R.") and describe its purpose; (2) summarize the historical case law pertinent to the A.I.R.; (3) delineate the U.S. states that recognize the A.I.R. from those that do not; (4) explain how the A.I.R. is impacted by the existence of a state's comparative negligence statute; and (5) tell how recent developments in case law are affecting the A.I.R. The purpose of the A.I.R. is to limit the scope of an auditor's contributory negligence defense in a negligence lawsuit filed by a client. The A.I.R. provides that the client's negligence is a defense only when it has contributed to the accountant's failure to perform his contract and to report the truth. New York was the first state to recognize the A.I.R.; other states adopting the rule include Illinois, Kansas, Mississippi, Nebraska, Oklahoma, Pennsylvania, Texas and Utah.

Keywords : *audit, interference, rule.*

GJMBR-D Classification : *JEL Code: M42, K0*



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Limiting Auditors' Defenses in Negligence Lawsuits: Recent Developments in the Audit Interference Rule

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Abstract - The objectives of this article are to: (1) define the audit interference rule (hereinafter "A.I.R.") and describe its purpose; (2) summarize the historical case law pertinent to the A.I.R.; (3) delineate the U.S. states that recognize the A.I.R. from those that do not; (4) explain how the A.I.R. is impacted by the existence of a state's comparative negligence statute; and (5) tell how recent developments in case law are affecting the A.I.R. The purpose of the A.I.R. is to limit the scope of an auditor's contributory negligence defense in a negligence lawsuit filed by a client. The A.I.R. provides that the client's negligence is a defense only when it has contributed to the accountant's failure to perform his contract and to report the truth. New York was the first state to recognize the A.I.R.; other states adopting the rule include Illinois, Kansas, Mississippi, Nebraska, Oklahoma, Pennsylvania, Texas and Utah. These states have either never recognized the A.I.R, or have abolished it.: Arkansas, Florida, Michigan, Minnesota and Ohio. Recent case law has highlighted several developments in the A.I.R., including: (a) an auditor accused of professional negligence may be required to specifically state how the client's alleged negligence interfered with the auditor's ability to conduct the audit; (b) the A.I.R. may also be applicable whenever a third-party beneficiary of an audit, such as a bank, sues an auditor for professional negligence; (c) the A.I.R., which limits the scope of an auditor's contributory negligence defense, has nothing to do with the separate in pari delicto defense which, if applicable, operates as an absolute bar to a claim based on equally wrongful acts of both parties; and (d) the court's granting of a jury instruction on a client's alleged contributory negligence should be the exception, not the rule.

Keywords : *audit, interference, rule.*

I. Objectives of the Article

The objectives of this article are to: (1) define the audit interference rule (hereinafter "A.I.R.") and describe its purpose; (2) summarize the historical case law pertinent to the A.I.R.; (3) delineate the U.S. states that recognize the A.I.R. from those that do not; (4) explain how the A.I.R. is impacted by the existence of a state's comparative negligence statute; and (5) tell how recent developments in case law are affecting the A.I.R.

II. The Audit Interference Rule

The Audit Interference Rule ("A.I.R.") provides that "the negligence of an employer who hires an accountant to audit the business is a defense only when it has contributed to the accountant's failure to perform his contract and to report the truth."[1] Under the A.I.R., "not all contributory fault of a plaintiff that is a proximate cause of an economic loss could be asserted as a defense. Instead, only contributory fault that affect[s] or interfere[s] with the audit could be considered."[2]

III. The A.I.R. Limits the Scope of a Contributory Negligence Defense

The A.I.R. does not bar the assertion of a contributory negligence defense but merely limits its scope. Jurisdictions applying the A.I.R. allow auditors to blame their clients, but only for conduct that contributes to the auditors' mistakes, instead of allowing auditors to blame clients for any conduct that causes economic losses of the firm.[3] The A.I.R. will not make a significant difference in all cases. Most of the cases applying the rule have been characterized by a passive client who failed to make a diligent effort to discover employee misconduct that resulted in interference with the ability of the auditor to conduct the audit. However, if the employer has engaged in active wrongdoing, the A.I.R. will be inapplicable and the auditor will be allowed to

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[1] Board of Trustees v. Coopers & Lybrand, 803 N.E.2d 460, 464-65 (Ill. 2003), citing National Surety Corp. v. Lybrand, 9 N.Y.S.2d 554, 563 (1939).

[2] Id. at 466. See also Cereal Byproducts Co. v. Hall, 132 N.E.2d 27, 29-30 (Ill. App. 1956), note 22 infra. The issue of audit interference is an affirmative defense which is analyzed in terms of contributory negligence. The analysis involves numerous issues of fact, including whether any contributory negligence was substantial enough to relieve the auditor of liability. This last issue in particular may not be determined as a matter of law, and is an issue for the fact finder to decide. PNC Bank, Kentucky, Inc. v. Grant Thornton, 899 F.Supp. 1399, 1409-10 (W.D. Pa. 1994).

[3] A federal district court in Kansas has observed that: "The weight of authority recognizes that accountants typically assume a duty to detect fraud or other irregularities, including those irregularities that are the result of, or at least made possible by, the client's negligent conduct. In effect, the accountant assumes a duty toward the client to protect the client from certain of the client's own negligent actions. Given these duties, it would be curious indeed if the accountant were then allowed to interpose as a defense the very injurious negligence of the client that the accountant has assumed a duty to discover and correct." Comeau v. Rupp, 810 F.Supp. 1172, 1183 (D.Kan. 1992).

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use an undiluted contributory negligence defense.[4] On the other hand, if there is no evidence of any contributory negligence of the client, the A.I.R. is also inapplicable.[5]

IV. History of the Audit Interference Rule

a) New York: The National Surety Case

In 1939, the State of New York produced the first case to adopt the A.I.R. In National Surety Corp. v. Lybrand,[6] the defendant accountants, who had been hired to audit the plaintiff stockbroker company, failed to discover that a cashier had been embezzling funds from the brokerage. In support of its decision to reject the accountants' defense that the plaintiff had been contributorily negligent in running its business, the Court explained: "We are. . .not prepared to admit that accountants are immune from the consequences of their negligence because those who employ them have conducted their own business negligently."[7] Later courts adopting the A.I.R. have agreed with the reasoning in the National Surety case; without such a rule, accountants would achieve complete immunity from liability for negligently failing to do a job their clients properly rely on them to do.[8]

The National Surety's A.I.R. continues to be good law in State of New York and has been applied in several subsequent cases.[9]

b) Nebraska: The Lincoln Grain Case

The most frequently cited subsequent case adopting the A.I.R. is Lincoln Grain, Inc. v. Coopers & Lybrand[10] in 1984. Lincoln Grain is popular enough to displace National Surety, at least on occasion, as the case that gives the rule its name. In Lincoln Grain, Coopers & Lybrand, had conducted an audit of Lincoln Grain's financial statements. Part of its audit was to check the accuracy of the valuation placed upon the inventory of the firm's Iowa division. The Iowa division was involved in the buying and selling of grain, but had no storage or shipping facilities. Its inventory consisted only of contracts to sell or purchase commodities. At the end of the fiscal year a value was placed upon the inventory by reference to the market price for the particular commodity as of that day.[11]

On June 30, 1975, Lincoln Grain valued the inventory of its Iowa division at nearly $2 million, and included this valuation in compiling its financial statements. On September 12, 1975, Coopers & Lybrand issued an unqualified opinion on Lincoln Grain's financial statements. In November of 1975, Lincoln Grain's Treasurer became concerned with the large cash needs of the Iowa division and began to investigate. In early 1976 the manager of the Iowa division admitted to falsifying the inventory valuations. Later investigation determined that instead of having a nearly $2 million inventory as of June 30, 1975, the inventory only had a value of $143,000.[12]

[4] FDIC v. Deloitte & Touche, 834 F.Supp. 1129, 1144 (E.D. Ark. W.D. 1992). But an undiluted contributory negligence defense cannot be used if a jurisdiction has adopted comparative negligence; *see* In re River Oaks Furniture, Inc., 276 B.R. 507, 549 (Bankr. N.D. Miss. 2001), where the client's accountant, Kim Long, had intentionally manipulated the client's financial records for five years. "In the opinion of the court, these manipulations were not minor, innocent mistakes. Not only did Long alter reconciliations in substantial amounts, she forged the underlying documents to which the. . .auditors were vouching. The lack of supervision at River Oaks permitted Long to perpetrate these acts at will." Id. When the client's Chief Financial Officer, Walker, became aware of her wrongdoing, he did not reveal it to anyone. In the Court's opinion, his silence "directly hindered and delayed" the investigation of the fraud. Id. The Court held that: "The combined effect of all of these circumstances is tantamount to 'audit interference'. Consequently, even if this court did subscribe to the National Surety philosophy, i.e., that the level of the client's conduct must equal with 'audit interference' before comparative negligence principles can be applied, it would consider the acts of Long and Walker as comparative factors before assessing any damages in this proceeding." Id. Therefore, under Mississippi law, the audit interference would be an offsetting factor in the determination of the auditor's liability using the comparative negligence scheme.

[5] In re Jack Greenberg, Inc., 240 B.R. 486, 519-20 (E.D. Pa. 1999). The auditor, Grant Thornton, was sued for professional negligence. In the auditor's Motion For Summary Judgment based on the client's contributory negligence, the Court noted that the A.I.R. served to limit the scope of the contributory negligence defense of an auditor. However, since there was no evidence that the client had been negligent, the A.I.R. was inapplicable. Id.

[6] 256 A.D. 226, 236, 9 N.Y.S.2d 554, 563 (1939).

[7] FDIC v. Deloitte & Touche, Note 4 supra at 563.

[8] Id.

[9] Two examples will be cited here: (a) in Shapiro v. Glekel 380 F. Supp. 1053, 1058 (S.D.N.Y. 1974), auditor Ernst & Ernst had allegedly negligently failed to detect inaccuracies in a client's financial statements which had led a bankruptcy trustee to permit the firm's directors to engage in an ill-advised program of acquisitions; the auditor asserted that the client's CEO had knowledge of the actual financial condition and that the client was therefore contributorily negligent and could not recover; relying upon the National Surety case and New York law, the U.S. District Court held that the negligence of the client had not contributed to the accountant's failure to perform his contract and the auditor's motion to dismiss the complaint was denied; (b) in Hall & Co., Inc. v. Steiner & Mondore, 147 A.D.2d 225, 228, 543 N.Y.S.2d 190, 191-92 (1989), the auditor allegedly negligently failed to discover and bring to the client's attention certain irregularities in the firm's books, which prevented discovery of major embezzlements committed by the client's bookkeeper; the auditor asserted affirmative defenses of contributory negligence and culpable conduct of the client, and the client asked the court to dismiss those defenses, but the court held that the defendant auditor had sufficient alleged negligent conduct on the part of the client which might have contributed to the loss of its money and to the auditor's failure to detect the bookkeeper's embezzlement; the court noted that the client had given the bookkeeper unsupervised check-signing authority without any internal controls, that this situation had allowed the malfeasance to occur, and therefore the client's motion to disallow the auditor's affirmative defenses was denied.

[10] 216 Neb. 433, 345 N.W.2d 300 (1984).

[11] Id. at 304.

[12] Id.

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The auditor had failed to confirm that the actual commodity market prices used in valuation of the inventory were accurate. The auditor relied upon the market prices used by the firm and did not independently confirm those prices; this was the essence of the lawsuit based on professional negligence filed by Lincoln Grain against Coopers & Lybrand. However, at trial, the defendant auditor successfully used the defenses of assumption of the risk and contributory negligence. The auditor stated that the client had assumed the risk that an audit would not guarantee that employee fraud would be uncovered by the audit, and that the client had been contributorily negligent because it had failed to exercise proper oversight over Its employees, thereby failing to detect the fraud in a timely manner.[13]

Lincoln Grain appealed the decision of the trial court to the Supreme Court of Nebraska. The Supreme Court reversed and remanded the case and ordered a new trial. The Court reasoned that the defense of assumption of the risk is "inapplicable to an action charging that an accountant negligently breached an agreement to render professional accounting services."[14] The Court buttressed this determination by stating that an auditor is "an independent, professional contractor engaged to conduct an independent audit; certainly it cannot be said that one who engages such an accountant assumes the risk that the accountant will fail to adhere to proper professional standards in performing"[15] the audit. In the instant case, the auditor failed to follow proper professional standards regarding the confirmation of the value of the inventory.[16]

The Supreme Court also rejected the defense that the client had been contributorily negligent. Expressly following the National Surety case, the Court held that "accountants are not to be rendered immune from the consequences of their own negligence merely because those who employ them may have conducted their own business negligently. Allowing such a defense would render illusory the notion that an accountant is liable for the negligent performance of his duties."[17] Accordingly, the Court further stated that "the contributory negligence of the client is a defense only where it has contributed to the accountant's failure to perform the contract and to report the truth."[18] Therefore, at a new trial, "whether Lincoln Grain was contributorily negligent in its dealings with the auditors and whether such negligence contributed"[19] to the auditor's failure to perform its audit in accordance with generally accepted auditing standards were questions of fact to be decided by the jury.[20]

V. Other States have Adopted the A.I.R.

In addition to New York and Nebraska, the A.I.R. has been adopted in Utah,[21] Pennsylvania,[22]

[13] Id. at 303-304.
[14] Id. at 306.
[15] Id.
[16] Id.
[17] Id. at 307.
[18] Id.
[19] Id.
[20] Id.
[21] Fullmer v. Wohlfeiler & Beck, 905 F.2d 1394 (10th Cir. 1990). The plaintiffs were investors in a failed business that had been audited by defendant. The auditor had issued qualified audit opinions for 1979, 1980 and 1981. Plaintiffs sued the auditor for professional negligence and won at the trial court. The court found that the financial statements did not conform to generally accepted accounting principles and that the audits had not been conducted in accordance with generally accepted auditing standards. The trial judge had rejected the auditor's defense that the plaintiffs had been guilty of negligence which caused or contributed to the plaintiffs' losses. He been correctly noted that the plaintiffs' negligence in an accounting malpractice case is only a defense, or the basis for an offset, where the plaintiffs' conduct has contributed to the accountant's failure to perform his work or his failure to furnish accurate accounting information. He found the plaintiffs to have been imprudent and negligent in the manner in which they handled some transactions (e.g., obtaining no security and some occasions not even obtaining notes, etc.), but that none of that conduct had any relevance to the auditor's responsibility to furnish accurate accounting information. The court held that since there had been no interference with the auditor's ability to conduct the audit, the trial court had also been correct in not allowing the auditor to assert a defense of comparative negligence. Accordingly, relying on the A.I.R., the judgment of the trial court was affirmed in its entirety. Id.
[22] JewelCor Jewelers & Distrib., Inc. v. Corr, 542 A.2d 72, 80 (1988), appeal denied, 524 Pa. 608, 569 A.2d 1367 (1989). JewelCor filed a professional negligence suit against its subsidiary's auditor, Ernest & Ernst. The trial court ruled that the auditor had not been negligent, and JewelCor appealed. One of the issues raised on appeal was whether the trial court had erred in its charge to the jury by instructing on the contributory negligence of Jewelcor. The appeals court noted that the proper standard to be applied in determining an accountant's liability is the one enunciated in the National Surety case. The appeals court also noted that if it were to be found that the client was negligent and such negligence had contributed to the failure of the audit, then the auditor would not be liable. However, since the jury found that the auditor was not negligent, then the issue of contributory negligence became irrelevant, and the instruction to the jury on contributory negligence was harmless error. Accordingly, the trial court judgment was affirmed and the auditor was held not to have committed professional negligence. Id.

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Texas,[23] Illinois[24] and Kansas.[25] In Utah, the U.S. Court of Appeals for the Tenth Circuit concluded that Utah law would adopt the National Surety approach because "the more fundamental principle is that the accountant should not be absolved of the duty undertaken by him to one reasonably relying on his audit unless the plaintiff's negligence contributed to the auditor's misstatement in his reports."[26]

Two of the commentators who have considered the A.I.R. prefer adoption of the rule to the alternative of allowing accountants to assert an unrestricted defense based on a client's negligence. See Menzel, The Defense of Contributory Negligence in an Accountant's Malpractice Action, 13 Seton Hall L.Rev. 292 (1983); and Hawkins, Professional Negligence Liability of Public Accountants, 12 Vand. L. Rev. 797 (1959).[27]

[23] Greenstein, Logan & Co. v. Burgess Marketing, Inc., 744 S.W.2d 170, 190 (Tex. App. 1987). The client sold gasoline in central Texas through convenience stores it owned or leased. For several years, the client's comptroller had underpaid the client's federal excise tax, and the audit had failed to detect that error; as a result, the amount of the client's net income and net worth were significantly overstated on its financial statements. Instead of a profit and a positive net worth, as shown on the audited financial statements, the client had actually incurred a net loss for several years and had a negative net worth of -$1.7 million. The Internal Revenue Service levied a $2.7 million tax lien against the client. The client sued the auditor for professional negligence and obtained a $3.6 million judgment against it. The jury found that the auditor had negligently performed several audits and had failed to use generally accepted auditing standards; the jury disregarded the auditor's statement that the client had purposely not paid the tax in order to have more funds available for company expansion. On appeal, the auditor contended the judgment should be reversed because the client's alleged negligent, intentional or fraudulent conduct barred the judgment. The Court of Appeals noted that "The circumstances under which an accountant can use the client's negligence, fraud or intentional conduct to avoid or absolve himself from liability has not yet been decided in Texas." Id. at 190. The Court noted that the issue had been decided in other jurisdictions, and decided to follow the Lincoln Grain case. In applying the Lincoln Grain decision to the instant case, the Court stated that the auditor had the burden of establishing, either as a matter of law or by appropriate jury findings, that the client had been negligent and that its negligence had proximately contributed to its failure to properly perform the audits, but that the auditor had failed to meet this burden at trial. Therefore, the auditor's appeal on this issue was denied. Id. at 190-191.

[24] Cereal Byproducts Co. v. Hall, 8 Ill.App.2d 331, 132 N.E.2d 27, 29-30 (1956), aff'd 15 Ill.2d 313, 155 N.E.2d 14 (1958).), holding that contributory negligence could not be asserted by the auditor when there was no evidence that the client interfered with the audit. Funds had been embezzled by the client's bookkeeper for several years and the audit had failed to detect the fraudulent activity. The auditor had foolishly followed the bookkeeper's instruction not to confirm the balances of 29 of the firm's 60 accounts receivable; those were the accounts that the bookkeeper had embezzled. The court held that the auditor's acceptance of a list of 29 accounts receivable not to be confirmed, without the knowledge of the client's manager, was "inexcusable negligence" for which the auditor was liable. Accordingly, the contributory negligence defense was inapplicable because the loss was attributable to the auditor and the client had not been negligent. Id. at 27-30.

[25] Comeau v. Rupp, 762 F.Supp. 1434, 1440 n. 6 (D.Kan. 1991).

[26] Fullmer v. Wohlfeiler & Beck, Note 19 supra at 1399, cited in FDIC v. Deloitte & Touche, Note 3 supra at 1145.

[27] *But see* Note, "The Peculiar Treatment of Contributory Negligence in Accountants' Liability Cases, 65 N.Y.U. L.Rev. 329 (1990).

Furthermore, the Federal Deposit Insurance Corporation has recommended the adoption of the A.I.R.[28]

VI. Whether Adoption of a Comparative Negligence Statute for Auditors Circumvents a Previously Adopted Audit Interference Rule

a) *Some Jurisdictions Have Ruled That Circumvention Does Not Occur*

In the Coopers & Lybrand case, the Illinois Supreme Court considered whether the common law A.I.R. had been abrogated by a statute that made comparative negligence applicable in tort actions against accountants;[29] the Court ruled that the A.I.R.[30] survived that legislation. After considering cases from other jurisdictions, the Supreme Court rejected the argument that the rule is inconsistent with principles of comparative fault. On the contrary, the Supreme Court held that application of the A.I.R. in auditing malpractice cases is in accord with recognized principles of comparative fault.[31] The Supreme Court also rejected a related argument that, by "relieving the client from responsibility for negligence not directly affecting the audit itself," the rule disserves public policy because it "minimizes the client's duty of care and encourages clients to take unjustified risks despite their superior knowledge of those risks."[32] The Supreme Court stated that other incentives and deterrents were available to control that type of risk taking, and that continued application of the A.I.R. would give the auditor incentive to take a more skeptical view of the client's financial statements, thereby resulting in greater care by the client.[33]

A federal district court in Louisiana, applying Texas law in an auditing professional negligence case, also opined that Texas' A.I.R. is not incompatible with the Texas comparative negligence statute.[34] This opinion was made notwithstanding the fact that the Texas statute provided that if a C.P.A. was sued for professional negligence, "a claimant may recover damages only if his percentage of responsibility is less than or equal to 50 percent."[35] Therefore, even in a state such as Texas which does not have a pure comparative negligence statute, i.e., one that only recognizes a limited percentage of plaintiff's negligence in causation, the A.I.R. remains applicable. This court noted: "There is nothing inherently inconsistent between the audit

[28] FDIC v. Deloitte & Touche, Note 3 supra.

[29] Illinois Public Accounting Act, 225 ILCS 450/30.2.

[30] Board of Trustees v. Coopers & Lybrand, Note 1 supra at 466.

[31] Id. at 468.

[32] Id.

[33] Id.

[34] Gulf Coast Bank & Trust Co. v. Statesman Business Advisors, Fed. Civ. Action No. 10-2618 (E.D.La. s K, Oct. 22, 2012) at 5-7.

[35] Tex. Civ. Prac. & Rem. Code s 33.001 (1987).

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interference rule and the doctrine of comparative negligence. The audit interference rule simply narrows the scope of client acts and omissions which can be considered to be 'negligent' for purposes of distributing loss. Nor does Texas' statutory scheme for comparative negligence compel a conclusion that the audit interference rule no longer applies in suits alleging accounting negligence."[36]

Mississippi,[37] Oklahoma[38] and Utah[39] have also ruled that the A.I.R. is not incompatible with the doctrine of comparative negligence.

VII. Other Jurisdictions have Ruled that Circumvention Does Occur

However, a federal court in Arkansas predicted that the Arkansas Supreme Court would disagree. The State of Arkansas had not adopted an A.I.R., but had enacted a comparative negligence statute. In a motion to dismiss, defendant auditor argued that the client's interference would bar the plaintiff client's claim. The U.S. District Court for the Western District of Arkansas disagreed and denied the motion to dismiss. The court weighed the pros and cons of an A.I.R. in conjunction with the state's comparative negligence law and came to the conclusion that Arkansas would not adopt the A.I.R.[40] They noted that the National Surety case, which contained the nation's first A.I.R., had been decided in a state with a contributory negligence law, providing that any negligence of plaintiff would completely bar recovery for plaintiff. In contrast, a comparative negligence statute such as the one enacted in Arkansas allows the court to assess damages according to the relative percentages of fault of the parties causing the harm. Since Arkansas had enacted a broad comparative negligence statute, there was less justification for the A.I.R. Therefore, the Arkansas federal court believed that the A.I.R. would be unsuitable for Arkansas. They reasoned that auditors are capable of harmful negligence just as much as clients are, and that the Arkansas comparative negligence law is capable of recognizing and distributing fault between parties whose misconduct contributed to an actionable loss.[41] The Arkansas Supreme Court had previously stated, "The purpose of our comparative negligence statute is to distribute the total damages among those who caused them."[42] Accordingly, the court believed that the Arkansas comparative negligence statute could achieve this purpose in an auditor's malpractice action, and that its application would not improperly protect auditors from liability for the portion of harm caused by their professional negligence. Furthermore, the court noted that accountants and auditors, like other professionals, are held to a standard of care which requires that they exercise the average ability and skill of those engaged in that profession. Failure to exercise ordinary care in conducting accounting activities may expose an accountant to allegations of negligence. Simultaneously, the persons who hire accountants, usually businesspersons, should also be required to conduct their business activities in a reasonable and prudent manner. Thus, the federal court concluded that the Arkansas Supreme Court would follow the traditional Arkansas rule of comparative fault in accounting malpractice cases, because such a rule would appreciate and work to enforce the respective duties of accountants and their clients. The court felt that neither party in these disputes requires or deserves exceptional protection or exceptional exposure to litigation and that a comparative fault law, unrestricted by the A.I.R., is capable of an evenhanded apportionment of liability for harm in this type of case.[43]

Similarly, the Supreme Court of Ohio has ruled that its comparative negligence statute removes the need for the A.I.R.; accordingly, the A.I.R., which came into existence during the period that contributory negligence was in place, has been abolished. A client had sued its auditor, Price Waterhouse, for professional negligence. At the trial court and at the court of appeals, Price Waterhouse had been precluded from asserting a comparative negligence defense and the A.I.R. had been applied to the case, resulting in a finding of liability for Price Waterhouse. The Ohio Supreme Court held that comparative negligence should have been allowed as a defense and that the A.I.R. was inapplicable, but the failure to allow comparative negligence as a defense was deemed to be harmless error; accordingly, the court of appeals' decision was affirmed, and Price Waterhouse was liable to the client for its professional negligence.[44]

Other jurisdictions currently refusing to recognize the A.I.R. include Minnesota,[45] Florida[46] and Michigan.[47] Like Arkansas and Ohio, these states reason that without the potentially harsh outcomes of a

[36] Gulf Coast Bank & Trust Co. v. Statesmen Business Advisers, Note 34 supra at 5-6.
[37] In re River Oaks Furniture, Inc., 276 B.R. 507, 548 (N.D.Miss. 2001).
[38] Stroud v. Arthur Andersen & Co. 37 P.3d 783, 789 (Okla. 2001). The court approved a jury instruction that in determining plaintiff's negligence the jury could only consider negligence which interfered with the auditor's provision of professional services. Id.
[39] Fullmer v. Wohfeiler & Beck, Note 21 supra. The court ruled that the plaintiff's "negligence in an accounting malpractice case is only a defense, or the basis of an offset where the plaintiff's conduct contributed to the accountant's failure to perform his work or to furnish accurate accounting information." Id.
[40] FDIC v. Deloitte & Touche, Note 4 supra at 1145-46.
[41] Id.
[42] Stull v. Ragsdale, 273 Ark. 277, 620 S.W.2d 264, 267 (1981).
[43] FDIC v. Deloitte & Touche, Note 4 supra.
[44] Scioto Memorial Hospital Association, Inc. v. Price Waterhouse, 659 N.E.2d 1268 (Ohio 1996).
[45] Halla Nursery v. Baumann-Furrie & Co., 454 N.W.2d 905 (Minn. 1990).
[46] Devco Premium Finance Co. v. North River Ins. Co., 450 So.2d 1216, 1220 (Fla.Dist.Ct.App. 1984).
[47] Capital Mortgage Corp. v. Coopers & Lybrand, 142 Mich.App. 531, 369 N.W.2d 922, 925 (1985).

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contributory negligence defense, an A.I.R. is not necessary or desirable because it would lead to undesirable consequences.[48]

VIII. Recent Developments

a) Specificity is Required in Asserting the A.I.R. as an Affirmative Defense

In order to invoke the A.I.R., an auditor accused of professional negligence is required to specifically allege how the client's alleged negligence interfered with the auditor's ability to conduct the audit. In a recent case, the auditor alleged that the client bank had failed to "adequately monitor and administer its loan to Sysix." That general allegation of negligence was held to be insufficient to plead the narrow category of comparative negligence that is permitted under the A.I.R. The auditor's allegation of the client's "poor business practices" was not allowed to be asserted as a defense to the auditor's negligent failure to discover and report the client's noncompliance with several legal requirements.[49]

b) Whether the A.I.R. is Applicable to a Third-Party's Claim against an Auditor

In Comerica Bank v. FGMK,[50] an Illinois case, a bank filed a lawsuit against an auditor, alleging that the auditor had negligently performed an audit of its client, a party to whom the bank had made a loan. There was no contractual relationship between the auditor and the bank. The Supreme Court of Illinois had never considered whether the A.I.R. may be used by an auditor as a affirmative defense in such cases.[51]

Comerica Bank argued that the rule should not be limited to the auditor-client relationship. The bank contended that the Coopers & Lybrand court had signaled its willingness to extend the rule to claims against auditors by third parties by its citation to two cases in which the bank did that.[52] Comerica said that application of the rule was appropriate because FGMK knew that the primary intent of the client in having the audit conducted was to influence the bank to grant the loan, and thus under the Illinois Public Accounting Act FGMK had a duty to the bank that was equal to the auditor's duty to its client. Finally, the bank argued that, because the auditor failed to allege in its answer that the bank interfered with the audit, the policy underlying the rule extends to claims by third parties against auditors.[53]

In response, the auditor contended that the A.I.R. should not apply outside the auditor-client relationship. The auditor stated that the Coopers & Lybrand citation of the Fullmer case was not an implicit endorsement of expanding the reach of the rule. The auditor also argued that application of the A.I.R. to non-clients would be contrary to the policy underlying the rule. The auditor also denied that it owed the bank a duty.

The U.S. District Court declined to predict whether the Supreme Court of Illinois would apply the A.I.R. in an action brought by a third party (e.g., a bank) against an auditor. They said it would have been premature to do so because they only had to rule on the bank's Motion To Strike the auditor's affirmative defense of comparative negligence. Since additional discovery of the facts was needed to determine whether that affirmative defense was barred by the A.I.R., plaintiff's Motion To Strike was denied.[54] However, the Court was impressed with the fact that the Illinois Public Accounting Act made an auditor liable to a third party, regardless of the absence of privity of contract, if the auditor is "aware that a primary intent of the client was for the professional services to benefit or influence the particular person bringing the action."[55] Thus, it appears that the District Court leaned toward application of the audit interference rule to negligence cases filed by third parties against auditors.[56]

More recently, a Florida state district court opined that the Illinois A.I.R. would also apply to a third party. A bank that had made a mortgage loan to the client had sued the C.P.A. firm for damages because an unqualified audit opinion had been issued. The court held: "We find that, as a logical extension of Illinois law, there is no reason for a third party not to be considered in the position of a client. . .The client hired [the auditor] to provide audit services and specifically told [the auditor] a primary purpose for the special engagement was to provide the report to [the bank], a third party with an established interest in the financial soundness of the client."[57] Accordingly, the court ruled that the A.I.R. was applicable to the bank as well as the client. However, since there was no evidence of audit interference by either the bank or the client, the trial court had erred in not directing a verdict in their favor on the comparative negligence defense.[58]

c) The Parmalat Scandal: The Relationship between the A.I.R. and the in Pari Delicto Doctrine

Parmalat, an Italian dairy conglomerate known for its long shelf-life milk, began as a small dairy distributor in Parma, Italy and grew to a diversified, multinational food company by 1990. Beginning in the

[48] FDIC v. Deloitte & Touche, Note 4 supra at 1146.
[49] Comerica Bank v. FGMK, No. 10 C 1930 (N.Dist. Ill, E. Div. 2011) (mem. op.), citing Id. at 468.
[50] Id.
[51] Id.
[52] Fullmer v. Wohlfeiler & Beck, Note 21 supra; and Stroud v. Arthur Andersen & Co., 37 P.3d 783 (Okla. 2001).
[53] Comerica Bank v. FGMK, Note 49 supra at 5-6.
[54] Id. at 6-7.
[55] 225 ILCS 450/30.1(2).
[56] Comerica Bank v. FGMK, note 49 supra at 6-7. However, the District Court rejected the portion of the bank's argument which relied on the Fullmer and Stroud cases. Neither of those decisions considered whether the audit interference rule should apply to claims outside the auditor-client relationship. Id. at 6.
[57] Schein v. Ernst & Young, 77 So.3d 827, 831 (4th Fla.Dist.Ct. 2012).
[58] Id.

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late 1980s, however, the firm experienced financial difficulties including a 100 billion Italian lira loss as a result of the purchase and subsequent bankruptcy of a media company and an investigation for radioactive milk and related product recall and drop in consumer confidence. The firm needed constant infusions of cash to cover its losses and service its massive debt. But cash could be obtained only so long as Parmalat appeared to be a sound investment. To this end, insiders at Parmalat and its external auditor, Grant Thornton, devised schemes involving misleading transactions and off-shore entities that created the appearance of financial health. Loans obtained on the basis of these transactions were used to service debt and obtain more loans. These schemes were hidden in financial statements prepared by Parmalat's directors and approved by its auditor, Grant Thornton. Parmalat continued its fraud until its massive collapse. When the firm was unable to pay maturing bonds in 2003, the firm's stock price lost half of its value almost overnight and the firm was forced to declare bankruptcy.[59]

Parmalat filed a lawsuit against the auditor, Grant Thornton, for professional malpractice. The complaint alleged that the auditor, acting in conjunction with top managers of Parmalat, established ficticious companies and structured fake transactions whose only purpose was to siphon off billions of dollars from Parmalat. As the firm suffered more and more losses from the looting, the managers sought to hide their acts with misleading manipulations and false transactions. According to the complaint, none of those transactions was intended to benefit Parmalat; instead, each was designed solely to facilitate the managers' looting of the firm. The complaint alleged that Grant Thornton, the auditor, was continuously aware of the looting and assisted in its cover-up. Together with the corrupt managers, the auditor allegedly devised a scheme to use offshore companies to offload debt and manufacture the appearance of revenue. Initially, the scheme involved three shell companies that were used to hide Parmalat's losses and to divert money to the managers. Later, in 1998, the managers and the auditor incorporated Bonlat, a subsidiary of Parmalat which became the principal vehicle for the fraud. Bonlat thereafter served to hold Parmalat off balance sheet liabilities that, had they been reflected on Parmalat's consolidated balance sheet, would have shown that Parmalat was in substantially worse financial health than it was purported to be. Meanwhile, Bonlat booked fictitious revenue and carried a fake $4.9 billion balance in a Bank of America account on its balance sheet. Bonlat's auditor, Grant Thornton, accepted a confirmation letter from Parmalat attesting to the $4.9 billion. Amazingly, the auditor did not make an independent confirmation. The auditor also accepted unquestioningly the legitimacy of a $600 million investment that Bonlat had allegedly made in a shell company set up by Parmalat. Grant Thorton did all of these things while continuing to issue unqualified audit opinions on Parmalat's financial statements year after year. As a result of the professional malpractice, the complaint filed against the auditor alleged damages in the amount of $10 billion.[60]

The auditor filed a Motion For Summary Judgment. Relying upon the affirmative defense of *in pari delicto,* Grant Thornton was able to convince the court that the unlawful acts of Parmalat's managers must be imputed to the firm. The doctrine of *in pari delicto* is based on the law of agency. The acts of an agent are ordinarily imputed to the principal. In the instant case, Parmalat, the principal, hired the managers to serve as its agents. Whenever a principal uses an agent to act on its behalf, it does so at its peril; there is always a risk that the agent will not conduct himself as he is supposed to do, i.e., to keep the interests of the principal of paramount importance. The managers who looted Parmalat committed unlawful acts, but they were Parmalat's agents, and their unlawful acts must be imputed to Parmalat. The law of torts will not allow a plaintiff with "unclean hands" to get legal relief from another party if that party has also participated in the unlawful or negligent acts. The court will not countenance a situation where one wrongdoer gets legal relief from another wrongdoer; in the instant case, Parmalat and Grant Thornton both committed wrongful acts.[61]

Parmalat tried to counter Grant Thornton's reliance on the *in pari delicto* doctrine in two ways. Firstly, Parmalat contended that the "adverse interest" exception applied in this case, i.e., that *in pari delicto* was inapplicable because the agents committing the unlawful acts acted in their own interest and had abandoned the principal's interest. The court ruled that the adverse interest exception was inapplicable because the agents did not totally abandon Parmalat's interests; for example, those unlawful acts enabled Parmalat to obtain new infusions of capital, to expand its production facilities, to increase its product line to 10,000 items, and to increase its international presence from 5 countries to 30. The adverse interest exception requires total abandonment of the principal's interest; partial abandonment, which exists in this case, is insufficient.[62]

Secondly, Parmalat argued to the court that the A.I.R. precludes application of the *in pari delicto* doctrine to bar claims for accounting malpractice. The court noted that the A.I.R. permits an accountant sued for malpractice to assert his or her client's negligence as a defense only where that negligence interferes with the accountant's failure to perform his contractual obli-

[59] In re Parmalat Securities Litigation, 659 F.Supp.2d 504, 509-11 (S.D.N.Y. 2009).

[60] Id. at 512-14.

[61] Id. at 517-18, 530.

[62] Id. at 518-25.

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gations and to be truthful. It exists to limit the defense of contributory negligence, and may also be applicable in states that have adopted a comparative negligence statute. In other words, the A.I.R. may be asserted by an auditor or a client to limit or preclude the auditor's liability for malpractice. But it has nothing to do with the separate *in pari delicto* defense which, if applicable, operates as an absolute bar to a claim based on equally wrongful acts of both parties. Accordingly, Parmalat was unsuccessful in its attempt to use the A.I.R. as a counterweight to the defendant's reliance on *in pari delicto;* the A.I.R. is inapplicable in the context of *in pari delicto.* Therefore, since both grounds put forward by Parmalat failed to prevent the application of *in pari delicto* to this case, the court granted Grant Thornton's Motion For Summary Judgment. Plaintiff Parmalat's professional negligence lawsuit against Grant Thornton was dismissed.[63]

d) Granting a Jury Instruction on Client's Contributory Negligence Should be the Exception, Not the Rule

Missouri has enacted a comparative negligence statute, but that statute only applies in cases involving personal injury or death or damages to property. The comparative negligence statute is inapplicable to cases related solely to economic loss, such as professional negligence cases; in those cases, contributory negligence is still applicable.[64] However, Missouri has neither adopted nor rejected the A.I.R.[65] Although not specifically adopting the rule, a Missouri appeals court recently gave the A.I.R. a nod of approval: "The audit interference rule thus represents nothing more than a narrow example of the broader judicial sensitivity we have already advised must be employed in professional negligence cases to avoid permitting contributory negligence to unfairly shift the duty undertaken by a professional back to the client. . .The defense of client contributory negligence should be unavailable as a matter of law when the alleged client negligence was a failure to discharge a responsibility within the scope of the professional's duty. That is, a client cannot, as a matter of law, be contributorily negligent for the same acts or omissions that constitute the professional's negligence. . .To conclude otherwise would discourage clients from relying on the professional assistance the client has sought, placing the client in the dilemma of having to worry about whether he will be later held contributorily negligent for relying on the professional to protect the client's interest. . .As the scope of the contributory negligence defense should turn on the duties the professional has undertaken to the client, it follows that the exact parameters of those duties must be defined in professional negligence cases in light of the particular circumstances of each case through jury instructions."[66]

Within that context, the court placed constraints on when a jury instruction on a client's contributory negligence is allowed in a professional negligence case against an auditor: "Great care must be taken by the trial court in such cases to avoid submitting a contributory negligence instruction that presumes a duty a client has not undertaken, that shifts to the client a duty undertaken by the professional, and that effectively negates the professional's obligation to perform its duties by ignoring the very reason the client sought out the professional's assistance in the first place. We also emphasize the importance in professional negligence economic loss cases of carefully defining the scope of the duty undertaken by the professional. Professionals are not insurers against error and can only be liable for mistakes that arise out of a duty specifically undertaken to a client and a corresponding failure to perform within the applicable standard of care. Though we cannot anticipate every scenario which will present itself to trial courts in the future, we suggest that by virtue of the principles herein discussed, *it will be. . .'the exception, and not the rule, where clients may be considered at fault' for a professional's purported failure to perform duties undertaken to the client."*[67]

IX. Conclusions

a) The purpose of the A.I.R. is to limit the scope of an auditor's contributory negligence defense in a negligence lawsuit filed by a client.
b) The A.I.R. provides that the client's negligence is a defense only when it has contributed to the accountant's failure to perform his contract and to report the truth.
c) New York was the first state to recognize the A.I.R.; other states adopting the rule include Illinois, Kansas, Mississippi, Nebraska, Oklahoma, Pennsylvania, Texas and Utah.
d) These states have either never recognized the A.I.R, or have abolished it.: Arkansas, Florida, Michigan, Minnesota and Ohio.
e) Recent case law has highlighted several developments in the A.I.R., including:
   i. an auditor accused of professional negligence may be required to specifically state how the client's alleged negligence interfered with the auditor's ability to conduct the audit;
   ii. the A.I.R. may also be applicable whenever a third-party beneficiary of an audit, such as a bank, sues an auditor for professional negligence;

[63] Id. at 531-32.
[64] Children's Wish Foundation International, Inc. v. Mayer Hoffman McCann, No. WD 70616 (Mo. App., W.D. 2010), pp. 41-42. However, other jurisdictions (e.g., Mississippi) do provide that their comparative negligence law is applicable to cases with only economic loss, such as auditors' professional negligence cases. In re River Oaks Furniture, Inc., 276 B.R. 507, 546 (N.D.Miss. 2001).
[65] Id. at 35.
[66] Id. at 45-47.
[67] Id. at 54. (Emphasis added.)

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iii. the A.I.R., which limits the scope of an auditor's contributory negligence defense, has nothing to do with the separate *in pari delicto* defense which, if applicable, operates as an absolute bar to a claim based on equally wrongful acts of both parties; and
iv. a court's granting of a jury instruction on a client's alleged contributory negligence should be the exception, not the rule.

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2. Texas, State of. Civ. Prac. & Rem. Code s 33.001 (1987).

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Investor Relations on the Western Balkan's Stock Market: A Comparative Study

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Abstract - In this work we analyses IR development of Serbian and Croatian companies listed on stock markets which are within indices Belex 15, BelexLine (Belgrade Stock Exchange) and Crobex (Zagreb Stock Exchange). Our results indicate that IR techniques have diffused from countries following the Anglo-American economic model to The Western Balkan's countries. Serbia and Croatia have adopted laws and regulations in order to facilitate the establishment of stock markets. These new regulatory regimes have largely been influenced by the EU especially for countries gaining or planning to gain membership. The emergence of IR practices and IR departments in the Serbia and Croatia contributes to the development of corporate governance structures and market transparency.

Keywords : *investor relations, communications, internet, shareholders, stock market.*

GJMBR-D Classification : *Code: G32, M41*



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Abstract - In this work we analyses IR development of Serbian and Croatian companies listed on stock markets which are within indices Belex 15, BelexLine (Belgrade Stock Exchange) and Crobex (Zagreb Stock Exchange). Our results indicate that IR techniques have diffused from countries following the Anglo-American economic model to The Western Balkan's countries. Serbia and Croatia have adopted laws and regulations in order to facilitate the establishment of stock markets. These new regulatory regimes have largely been influenced by the EU especially for countries gaining or planning to gain membership. The emergence of IR practices and IR departments in the Serbia and Croatia contributes to the development of corporate governance structures and market transparency. This exploratory study suggests that further research using a larger sample to enable statistical testing of disclosure theories relevant to IR is desirable. There is also a possibility for more qualitative case study or research to provide further insight into the topic. Potential also exists for studies of the diffusion of IR in the other Western Balkan's countries (Montenegro, Macedonia, Bosnia and Hertzegovina, Slovenia, Bulgaria etc.) and the newly emerging economies of BRICS countries (Brazil, India, China and South Africa).

Keywords : investor relations, communications, internet, shareholders, stock market.

I. Introduction

Investor relations and communications with the financial public refer to different forms of communication methods and tools which a company uses when building relations with those who provide means for its growth and development. This makes existing and potential investors the prime financial public, but one should not overlook the importance of others involved, those that have substantial influence on investors' perspectives and opinions. In relations with the financial public, besides professional, well-informed investors the targeted public is also individuals who, as a rule, are neither professional investor nor are equipped with comprehensive information or broad financial knowledge. Good and active investor relations help a company to provide a fair price for its stocks, and also provide access to extra capital when needed.

Providing information about business results is the most significant opportunity for communicating with investors. Achieved results provide proof that a company is capable of reaching its goals and the market's expectations. Published results must be detailed enough for analysts and investors to reliably evaluate the company's value. This does not necessarily mean that financial reports are always the most efficient means of communication. It often happens that numbers and accountancy rules suppress transmission of all the necessary information. Management, for example, is often unrealistic regarding the company's future, since their role is to 'sell' the company to new employees, buyers, distributors, and investors. The forecast of future results also demands evaluation of one's ability to run a company, which can lead to overoptimistic grades from the analysts' perspective. Therefore, management must regularly analyze a company's business and compare their forecasts with the ones made by analysts.

The developments in the last decades of e-business, global capital markets, and information technology, have influenced the economic system to become more digital. The purpose of financial reporting has also changed in recent years to become more user-oriented. As they have become better informed, the users of financial reporting, stakeholders such as investors, creditors, clients, suppliers, and analysts, require more and more accounting information from companies.

This study investigates investor relations development and communication methods of companies listed on the Belgrade Stock Exchange (BELEX 15, BELEX LINE) and Zagreb Stock Exchange (CROBEX). For this purpose the websites of the 36 largest listed companies in the Republic of Serbia and Croatia were screened for investor relations items.

The objective of our study is to find out if Serbian and Croatian companies use Internet advantages to communicate with institutional and individual investors. Using the Internet for disclosing financial statements facilitates stakeholders' access to information and decreases the costs of printing and disseminating the hard copy of financial statements to interested investors. The question we try to answer is whether regional companies (Serbian and Croatian) have given more attention to online investor relations in improving their investor communications.

II. Defining IR

Modern 'investor relations' as a discipline was defined in the late 1970s. Different academics and practitioners of investor relations defined it in various ways. In general, 'investor relations' can be seen as a

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connection or link between companies and the investor community (Lake and Graham, 1990). Investor relations are an overall process by which a corporation communicates with the investor community, explaining the company's future challenges and opportunities, discussing present strategy and past performance, and developing a constituency of informed and interested investors) (Ellis, 1985). Conducted effectively, investor relations can have a positive effect on a company's total value relative to the overall market and a company's capital cost (Petersen and Martin, 1996).

According to the definition of the *American National Investor Relations Institute* (NIRI), relations with investors represent a complex strategic company activity, which is a product of finance, communication, marketing, and business law application, and aims to provide two-way communication between company, financial public, and other subjects, which leads to a fair price for the company's securities (NIRI, 2010; LSE, 2010). The difference between these two definitions implies the scope of the investor relations dynamic, and that new dimensions are being added to investor relation activities. Investor relation is nothing but a defensive or aggressive attempt to stimulate the company's value and share price (Ryder and Regester, 1989). Ultimately this is not true. 'Investor relations' are not only responsible for stimulating firm value and share price, but also are important in other striking ways. However, an investor relation is the financial end of the communications function, rather than the communications end of the financial function", meaning investor relations start with financial activities and finish when that financial information is communicated to its audience (Dolphin, 2003). Thus investor relations can be seen as a task of the company management in order to provide timely, accurate, useful, meaningful, understandable and complete information about the company's fundamentals, present and past situation, and future prospects to the investor community, which incorporates the disciplines of marketing, communication, accounting, and finance, and influences the value of the corporation. The impact of governments and the various institutional requirements (SEC, stock exchanges, etc.) also have a positive influence in providing timely, accurate, and meaningful information to the investor community by the companies. By practicing various activities, investor relationship departments communicate information to the investor community. The general investor relation activities are depicted in Table 1.

The purpose of investor relations is to make a proper connection or link between the company's management and the financial community (Miller, 1991). Basically, the investor relationship department of corporations deals and communicates with influential financial groups.

Table 1 : Investor relation activities

Conveying information about	Activities
Present business status	Explaining information about the business and environment Explaing recent development and decisions on the basis of company's long term planning and strategy
Forecasting future status	Highligting future prospects of the business rather than historical performance Focusing on long term strategies Focusing on long term opportunities for the business
Transparency	Avoiding over-expectations from the target audiences Facing adverse news openly and honestly
Managing relations	Providing analysts with access to the top management Being proactive rather than re-active Employs an nvestor relations staff or a department that is able to explain details and is responsive to analysts' inquires and requests

The financial community consists of the following sixteen influential financial groups: stock exchange member firms, customers' brokers, security analysts and individual analysts, unlisted or over-the-counter dealers, investment bankers, commercial bankers, registered investment advisory services, insurance companies and pension funds, mutual funds and investment trusts, investment counselors, trustees of estates and institutions, financial statistical organizations, investment magazines and financial publications, large individual shareholders, debt rating agencies, portfolio managers and lender banks (Miller, 1991). Whatever the principle activities and whoever the audience, communicating and transmitting relevant, concise, trust worthy, real time information are the key activities of investor relations.

Publicly traded companies are required to provide certain information to current and potential investors. In the U.S., this information includes *mandated SEC disclosure documents, such as annual reports, 10-K filings, proxy statements, quarterly 10-Q filings, and 8-Ks* that announce unscheduled decisions and actions. Additionally, there are day-to-day goings-on of the company, marketing strategies, operational decisions, acquisitions, and general business fluctuations that, if deemed to be *material,* can be shared with investors. All of these communications are supported by other vehicles such as *press releases, conference calls, and management presentations,* whether live or Web cast (Ryan and Jacobs, 2005).

In most cases, the packaging and distribution of this information is the responsibility of investor relations, as IR is the filter through which all financial commu-

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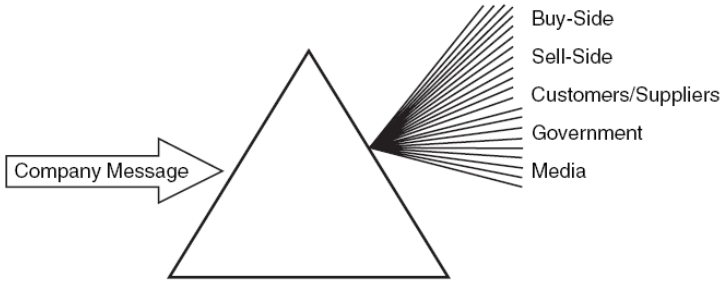
nications come out of the company. (See Figure 1). Companies have either an IR department or an executive designated with IR responsibilities, and many companies supplement the IR function with outside IR counsel. IR counsel, either internal or external, not only administrates disclosure responsibilities but, in a perfect world, works to preserve or enhance the company's equity value. IR counsel steeped in capital markets know-how and industry-specific knowledge understands the cause and effect of stock movements and incorporates that knowledge into all strategic communications plans.

Figure 1 : The Financial Communciations Filter



Source : Ryan M. T. & Jacobs A. C. (2005). Using Investor Relations to Maximize Equity Valuation. John Wiley & Sons Inc., New Jersey, 2005, 5.

III. History of IR

Investor relations are a young specialization and can be dated back to the time around post World War II. In the time after World War II, there was an economic boom, which meant that Americans had to find a place to put their money, and companies had to expand in order to satisfy the growing needs of consumers. There had been some trading occurring during the Second World War, however, it was only the rich and professional investors that dared to invest their money in companies. Therefore, the trading volume practically exploded when the rich and professional investors started to invest in companies during the 1950s and the 1960s and a new type of communication department within a company was born. Three eras can be identified in the history of investor relations: the Communication Era (1945-1970), the Financial Era (1970-2000), and the Synergy Era (after 2000) (Laskin, 2010).

a) The Communication Era (1945-1970)

The modern profession of investor relations originated through the ideas of Ralph Cordiner, a chairman of *General Electric* who in 1953, created a business function in charge of all shareholder communications. In fact, it was in the early 1950s when numerous U.S. companies began thinking about their shareholders in a different way, and concentrating on how to build a beneficial relationship with them. This sudden shift in thought processes was due to the fact that companies were facing another type of shareholder on the financial market – namely, the private/individual shareholder, who caused major changes in the board room. Before this, companies only knew of institutional shareholders but now normal persons from American households also became shareholders. The first companies to recognize this change were the car manufactures *Ford, GM,* and *Chrysler*. They began to target consumers as shareholders because back then, it was normal for private shareholders to purchase cars from the company in which they owned shares. From that point on, increasing share demand became a crucial part of the corporate agenda as it would push prices up and up (Laskin, 2010). Below are some examples of the major changes that U.S. companies executed after they began targeting private shareholders:

- The annual reports took shape as a 48 page, glossy sales brochure for the company's products. All the financial data was there too, but now focus was on sale.
- Companies would give away free gifts or gifts boxes with samples of products to their shareholders.
- Annual General Meetings (AGM) would be of no substance, but rather an event where shareholders could eat and drink for free and stay free at hotels in relation with the AGM.

As mentioned above, there was an economic boom during the post-World-War-II years which created extra income in the hands of the American public; this was an extraneous income that could be invested. Corporations found themselves fighting with each other for this cash – a competition companies were not used to facing. In this moment, the management turned to the proven professionals of communicating with individuals for help – public relations teams. Unfortunately, in the 1950s, public relations were not a well-established practice. Only the largest companies had an internal public relations staff, and the functions and roles of public relations were limited. This era was characterized by the lack of financial expertise among practitioners.

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Investor relations tasks were assigned to publicists who were largely considered press agents, who focused their efforts on putting the company's name into mass media. Investor relations throughout this period lacked strategic and managerial activities, as companies did not think that shareholders could have a marked influence on them. Thus, organizations did not conduct research to understand their shareholder patterns better. The feedback from shareholders was not collected or analyzed what so ever. The stream of information simply flowed one-way: from organization to the publics, and flowed mainly through mass media channels. Later on in the history of investor relations, this communication method was changed to two-way communication as IR practitioners figured out that this was the best way to communicate with shareholders.

At the end of the communication era, the two professions of investor relations and public relations were split completely. Companies finally realized that public relations professionals had little competence in running investor relations. Thus investor relations professionals founded their own organization named the National Investor Relations Institute (NIRI). They quickly defined their main goal as: "*Our aim is to separate ourselves from the so-called financial public relations consultants, who operate on the fringe of stock touting, and who are fouling the nest.*"(Laskin, 2010).

b) The Financial Era (1970-2000)

The second era, the financial era, saw the focus shift from private shareholders to institutional investors. During the financial era, the U.S. market was about to be institutionalized. Investor relations responsibilities were also shifting from communication specialists to accountants and financial professionals. Under the supervision of CFOs (*Corporate Financial Officers*), investor relations activities became focused on providing financial disclosure to investors. Companies were used to handling poorly educated private shareholders, but the shareholder profile changed to well-educated professionals, financial analysts who did not accept a nice glossy report filled with product information. Instead, they demanded information about company strategies, sales, and research and development.

The focus then shifted from mass media to one-on-one meetings with institutional shareholders and financial analysts. This interpersonal nature of communications enabled two-way information streams. Feedback was gathered, although it was rarely used to modify the activities of corporations. Instead, it was used to come up with more persuasive messages in order to "sell" the organization. The "selling" approach positioned the goal of investor relations towards increasing the share price through supplying the financial audience with plenty of positive company news. A high share price would satisfy shareholders and the company would have more money to work with as the value of the company would increase. Scholars suggest that this might be one of the reasons for the "creative accounting" at Enron and other corporations.

The job description of an IR professional also evolved during this era. Institutional investors were powerful and evaluated every action the company took and did not hesitate to criticize or ask questions if they believed these actions were not in the best interests of the shareholders. Companies saw institutional investors as corporate activists because they were not used to interference from skeptical shareholders. For this reason, investor relations professionals had to transform from providing information into defending the managers' actions. If these actions were criticized, investor relations professionals were expected to come with counterarguments to explain and protect the company's actions. Overall, their job was to increase valuation of the company and distribute positive information while the negative was tightly controlled. This led to manipulated communication which resulted in overvaluations, accounting fraud, and selective distribution of information (Laskin, 2010).

c) The Synergy Era (after 2000)

Laskin (2010) defines the current era of investor relations as the *synergy era*. The shift from the previous *financial era* was caused by changes in society and the economy. The 21st century was impacted by devastating corporate scandals and failures. Large accounting scandals and the burst of the dot-com bubble challenged the entire model of corporate America. Various accounting scandals necessitated an overhaul of disclosure and financial reporting standards as well. Laskin suggests that investor relations practice has assumed more responsibilities than ever before since the collapse of Enron. Furthermore, the competition for capital increased heavily and made investor relations a key activity, influencing the success of the entire company. "*CEOs saw that investor relations are not one of the auxiliary functions, but rather an activity that can create a competitive advantage.*"(Laskin, 2010).

Today, the task for investor relations officers is to help investors to understand the business model of the company. The new goal of investor relations is to build a mutually beneficial trust relationship between the company and its investors, which allows for long-term cooperation. Today's investors demand more than only being supplied a financial disclosure. They require information about the company's strategy, management team, and mission and vision, amongst others that are vital information in regards to making an investment decision. Thus, it has become more important for investor relations officers to not only speak the financial language, but it is also important for them to be able to strategically communicate with investors.

Investor relations is about proficient communication between a company and its investors, and

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success in investor relations requires the companies to extend the scope of investor relations from a mere publication of obligatory annual and interim reports to more frequent, extensive, proactive and diversified two-way interaction and communication. The synergy era requires that investor relations officers listen to investors as much as they listen to management, and that they help to align the interests of both parties. Investors should be as likely to follow management recommenddations as management should be able to adopt investor propositions. This type of investor relations is based on communication between the company, investment community and financial public.

It can be argued that the current state of investor relations results directly from the investor relations history. Today, the profession requires a synergy of communication expertise and financial expertise, which have characterized the previous eras respectively. Communication and financial skills are equally valued and required in order to obtain the goal of improving the understanding of the company among investors. Communication is the key, with information traveling back and forth between company and investors, and implementing feedback from investors in the corporate decision-making process. Investor feedback is actively gathered and evaluated, shareholder research is conducted, and the analysis is often taken into consideration when planning the company's strategy.

IV. IR on the Internet: Importance of E-Communications

To survive in a changing business environment, company itself must satisfy the needs of various interest groups, so-called stakeholders, among who are investors, that is shareholders and stockholders. Thus, we enter the area frequently called public relations (PR). The era of "e-communications" began in the 90's in past century, with wider usage of Internet. With the change of ways of communication, investors' needs also changed (Cole, 2004). Until then, investors or some other interest group could obtain company's information in written form or in direct talk with company's authorised manager. Possibility of company's data being "on-line" and available on company's Internet page, changed investors' habits (Guimard, 2008). In order to sustain in the market, companies must lead proactive strategy and foresee changes on the market and possible demands. That is how major companies work, like *Microsoft,* for example, who after frequent visits to their web pages prepared list of mostly asked question and answers, enabled web casting conferences and prepared presentations (Special Report, 2003). Basically, using Internet in relations with investors brought *Microsoft, Apple* etc. not only lower cost, but also a cheaper way of promoting the company. Since new electronic possibilities changed the structure and way of investing, they also changed the nature of relations with investors (Marcus, 2005).

Therefore, companies must be aware of the fact that active usage of Internet presentations for communicating information to investors also provides them with communication media. In other words, investors can make inquires via e-mail, define data they want to receive by newsletter, engage in a conference, etc.

Table 2 : E –communications forms

Standard forms	New forms
Informative packages	Road show
Mycro site of company	Digital video broadcasting
Chatroom	Forums
Newsletter	Conference calling
E-mail	RSS & RNS
E-mail alarms	Social networks

Source : Djordjevic B. et al. (2012). Investor Relations on the Internet: Analysis of companies on the Serbian stock market. Economic Annals, vol.57, 193/2012, Faculty of Economics, Belgrade, p.124.

Nevertheless, in spite of focus on e-communication, direct meetings with company's representative are the most popular means of communication for professional investors. And besides all upper mentioned forms of communication, phone is still the most popular method for information exchange between company and an investor. Companies use a multi-channel approach to inform their investors. Information is traditionally communicated via financial reports, press releases, road shows and in analyst meetings. The Internet can be used to provide investors with a copy of the traditional paper-based annual report, but it also offers new opportunities to present and communicate information. These include technology-specific presentation advantages, the use of cookie technology, and direct forms of communication, such as mailing lists and online participation. The advantages of providing information to investors via the Internet are: speed, lower costs and the possibility of reaching large groups of investors (Deller et al., 1999).

Social media and networks are a new form communications with investors today. Social networking allows users to connect and interact with likeminded people. While these tools were originally developed for individual use, the aspects of information sharing and instant responsiveness of social media lend itself well for corporate communications. Through social media platforms, companies can build and promote their brands, introduce new products, and learn about their customer base. Social media becomes an extension of real world communication strategies by allowing enhanced transparency and increasing interaction between companies and their stakeholders.

According to 'Public Company Use of Social Media for Investor Relations 2011,' a study by Q4Web

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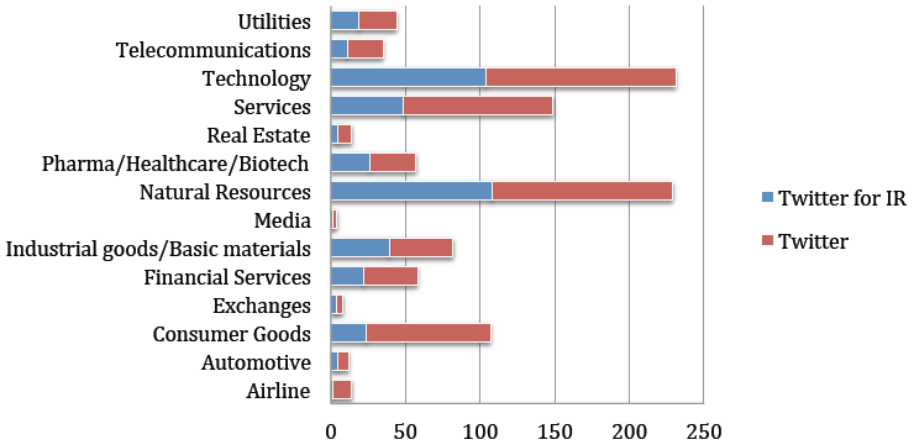
Systems that reviewed 629 public companies in total, small public companies are more avid users of Twitter for investor relations compared with large companies, with 179 and 141 users respectively. Similarly, 98 smaller companies were reported using *Facebook* for investor relations purposes, compared with 69 large companies. Across the board, both small and large enterprises were more inclined to using social media for investor relations, as compared with mid-sized companies. A possible explanation for this data is that while large public companies have the resources to use social media and feel inclined to use the tools available because their competitors are doing it, smaller companies are reaping the largest benefits from integrating social media into their investor relations effort. The low cost of social media, combined with the potentially large footprint and visibility create an attractive value proposition. Smaller companies are also more likely to have a vocal base of retail investors, who are the prime targets of social media.

Table 3 : Public Company Use of Social Media for IR

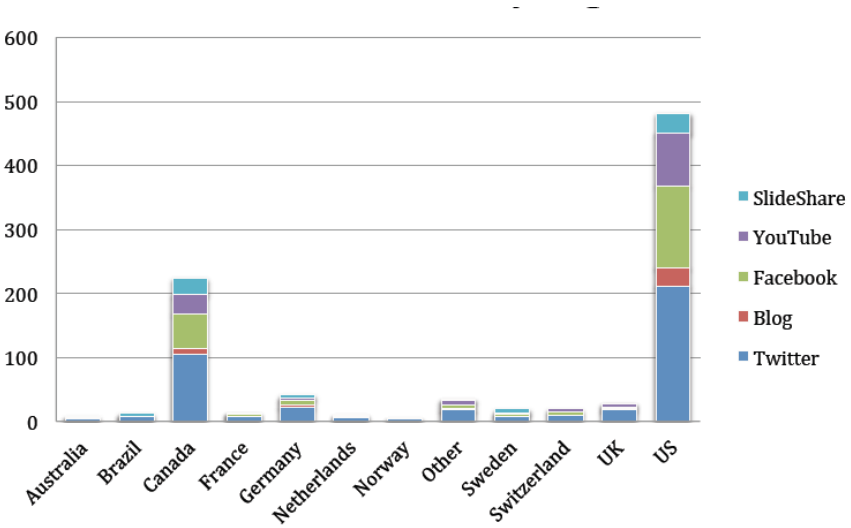
	Large	Mid	Small
Twitter	141	97	179
Facebook	69	49	98
YouTube	60	29	50
SlideShare	31	14	36
Blogs	20	5	18

Figure 2 : Use of Twitter for IR



Source : Joyce, S.(2011). Public Company Use of Social Media for Investor Relations – Part I Twitter & Stock Twits. Q4Web Systems, 6. http://www.lythampartners.com/media/7481/q4_social_media_iro_whitepaper.pdf

Figure 3 : Social media use by region



Source : Joyce, S. (2011). Public Company Use of Social Media for Investor Relations – Part I Twitter & Stock Twits. Q4Web Systems, 6. http://www.lythampartners.com/media/7481/q4_social_media_iro_whitepaper.pdf

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V. Methodology and Research Framework

We used explorative research, realized at the end of 2012, with content analyses of the Internet presentation of leading companies listed on the Belgrade Stock Exchange and Zagreb Stock Exchange, Croatia. Exploring each individual market (18 companies) included Internet presentations and pages of companies with the largest flow of share trading, as well as domestic companies whose securities were most traded on the Belgrade and Zagreb stock market in the previous two years. The companies considered were ranked in the stock market indices Belex 15, BelexLine and Crobex (Table 4). Within the companies' Internet presentations, three categories of importance for investors and the entire financial public information were considered, as shown in Table 5.

The findings of previous research are presented here based on a modified version of Hedlin's (1999) *three-stage model*, which describes the three stages of investor relations on the Internet (see Table 6.) The first stage is the Internet presence, offering general company information. The second stage, which is more interesting for investors, involves using the Internet to communicate investor information. Finally, in the third stage, a company can exploit the Internet for the specific advantages it offers. In this study, three further groups of Internet activities were recognized within the third stage (Hedlin, 1999).

Table 4 : Companies in our research, listed on BSE and ZSE

Belex 15/BelexLine	Crobex
NIS a.d. Beograd	Atlantska plovidba d.d.
Imlek a.d. Beograd	Končar - elektroindustrija d.d.
Aik banka a.d. Niš	Kraš d.d.
Komercijalna banka a.d. Beograd	Podravka d.d.
Energoprojekt holding a.d. Beograd	Riviera Adria d.d.
Soja protein a.d. Bečej	Zagrebačka banka d.d.
Metalac a.d. Gornji Milanovac	Dalekovod d.d.
Tigar a.d. Pirot	Ericsson Nikola Tesla d.d.
Univerzal banka a.d. Beograd	Atlantic Grupa d.d.
Bambi Banat a.d. Beograd	AD Plastik d.d.
Galenika Fitofarmacija a.d. Zemun	Luka Rijeka d.d.
Messer Tehnogas a.d. Beograd	Ledo d.d.
Alfa plam a.d. Vranje	Konzum d.d.
Vital a.d. Vrbas	Adris grupa d.d.
Mlekara a.d. Subotica	Tisak d.d.
Informatika a.d. Beograd	Valamar Adria Holding d.d.
Carnex a.d. Vrbas	Luka Ploče d.d.
Telefonija a.d. Beograd	INA d.d.

Table 5 : Researched categories of importance for investor information

I WEB SITE	II INFORMATION FOR INVESTORS	III TOOLS FOR INVESTORS
Home page (I) Investor Relations page (IR) Corporate Social Responsibility (CSR)	Contacts (C) Financial reports (FR) Ownership structure (OS) Media (M) Stock values (SV) Management (MGT) Board of directors (BD) Business profile (BP)	Social media (SM) Audio (A) Video (V) RNS (RNS) RSS (RSS) Webcast (WBC) Newsletters (NL) Power Point (PP) E-mail (E) .pdf (PDF) Call center (CC)

Table 6 : IR Classification and structure of the three stages

IR Classification	Information & tools for investors	No. of items
First stage	I, CSR, C, FR, M	5
Second stage	OS, SV, MGT, BD, BP	5
Third stage	SM, A, V, RNS, RSS, WBC, NL, PPT, E, PDF, CC	11

After identifying the homepages of our sample companies we determine for each company the mean score for measuring the Internet investor relation stage, based on a list of variables predefined in the first part of our study. To measure the investor relation stage quantitatively in the present study, a disclosure index for investor relations (IR) was developed:

$$ScorIR = \sum_{i=1}^{18} IR_i \qquad (1)$$

We use a composite index for measuring the investor relation stage (Chavent *et al.*, 2006). For each company we assign the value of "one" to each informational criteria satisfied and value "zero" otherwise. Each information subcategory from our sample contains a different number of items.

VI. Data and Results

Based on explorative research of chosen Serbian and Croatian companies' Internet presentation, we divided acquired results into three groups, as shown in Table 5. Research results are presented in Graph. 1, 2 and 3.

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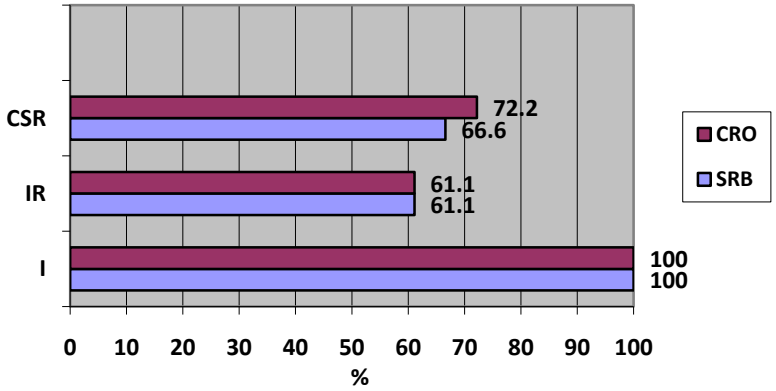
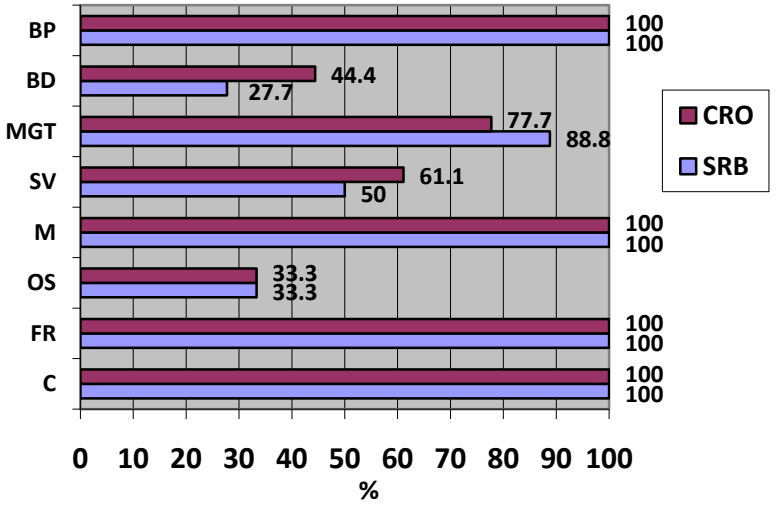
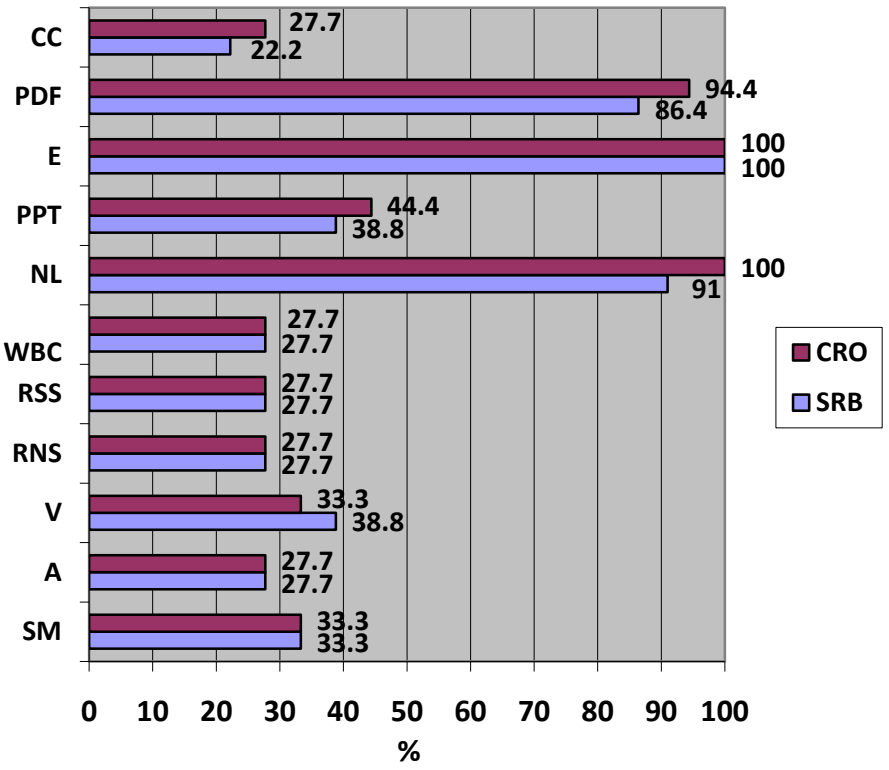
Graph 1 : Category 1 (Web sites)



Graph 2 : Category 2 (Information for Investors)



Graph 3 : Category 3 (Tools for Investors)



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a) Web Sites of Companies

With regard to earlier period, it is notable that companies pay more attention to accentuating their corporate social responsibility – Serbia with 66,6%, Croatia a bit more – 72,2% of companies. Also, more and more both Serbian and Croatian companies appreciate the importance of communication with investors, thereby they have special web page regarding IR within their internet presentation (61, 1% of companies).

b) Information for Investors

Significant flaw for all stakeholders, especially for current and potential investors, is that ownership and movement of share values are not published on web site of the company. Ownership structure is presented by 33,3% of Serbian and Croatian companies, while information on movements of share values are given by 50% of Serbian companies and 61,1% of Croatian companies.

c) Tools for Investors

Besides traditional tools (e-mail, pdf, ppt, video), it is important to emphasize that increasing number of companies uses social networks as a method of public communication. Facebook, Twitter, YouTube are predominant. Also, some companies have Call centers with special numbers for providing information. In both countries, 33,3% of researched companies use social networks, while Call centers have 22,2 %of Serbian companies and 27,7% of Croatian companies.

Based on formerly given research results, application of relevant methodology and three-stage model, we formed a table containing investor relation stages of development in Serbia and Croatia (see Table 7. and 8.). We can see that over 90% of researched companies fulfill all necessary requirements of stage one (home page, CSR, contacts, financial reports, media). In Serbia, 59% of companies are in second stage of investor relation development, whereas IR internet advantages are completely understood by 47% of listed companies. It is similar in Croatia: 63% of companies are in stage II of IR development, while IR internet tools are used by 49% of companies. We can assert that companies in Serbia and Croatia are in stage II of IR development and there is PLENTY of room to upgrade communication with interested public via internet and web tools.

If we consider Serbian companies, improvements are noticeable. Based on IR development research conducted early in 2010 and results gained in this research, improvement in usage of communication tools and internet are evident, as well as efforts of Serbian companies to enhance investor relations (see Table 9. and 10.). As we can see, companies in 2010. didn't have CSR related pages, didn't use audio and video conference, social networks were not present, number of companies displaying their share value was insignificant, etc. (Djordjevic *et al.*, 2012). Nowadays, situation regarding IR is much better than back in 2010.

Table 7 : Results of IR research by stage

	SRB*	CRO**
First stage *Companies that use internet as an alternative publication media*	1.00	1.00
	0.666	**0.722**
	1.00	1.00
	1.00	1.00
	1.00	1.00
Second stage *Companies that use internet for investor communication*	0.333	**0.333**
	0.500	0.611
	0.888	0.777
	0.277	0.444
	1.00	1.00
Third stage *Companies that exploit internet features*	0.333	0.333
	0.277	0.277
	0.388	0.333
	0.277	0.277
	0.277	0.277
	0.277	0.277
	0.910	1.00
	0.388	0.444
	1.00	1.00
	0.864	0.944
	0.222	**0.277**

Source : The autor's own calculation

Table 8 : ScorIR of SRB and CRO listed companies with IR indexes

	SRB ScorIR	CRO ScorIR
First stage	0.933	0.944
Second stage	**0.599**	**0.633**
Third stage	0.473	0.494

Source : The autor's own calculation

Table 9 : IR results of SRB companies (2010/2012)

	SRB 2010	SRB 2012
First stage *Companies that use internet as an alternative publication media*	0.864	1.00
	0	**0.666**
	0,091	1.00
	0.773	1.00
	0.773	1.00
Second stage *Companies that use internet for investor communication*	0.682	0.333
	0.068	0.500
	0.644	0.888
	0.364	0.277
	0.864	1.00
Third stage *Companies that*	0	**0.333**
	0	**0.277**
exploit internet features	0.091	0.388
	0	**0.277**
	0.045	0.277
	0	**0.277**
	0.910	0.910
	0	**0.388**
	0.886	1.00
	0.864	0.864
	0	**0.222**

Source : The autor's own calculation

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Table 10 : ScorIR of SRB listed companies (2010/2012)

	SRB ScorIR 2010	SRB ScorIR 2012
First stage	0.501	0.933
Second stage	0.524	0.599
Third stage	0.254	0.473

Source : The autor's own calculation

VII. Conclusion

The goal of the presented research on the quality of relations between listed companies and their investors is to present a picture of the current state of affairs in the domestic capital market, and to provide guidance in anticipation of further development in and improvement of investor relations. The analyses of research results have particularly pointed out several areas which could be improved and which could form the basis of future research:

- Reporting above the prescribed legal minimum is required in order to build quality relations with the investing public. Domestic companies should put extra information and comments in their annual reports, Internet presentations, and other materials meant for the investing public, in accordance with other developed capital markets;
- Companies that wish to actively compete for foreign investors should improve their reports in English. Although publishing information in English is not a prescribed obligation, other than for companies whose shares are listed in the BSE and ZSE Prime Market, good investor relation practice assumes the timely and equally extensive information of foreign investors;
- Publishing information on company securities trading on its own Internet page and publishing share prices on its home page affirms a company's orientation to the capital market, and represent activities that are fairly easy realized by taking over data (free of charge) directly from the Belgrade Stock Exchange or data distributors (Data vendors);
- Internet presentation pages intended for investors should be organized in a user-friendly way, i.e., easy to use and simple to find all the necessary information. The mere existence of these pages is not enough to fulfill the expectation of the investing public, and their organization and maintenance should be thoroughly planned;
- Investor relation activities in the Serbian and Croatian capital market are still in the formation phase. Building these relations will require significant attention, and it is necessary to bear in mind that, besides financial reports, modern relations with investors include marketing and PR skills. The existence of qualified personnel that deal exclusively with building and managing investor relations is necessary for a company's successful performance in financing and affirming its business in the capital market;
- Practice shows that investors and shareholders highly appreciate direct contact with management and persons in charge of investor relations. Therefore domestic companies could increase face-to-face activities such as holding meetings with representatives of the investing public, both in Serbia and abroad. Besides face-to-face meetings, the development of modern technology provides cheaper forms of direct contact via Internet or video conferencing, by which, at fairly low cost, a wider investor audience can be reached;
- New technology will also be a challenge as the social media platforms has accelerated extremely fast. IR practitioners are facing a huge social network that will be almost impossible to control. For this reason, companies will be forced to make sure that the IR department receives further education and simultaneously evolves with the new technology. In addition, IR departments should take the lead in developing social media in order to communicate with financial markets. As a result, IR practitioners should be able to respond more effectively and faster when it is needed;
- The future of investor relations will be extremely challenging and it will require the profession to change in order to meet the demands of tomorrow. That said, it is very unlikely that the goal of investor relations will change. The main task of the IR department will still be to build mutually beneficial relationships between companies and their shareholders that are based on open, two-way communication. The only change will be the level of complexity in regards to handling investor relations as new technology continues to change the communication channels and forums.

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Metric SI units are supposed to generally be used excluding where they conflict with current practice or are confusing. For illustration, 1.4 l rather than 1.4 × 10-3 m3, or 4 mm somewhat than 4 × 10-3 m. Chemical formula and solutions must identify the form used, e.g. anhydrous or hydrated, and the concentration must be in clearly defined units. Common species names should be followed by underlines at the first mention. For following use the generic name should be constricted to a single letter, if it is clear.

Structure

All manuscripts submitted to Global Journals Inc. (US), ought to include:

Title: The title page must carry an instructive title that reflects the content, a running title (less than 45 characters together with spaces), names of the authors and co-authors, and the place(s) wherever the work was carried out. The full postal address in addition with the e-mail address of related author must be given. Up to eleven keywords or very brief phrases have to be given to help data retrieval, mining and indexing.

Abstract, used in Original Papers and Reviews:

Optimizing Abstract for Search Engines

Many researchers searching for information online will use search engines such as Google, Yahoo or similar. By optimizing your paper for search engines, you will amplify the chance of someone finding it. This in turn will make it more likely to be viewed and/or cited in a further work. Global Journals Inc. (US) have compiled these guidelines to facilitate you to maximize the web-friendliness of the most public part of your paper.

Key Words

A major linchpin in research work for the writing research paper is the keyword search, which one will employ to find both library and Internet resources.

One must be persistent and creative in using keywords. An effective keyword search requires a strategy and planning a list of possible keywords and phrases to try.

Search engines for most searches, use Boolean searching, which is somewhat different from Internet searches. The Boolean search uses "operators," words (and, or, not, and near) that enable you to expand or narrow your affords. Tips for research paper while preparing research paper are very helpful guideline of research paper.

Choice of key words is first tool of tips to write research paper. Research paper writing is an art.A few tips for deciding as strategically as possible about keyword search:

- One should start brainstorming lists of possible keywords before even begin searching. Think about the most important concepts related to research work. Ask, "What words would a source have to include to be truly valuable in research paper?" Then consider synonyms for the important words.
- It may take the discovery of only one relevant paper to let steer in the right keyword direction because in most databases, the keywords under which a research paper is abstracted are listed with the paper.
- One should avoid outdated words.

Keywords are the key that opens a door to research work sources. Keyword searching is an art in which researcher's skills are bound to improve with experience and time.

Numerical Methods: Numerical methods used should be clear and, where appropriate, supported by references.

Acknowledgements: Please make these as concise as possible.

References

References follow the Harvard scheme of referencing. References in the text should cite the authors' names followed by the time of their publication, unless there are three or more authors when simply the first author's name is quoted followed by et al. unpublished work has to only be cited where necessary, and only in the text. Copies of references in press in other journals have to be supplied with submitted typescripts. It is necessary that all citations and references be carefully checked before submission, as mistakes or omissions will cause delays.

References to information on the World Wide Web can be given, but only if the information is available without charge to readers on an official site. Wikipedia and Similar websites are not allowed where anyone can change the information. Authors will be asked to make available electronic copies of the cited information for inclusion on the Global Journals Inc. (US) homepage at the judgment of the Editorial Board.

The Editorial Board and Global Journals Inc. (US) recommend that, citation of online-published papers and other material should be done via a DOI (digital object identifier). If an author cites anything, which does not have a DOI, they run the risk of the cited material not being noticeable.

The Editorial Board and Global Journals Inc. (US) recommend the use of a tool such as Reference Manager for reference management and formatting.

Tables, Figures and Figure Legends

Tables: Tables should be few in number, cautiously designed, uncrowned, and include only essential data. Each must have an Arabic number, e.g. Table 4, a self-explanatory caption and be on a separate sheet. Vertical lines should not be used.

Figures: Figures are supposed to be submitted as separate files. Always take in a citation in the text for each figure using Arabic numbers, e.g. Fig. 4. Artwork must be submitted online in electronic form by e-mailing them.

Preparation of Electronic Figures for Publication

Even though low quality images are sufficient for review purposes, print publication requires high quality images to prevent the final product being blurred or fuzzy. Submit (or e-mail) EPS (line art) or TIFF (halftone/photographs) files only. MS PowerPoint and Word Graphics are unsuitable for printed pictures. Do not use pixel-oriented software. Scans (TIFF only) should have a resolution of at least 350 dpi (halftone) or 700 to 1100 dpi (line drawings) in relation to the imitation size. Please give the data for figures in black and white or submit a Color Work Agreement Form. EPS files must be saved with fonts embedded (and with a TIFF preview, if possible).

For scanned images, the scanning resolution (at final image size) ought to be as follows to ensure good reproduction: line art: >650 dpi; halftones (including gel photographs) : >350 dpi; figures containing both halftone and line images: >650 dpi.

Color Charges: It is the rule of the Global Journals Inc. (US) for authors to pay the full cost for the reproduction of their color artwork. Hence, please note that, if there is color artwork in your manuscript when it is accepted for publication, we would require you to complete and return a color work agreement form before your paper can be published.

Figure Legends: Self-explanatory legends of all figures should be incorporated separately under the heading 'Legends to Figures'. In the full-text online edition of the journal, figure legends may possibly be truncated in abbreviated links to the full screen version. Therefore, the first 100 characters of any legend should notify the reader, about the key aspects of the figure.

6. AFTER ACCEPTANCE

Upon approval of a paper for publication, the manuscript will be forwarded to the dean, who is responsible for the publication of the Global Journals Inc. (US).

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The corresponding author will receive an e-mail alert containing a link to a website or will be attached. A working e-mail address must therefore be provided for the related author.

Acrobat Reader will be required in order to read this file. This software can be downloaded

(Free of charge) from the following website:

www.adobe.com/products/acrobat/readstep2.html. This will facilitate the file to be opened, read on screen, and printed out in order for any corrections to be added. Further instructions will be sent with the proof.

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Before start writing a good quality Computer Science Research Paper, let us first understand what is Computer Science Research Paper? So, Computer Science Research Paper is the paper which is written by professionals or scientists who are associated to Computer Science and Information Technology, or doing research study in these areas. If you are novel to this field then you can consult about this field from your supervisor or guide.

TECHNIQUES FOR WRITING A GOOD QUALITY RESEARCH PAPER:

1. Choosing the topic: In most cases, the topic is searched by the interest of author but it can be also suggested by the guides. You can have several topics and then you can judge that in which topic or subject you are finding yourself most comfortable. This can be done by asking several questions to yourself, like Will I be able to carry our search in this area? Will I find all necessary recourses to accomplish the search? Will I be able to find all information in this field area? If the answer of these types of questions will be "Yes" then you can choose that topic. In most of the cases, you may have to conduct the surveys and have to visit several places because this field is related to Computer Science and Information Technology. Also, you may have to do a lot of work to find all rise and falls regarding the various data of that subject. Sometimes, detailed information plays a vital role, instead of short information.

2. Evaluators are human: First thing to remember that evaluators are also human being. They are not only meant for rejecting a paper. They are here to evaluate your paper. So, present your Best.

3. Think Like Evaluators: If you are in a confusion or getting demotivated that your paper will be accepted by evaluators or not, then think and try to evaluate your paper like an Evaluator. Try to understand that what an evaluator wants in your research paper and automatically you will have your answer.

4. Make blueprints of paper: The outline is the plan or framework that will help you to arrange your thoughts. It will make your paper logical. But remember that all points of your outline must be related to the topic you have chosen.

5. Ask your Guides: If you are having any difficulty in your research, then do not hesitate to share your difficulty to your guide (if you have any). They will surely help you out and resolve your doubts. If you can't clarify what exactly you require for your work then ask the supervisor to help you with the alternative. He might also provide you the list of essential readings.

6. Use of computer is recommended: As you are doing research in the field of Computer Science, then this point is quite obvious.

7. Use right software: Always use good quality software packages. If you are not capable to judge good software then you can lose quality of your paper unknowingly. There are various software programs available to help you, which you can get through Internet.

8. Use the Internet for help: An excellent start for your paper can be by using the Google. It is an excellent search engine, where you can have your doubts resolved. You may also read some answers for the frequent question how to write my research paper or find model research paper. From the internet library you can download books. If you have all required books make important reading selecting and analyzing the specified information. Then put together research paper sketch out.

9. Use and get big pictures: Always use encyclopedias, Wikipedia to get pictures so that you can go into the depth.

10. Bookmarks are useful: When you read any book or magazine, you generally use bookmarks, right! It is a good habit, which helps to not to lose your continuity. You should always use bookmarks while searching on Internet also, which will make your search easier.

11. Revise what you wrote: When you write anything, always read it, summarize it and then finalize it.

12. Make all efforts: Make all efforts to mention what you are going to write in your paper. That means always have a good start. Try to mention everything in introduction, that what is the need of a particular research paper. Polish your work by good skill of writing and always give an evaluator, what he wants.

13. Have backups: When you are going to do any important thing like making research paper, you should always have backup copies of it either in your computer or in paper. This will help you to not to lose any of your important.

14. Produce good diagrams of your own: Always try to include good charts or diagrams in your paper to improve quality. Using several and unnecessary diagrams will degrade the quality of your paper by creating "hotchpotch." So always, try to make and include those diagrams, which are made by your own to improve readability and understandability of your paper.

15. Use of direct quotes: When you do research relevant to literature, history or current affairs then use of quotes become essential but if study is relevant to science then use of quotes is not preferable.

16. Use proper verb tense: Use proper verb tenses in your paper. Use past tense, to present those events that happened. Use present tense to indicate events that are going on. Use future tense to indicate future happening events. Use of improper and wrong tenses will confuse the evaluator. Avoid the sentences that are incomplete.

17. Never use online paper: If you are getting any paper on Internet, then never use it as your research paper because it might be possible that evaluator has already seen it or maybe it is outdated version.

18. Pick a good study spot: To do your research studies always try to pick a spot, which is quiet. Every spot is not for studies. Spot that suits you choose it and proceed further.

19. Know what you know: Always try to know, what you know by making objectives. Else, you will be confused and cannot achieve your target.

20. Use good quality grammar: Always use a good quality grammar and use words that will throw positive impact on evaluator. Use of good quality grammar does not mean to use tough words, that for each word the evaluator has to go through dictionary. Do not start sentence with a conjunction. Do not fragment sentences. Eliminate one-word sentences. Ignore passive voice. Do not ever use a big word when a diminutive one would suffice. Verbs have to be in agreement with their subjects. Prepositions are not expressions to finish sentences with. It is incorrect to ever divide an infinitive. Avoid clichés like the disease. Also, always shun irritating alliteration. Use language that is simple and straight forward. put together a neat summary.

21. Arrangement of information: Each section of the main body should start with an opening sentence and there should be a changeover at the end of the section. Give only valid and powerful arguments to your topic. You may also maintain your arguments with records.

22. Never start in last minute: Always start at right time and give enough time to research work. Leaving everything to the last minute will degrade your paper and spoil your work.

23. Multitasking in research is not good: Doing several things at the same time proves bad habit in case of research activity. Research is an area, where everything has a particular time slot. Divide your research work in parts and do particular part in particular time slot.

24. Never copy others' work: Never copy others' work and give it your name because if evaluator has seen it anywhere you will be in trouble.

25. Take proper rest and food: No matter how many hours you spend for your research activity, if you are not taking care of your health then all your efforts will be in vain. For a quality research, study is must, and this can be done by taking proper rest and food.

26. Go for seminars: Attend seminars if the topic is relevant to your research area. Utilize all your resources.



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27. Refresh your mind after intervals: Try to give rest to your mind by listening to soft music or by sleeping in intervals. This will also improve your memory.

28. Make colleagues: Always try to make colleagues. No matter how sharper or intelligent you are, if you make colleagues you can have several ideas, which will be helpful for your research.

29. Think technically: Always think technically. If anything happens, then search its reasons, its benefits, and demerits.

30. Think and then print: When you will go to print your paper, notice that tables are not be split, headings are not detached from their descriptions, and page sequence is maintained.

31. Adding unnecessary information: Do not add unnecessary information, like, I have used MS Excel to draw graph. Do not add irrelevant and inappropriate material. These all will create superfluous. Foreign terminology and phrases are not apropos. One should NEVER take a broad view. Analogy in script is like feathers on a snake. Not at all use a large word when a very small one would be sufficient. Use words properly, regardless of how others use them. Remove quotations. Puns are for kids, not grunt readers. Amplification is a billion times of inferior quality than sarcasm.

32. Never oversimplify everything: To add material in your research paper, never go for oversimplification. This will definitely irritate the evaluator. Be more or less specific. Also too, by no means, ever use rhythmic redundancies. Contractions aren't essential and shouldn't be there used. Comparisons are as terrible as clichés. Give up ampersands and abbreviations, and so on. Remove commas, that are, not necessary. Parenthetical words however should be together with this in commas. Understatement is all the time the complete best way to put onward earth-shaking thoughts. Give a detailed literary review.

33. Report concluded results: Use concluded results. From raw data, filter the results and then conclude your studies based on measurements and observations taken. Significant figures and appropriate number of decimal places should be used. Parenthetical remarks are prohibitive. Proofread carefully at final stage. In the end give outline to your arguments. Spot out perspectives of further study of this subject. Justify your conclusion by at the bottom of them with sufficient justifications and examples.

34. After conclusion: Once you have concluded your research, the next most important step is to present your findings. Presentation is extremely important as it is the definite medium though which your research is going to be in print to the rest of the crowd. Care should be taken to categorize your thoughts well and present them in a logical and neat manner. A good quality research paper format is essential because it serves to highlight your research paper and bring to light all necessary aspects in your research.

Informal Guidelines of Research Paper Writing

Key points to remember:

- Submit all work in its final form.
- Write your paper in the form, which is presented in the guidelines using the template.
- Please note the criterion for grading the final paper by peer-reviewers.

Final Points:

A purpose of organizing a research paper is to let people to interpret your effort selectively. The journal requires the following sections, submitted in the order listed, each section to start on a new page.

The introduction will be compiled from reference matter and will reflect the design processes or outline of basis that direct you to make study. As you will carry out the process of study, the method and process section will be constructed as like that. The result segment will show related statistics in nearly sequential order and will direct the reviewers next to the similar intellectual paths throughout the data that you took to carry out your study. The discussion section will provide understanding of the data and projections as to the implication of the results. The use of good quality references all through the paper will give the effort trustworthiness by representing an alertness of prior workings.

Writing a research paper is not an easy job no matter how trouble-free the actual research or concept. Practice, excellent preparation, and controlled record keeping are the only means to make straightforward the progression.

General style:

Specific editorial column necessities for compliance of a manuscript will always take over from directions in these general guidelines.

To make a paper clear

· Adhere to recommended page limits

Mistakes to evade

- Insertion a title at the foot of a page with the subsequent text on the next page
- Separating a table/chart or figure - impound each figure/table to a single page
- Submitting a manuscript with pages out of sequence

In every sections of your document

· Use standard writing style including articles ("a", "the," etc.)

· Keep on paying attention on the research topic of the paper

· Use paragraphs to split each significant point (excluding for the abstract)

· Align the primary line of each section

· Present your points in sound order

· Use present tense to report well accepted

· Use past tense to describe specific results

· Shun familiar wording, don't address the reviewer directly, and don't use slang, slang language, or superlatives

· Shun use of extra pictures - include only those figures essential to presenting results

Title Page:

Choose a revealing title. It should be short. It should not have non-standard acronyms or abbreviations. It should not exceed two printed lines. It should include the name(s) and address (es) of all authors.



Abstract:

The summary should be two hundred words or less. It should briefly and clearly explain the key findings reported in the manuscript--must have precise statistics. It should not have abnormal acronyms or abbreviations. It should be logical in itself. Shun citing references at this point.

An abstract is a brief distinct paragraph summary of finished work or work in development. In a minute or less a reviewer can be taught the foundation behind the study, common approach to the problem, relevant results, and significant conclusions or new questions.

Write your summary when your paper is completed because how can you write the summary of anything which is not yet written? Wealth of terminology is very essential in abstract. Yet, use comprehensive sentences and do not let go readability for briefness. You can maintain it succinct by phrasing sentences so that they provide more than lone rationale. The author can at this moment go straight to shortening the outcome. Sum up the study, with the subsequent elements in any summary. Try to maintain the initial two items to no more than one ruling each.

- Reason of the study - theory, overall issue, purpose
- Fundamental goal
- To the point depiction of the research
- Consequences, including definite statistics - if the consequences are quantitative in nature, account quantitative data; results of any numerical analysis should be reported
- Significant conclusions or questions that track from the research(es)

Approach:

- Single section, and succinct
- As a outline of job done, it is always written in past tense
- A conceptual should situate on its own, and not submit to any other part of the paper such as a form or table
- Center on shortening results - bound background information to a verdict or two, if completely necessary
- What you account in an conceptual must be regular with what you reported in the manuscript
- Exact spelling, clearness of sentences and phrases, and appropriate reporting of quantities (proper units, important statistics) are just as significant in an abstract as they are anywhere else

Introduction:

The **Introduction** should "introduce" the manuscript. The reviewer should be presented with sufficient background information to be capable to comprehend and calculate the purpose of your study without having to submit to other works. The basis for the study should be offered. Give most important references but shun difficult to make a comprehensive appraisal of the topic. In the introduction, describe the problem visibly. If the problem is not acknowledged in a logical, reasonable way, the reviewer will have no attention in your result. Speak in common terms about techniques used to explain the problem, if needed, but do not present any particulars about the protocols here. Following approach can create a valuable beginning:

- Explain the value (significance) of the study
- Shield the model - why did you employ this particular system or method? What is its compensation? You strength remark on its appropriateness from a abstract point of vision as well as point out sensible reasons for using it.
- Present a justification. Status your particular theory (es) or aim(s), and describe the logic that led you to choose them.
- Very for a short time explain the tentative propose and how it skilled the declared objectives.

Approach:

- Use past tense except for when referring to recognized facts. After all, the manuscript will be submitted after the entire job is done.
- Sort out your thoughts; manufacture one key point with every section. If you make the four points listed above, you will need a least of four paragraphs.

- Present surroundings information only as desirable in order hold up a situation. The reviewer does not desire to read the whole thing you know about a topic.
- Shape the theory/purpose specifically - do not take a broad view.
- As always, give awareness to spelling, simplicity and correctness of sentences and phrases.

Procedures (Methods and Materials):

This part is supposed to be the easiest to carve if you have good skills. A sound written Procedures segment allows a capable scientist to replacement your results. Present precise information about your supplies. The suppliers and clarity of reagents can be helpful bits of information. Present methods in sequential order but linked methodologies can be grouped as a segment. Be concise when relating the protocols. Attempt for the least amount of information that would permit another capable scientist to spare your outcome but be cautious that vital information is integrated. The use of subheadings is suggested and ought to be synchronized with the results section. When a technique is used that has been well described in another object, mention the specific item describing a way but draw the basic principle while stating the situation. The purpose is to text all particular resources and broad procedures, so that another person may use some or all of the methods in one more study or referee the scientific value of your work. It is not to be a step by step report of the whole thing you did, nor is a methods section a set of orders.

Materials:

- Explain materials individually only if the study is so complex that it saves liberty this way.
- Embrace particular materials, and any tools or provisions that are not frequently found in laboratories.
- Do not take in frequently found.
- If use of a definite type of tools.
- Materials may be reported in a part section or else they may be recognized along with your measures.

Methods:

- Report the method (not particulars of each process that engaged the same methodology)
- Describe the method entirely
- To be succinct, present methods under headings dedicated to specific dealings or groups of measures
- Simplify - details how procedures were completed not how they were exclusively performed on a particular day.
- If well known procedures were used, account the procedure by name, possibly with reference, and that's all.

Approach:

- It is embarrassed or not possible to use vigorous voice when documenting methods with no using first person, which would focus the reviewer's interest on the researcher rather than the job. As a result when script up the methods most authors use third person passive voice.
- Use standard style in this and in every other part of the paper - avoid familiar lists, and use full sentences.

What to keep away from

- Resources and methods are not a set of information.
- Skip all descriptive information and surroundings - save it for the argument.
- Leave out information that is immaterial to a third party.

Results:

The principle of a results segment is to present and demonstrate your conclusion. Create this part a entirely objective details of the outcome, and save all understanding for the discussion.

The page length of this segment is set by the sum and types of data to be reported. Carry on to be to the point, by means of statistics and tables, if suitable, to present consequences most efficiently.You must obviously differentiate material that would usually be incorporated in a study editorial from any unprocessed data or additional appendix matter that would not be available. In fact, such matter should not be submitted at all except requested by the instructor.



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Content

- Sum up your conclusion in text and demonstrate them, if suitable, with figures and tables.
- In manuscript, explain each of your consequences, point the reader to remarks that are most appropriate.
- Present a background, such as by describing the question that was addressed by creation an exacting study.
- Explain results of control experiments and comprise remarks that are not accessible in a prescribed figure or table, if appropriate.
- Examine your data, then prepare the analyzed (transformed) data in the form of a figure (graph), table, or in manuscript form.

What to stay away from

- Do not discuss or infer your outcome, report surroundings information, or try to explain anything.
- Not at all, take in raw data or intermediate calculations in a research manuscript.
- Do not present the similar data more than once.
- Manuscript should complement any figures or tables, not duplicate the identical information.
- Never confuse figures with tables - there is a difference.

Approach

- As forever, use past tense when you submit to your results, and put the whole thing in a reasonable order.
- Put figures and tables, appropriately numbered, in order at the end of the report
- If you desire, you may place your figures and tables properly within the text of your results part.

Figures and tables

- If you put figures and tables at the end of the details, make certain that they are visibly distinguished from any attach appendix materials, such as raw facts
- Despite of position, each figure must be numbered one after the other and complete with subtitle
- In spite of position, each table must be titled, numbered one after the other and complete with heading
- All figure and table must be adequately complete that it could situate on its own, divide from text

Discussion:

The Discussion is expected the trickiest segment to write and describe. A lot of papers submitted for journal are discarded based on problems with the Discussion. There is no head of state for how long a argument should be. Position your understanding of the outcome visibly to lead the reviewer through your conclusions, and then finish the paper with a summing up of the implication of the study. The purpose here is to offer an understanding of your results and hold up for all of your conclusions, using facts from your research and generally accepted information, if suitable. The implication of result should be visibly described. Infer your data in the conversation in suitable depth. This means that when you clarify an observable fact you must explain mechanisms that may account for the observation. If your results vary from your prospect, make clear why that may have happened. If your results agree, then explain the theory that the proof supported. It is never suitable to just state that the data approved with prospect, and let it drop at that.

- Make a decision if each premise is supported, discarded, or if you cannot make a conclusion with assurance. Do not just dismiss a study or part of a study as "uncertain."
- Research papers are not acknowledged if the work is imperfect. Draw what conclusions you can based upon the results that you have, and take care of the study as a finished work
- You may propose future guidelines, such as how the experiment might be personalized to accomplish a new idea.
- Give details all of your remarks as much as possible, focus on mechanisms.
- Make a decision if the tentative design sufficiently addressed the theory, and whether or not it was correctly restricted.
- Try to present substitute explanations if sensible alternatives be present.
- One research will not counter an overall question, so maintain the large picture in mind, where do you go next? The best studies unlock new avenues of study. What questions remain?
- Recommendations for detailed papers will offer supplementary suggestions.

Approach:

- When you refer to information, differentiate data generated by your own studies from available information
- Submit to work done by specific persons (including you) in past tense.
- Submit to generally acknowledged facts and main beliefs in present tense.

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- Do not give permission to anyone else to "PROOFREAD" your manuscript.

- Methods to avoid Plagiarism is applied by us on every paper, if found guilty, you will be blacklisted by all of our collaborated research groups, your institution will be informed for this and strict legal actions will be taken immediately.)
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Criterion for Grading a Research Paper (Compilation) by Global Journals Inc. (US)

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Topics	Grades		
	A-B	**C-D**	**E-F**
Abstract	Clear and concise with appropriate content, Correct format. 200 words or below	Unclear summary and no specific data, Incorrect form Above 200 words	No specific data with ambiguous information Above 250 words
Introduction	Containing all background details with clear goal and appropriate details, flow specification, no grammar and spelling mistake, well organized sentence and paragraph, reference cited	Unclear and confusing data, appropriate format, grammar and spelling errors with unorganized matter	Out of place depth and content, hazy format
Methods and Procedures	Clear and to the point with well arranged paragraph, precision and accuracy of facts and figures, well organized subheads	Difficult to comprehend with embarrassed text, too much explanation but completed	Incorrect and unorganized structure with hazy meaning
Result	Well organized, Clear and specific, Correct units with precision, correct data, well structuring of paragraph, no grammar and spelling mistake	Complete and embarrassed text, difficult to comprehend	Irregular format with wrong facts and figures
Discussion	Well organized, meaningful specification, sound conclusion, logical and concise explanation, highly structured paragraph reference cited	Wordy, unclear conclusion, spurious	Conclusion is not cited, unorganized, difficult to comprehend
References	Complete and correct format, well organized	Beside the point, Incomplete	Wrong format and structuring

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