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ACCOUNTING AND AUDITING

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# Does Analyst Coverage affect Bias and Information Content of Management Forecasts and are Results Comparable across Industries?

By Ronald A. Stunda

*Valdosta State University, Georgia*

**Abstract-** This study provides empirical evidence regarding the bias of management forecasts and information content of management forecasts as analyst coverage increases both by firm and industry.

Findings indicate that, on average, management forecasts in the sample exhibit downward bias in the forecast. This is a result that many prior researchers have found. However, when an industry analysis was performed, the industries with the highest analyst coverage (i.e., oil and gas, technology, and healthcare) had minimal bias. In fact, the bias of the management forecast approached zero. All other industries observed contained negative bias results.

With respect to information content of the management forecast, firms with fewer than 14 analysts covering them were compared to firms with coverage by greater than 14 analysts. Findings suggest that firms with analysts exceeding 14 have an enhanced information signal to the investors and other interested parties than do firms with fewer than 14 analysts.

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Ronald A. Stunda

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Findings indicate that, on average, management forecasts in the sample exhibit downward bias in the forecast. This is a result that many prior researchers have found. However, when an industry analysis was performed, the industries with the highest analyst coverage (i.e., oil and gas, technology, and healthcare) had minimal bias. In fact, the bias of the management forecast approached zero. All other industries observed contained negative bias results.

With respect to information content of the management forecast, firms with fewer than 14 analysts covering them were compared to firms with coverage by greater than 14 analysts. Findings suggest that firms with analysts exceeding 14 have an enhanced information signal to the investors and other interested parties than do firms with fewer than 14 analysts. When the analysis was conducted by industry, the results were again consistent. The industries with the highest analysts following (i.e., oil and gas, technology, and healthcare) possessed more of an information-enhancing signal to investors and other users than industries with a lower analyst following.

## I. INTRODUCTION

Many investors rely to a great extent on analyst input. Financial analysts are an integral part of the capital market. They provide earnings forecasts, buy/sell recommendations, and other recommendations to investors and brokers alike. Much of the information that analysts use in their analysis and recommendations is supplied directly by the individual firms (Lees, 1981). As in the case of mandatory disclosures, where financial data can vary greatly from firm to firm (i.e. use of estimates, aggregation of segments, use of accruals, etc.) voluntary disclosures between firms may vary as well. Analysts often step in and attempt to enhance the management disclosure with their own research and analysis in an effort to make the information more useful to the users.

Past research indicates that managers value analyst coverage (Cliff and Denis, 2004). Because of the important role analyst research plays in informing investors, many academic papers have focused attention on various issues surrounding analyst

coverage. This study is similar to earlier research in that it investigates analyst coverage. It is substantially different in that it attempts to associate the degree of analyst coverage to bias and information content of voluntary forecasts. In addition, it assesses the effect of analyst coverage by industry, something that has been done to a much limited extent in prior research.

## II. LITERATURE REVIEW

Nichols (1989) and Schipper (1991) suggest that the behavior of analysts provides insight into the activities and beliefs of investors that cannot be observed directly. In addition, the effects of increased disclosures, and information surrounding these disclosures, are of interest to accounting professionals who are involved in attesting to firm financials, firm managers, and regulators. Benefits of such information described by the American Institute of Certified Public Accountants (AICPA) Special Committee on Financial Reporting (AICPA, 1993) include; reduced uncertainty, lower information asymmetry among market participants, fewer earnings surprises, and a greater investor following. Empirical research provides similar findings, including reduced estimation of risk (Barry and Brown, 1985), increased investor following (Merton, 1997), and reduced information asymmetry (Glosten and Milgrom, 1985).

The role of analyst coverage has often arisen in extant research with respect to its ability to enhance the information provided by firm disclosures (both mandatory and voluntary). Clement and Tse (2005) find that firms with a greater following of analysts also contain an increase in the accuracy of the analysts' forecasts. Brennan and Subrahmanyam (1995) find a positive association between analyst following and liquidity of the firm. Chung, Wood, and Wyhowski (1995) find a negative association between analyst coverage and information asymmetry. O'Brien and Bhushan (1990) find that analyst following reduces return volatility of the firm.

Prior research has also interjected behavioral characteristics regarding analyst coverage. Hong, Kubik, and Solomon (2000) find that firms with a greater number of analysts following are likely to contain less experienced analysts providing a forecast of the firm.

*Author:* Valdosta State University. e-mail: rastunda@valdosta.edu

This is confirmed by Trueman (1994) who finds that weaker analysts are more concerned about reputation and are more likely to herd with other analysts in following a firm. McNichols and O'Brien (1997), Rajan and Servaes (1998), Bradley, Jordan, and Ritter (2003), and Cliff and Denis (2004) all find evidence that analysts prefer to cover firms that they view favorably. Lang and Lundholm (1996) find that analysts are more likely to cover firms with more information disclosure policies. Fortin and Roth (2007) find that more analysts are attracted to larger firms as opposed to smaller firms.

Prior research along these lines has focused on forecast characteristics (forecast horizon, past accuracy, firm size, forecast frequency, number of firms). These include; Baginski and Hassell (1990), Mikhail, Walther, and Willis (1997), Clement (1999), Jacob, Lys, and Neale (2000), Brown (2001), Clement and Tse (2005), and others. Where past research has fallen short is in assessing the relationship of analyst coverage to results by industry. While some industries in the United States have been on the ascent (i.e., technology firms), others have been in decent (i.e., industrial firms), with a host of industries in between. Does analyst coverage make a difference given the industry which is being covered? Or are results consistent across industries? These are questions that might be helpful as we continue to unravel the analyst puzzle in the lineage of the wealth of research that exists on the topic. In answering these questions, the hope is to extend the prior research in an attempt to make that research more informative along industry lines, thereby providing greater information to the investor, manager and regulator.

### III. METHODS

#### a) Hypotheses Overview

All of the aforementioned empirical studies have a common characteristic, they find analyst coverage informative with respect to analysis of the management forecast. Many find the information leads to more accurate forecasts by management and, therefore, less management bias. A shortcoming that most of the prior studies have is that; 1. Most of these studies are limited in numbers of years analyzed, such as Chun, Wood, and Wyhowski (1995), Brennan and Subrahmanyam (1995), Roulston (2006), Lang and Lundholm (1996), and Fortin and Roth (2007). All of these researchers analyzed just one year in drawing conclusions. An exception is Clement and Tse (2005) who use 10 years of data in their research. 2. None of these past studies evaluate analyst coverage by major industry. The lack of such analysis leaves a void in descriptive empirical literature that must be filled in order to make the long line of analyst coverage studies more complete.

This study seeks to fill that void by providing an analysis that is more encompassing, that is, it consists of more firm forecasts and over a greater period of time.

In addition, this study also assesses analyst coverage by industry in order to determine if overall results hold for specific industries. By making these enhancements to prior research, it is hoped that this study will further contribute to this line of literature by examining past results in greater length (time periods) and breadth (greater industry detail) and therefore provide enhanced information to all users of such information.

Hypotheses about Bias of Management Forecast (hypotheses 1 and 2) Many studies of voluntary management earnings forecasts do not find evidence of bias in voluntary disclosures (Baginski, Hassel and Waymire, 1994; Frankel, Mc Nichols and Wilson, 1995). Other studies indicate that bias may be related to the cycle of the economic period (Miller, 2009; Stunda, 2015). Still other studies show that as firms that release voluntary forecasts have greater analyst coverage, any bias that exists is reduced (Clement and Tse, 2005; Fortin and Roth, 2007). These studies of voluntary forecasts must be considered along with the earnings management literature. For instance, voluntary disclosures facilitate additional information to the investor at a lower acquisition cost (Lees, 1981; Diamond, 1985; Ajinkya and Gift, 1984). However, if only partial communication flows from management to investors and acquiring full information is costly, there exists asymmetric information and the potential for earnings management, and therefore bias, of the forecast (Anilowski, Feng, and Skinner, 2010).

If the same degree of earnings management (whether positive or negative) exists in both the forecast of earnings and actual earnings, the expectation is that there would be no difference in forecast error. If, however, the ability to perform earnings management is anticipated but not realized, some difference in forecast error would be present. If greater upward earnings management of the forecast occurs (or less actual earnings management), a negative forecast error should exist. If greater downward earnings management of the forecast occurs (or less actual earnings management), a positive forecast error should result. Thus, the first hypothesis tests for the existence of forecast error (i.e., bias) in the total sample of firms, inclusive of all industries. The null hypothesis tested is:

*H1: Average management forecast error (actual EPS – management forecast of EPS) for all sample firms equals zero.*

The above hypothesis serves as a baseline in order to assess subsequent analysis by industry. Applying the same logic as seen in hypothesis 1, attention is now turned to firms in specific industries, highlighted by their associated analyst coverage. It has been shown that some firms will draw greater analyst coverage (Fortin and Roth, 2007; Clement and Tse, 2005). Prior research is silent on whether similar findings hold true to specific industries. Applying the same test

as in hypothesis 1, the following null hypothesis is provided:

*H2: Average management forecast error (actual EPS – management forecast of EPS) for each industry in the sample equals zero.*

The management forecasts of earnings must be related to actual earnings in order to determine if bias exists. McNichols (1989) analyzes bias through the determination of forecast error. Stated in statistical form, these hypotheses are represented in Equation 1 (see Appendix). In order to test hypotheses 1 and 2, firm voluntary forecasts were analyzed. Statistical analysis is performed on the samples in order to determine if the average forecast error is zero. McNichols (1989) and DeAngelo (1988) conducted a t-test on their respective samples in addition to a Wilcoxon signed rank test. Lehman (1975) reports that the Wilcoxon test has an efficiency of about 95% relative to a t-test for data that are normally distributed, and that the Wilcoxon test can be more efficient than the t-test for non-normal distributions. Therefore, this analysis consists of performing a t-test and a Wilcoxon signed rank test on the average cross-sectional differences between actual earnings per share and the management forecast of earnings per share.

Hypotheses about Information Content of Accounting Earnings and Management Forecasts (hypotheses 3 and 4)

If mandatory disclosures of earnings contain some degree of earnings management (Berry, 1995; Brown, 1996), then voluntary disclosures may possess the potential for such earnings management as well (Collins and DeAngelo, 1990; Baginski, Hassell, and Waymire, 1994). Investors may react to managed earnings in one of two ways; they may discount the information as additional noise, or they may view this information as enhancing the properties of the signal (i.e., in terms of amount or variance). Research during the past five decades has shown that accounting earnings possesses information content (Ball and Brown, 1968 and a wealth of other researchers). Current literature finds that the information content of earnings announcements can be different when dependent upon various circumstances (i.e. stock proxy contests, mergers and acquisitions, buyouts, Chapter 11 proceedings, analyst coverage etc.).

Roulstone (2003) and Clement and Tse (2005) find that the average firm is followed by 14-15 analysts. Their findings show that as analysts coverage increases there is an increased positive association with firm liquidity and accuracy. If investors interpret managed earnings forecasts as just additional noise, the market would discount this information. If, however, investors view the managed earnings forecast as a positive (or negative) signal from management, the market would not discount the information. The expectation for

information content of management forecasts would revolve around these two notions. These alternative notions suggest the following null hypothesis:

*H3: The information content of management forecasts is not significantly different for all firms as analyst coverage varies.*

Applying the above notions result in the following hypothesis when analysis is conducted by industry, stated in the null form:

*H4: The information content of management forecasts is not significantly different by industry as analyst coverage varies.*

The purpose of these tests is to assess the relative information content of management earnings forecasts as analyst coverage increases by firm and industry. The model in Equation 2 (see Appendix) is used to evaluate information content:

Using the model in equation 2, two separate regressions are run, one for a sample where firm analyst coverage is assessed and another where industry analyst coverage is assessed. The coefficient  $a$  measures the intercept. The coefficient  $b_1$  is the earnings response coefficient (ERC) for all firms in the respective sample. The coefficient  $b_2$  represents the incremental ERC for forecasts made where less than 14 analysts are present. The coefficient  $b_3$  represents the incremental ERC for forecast when greater than 14 analysts are present. The coefficients  $b_4$ ,  $b_5$ , and  $b_6$  are contributions to the ERC for all firms in the sample. To investigate the effects of the information content of management forecasts on ERC, there must be some control for variables shown by prior studies to be determinants of ERC. For this reason, the variables represented by coefficients  $b_4$ ,  $b_5$  and  $b_6$  are included in the study.

Unexpected earnings (UE<sub>*i*</sub>) is measured as the difference between the management earnings forecast (MF<sub>*i*</sub>) and the security market participants' expectations for earnings proxied by consensus analyst following as per Investment Brokers Estimate Service (IBES) (EX<sub>*i*</sub>). The unexpected earnings are scaled by the firm's stock price ( $P_i$ ) 180 days prior to the forecast. This is illustrated in Equation 3 (see Appendix).

For each disclosure sample, an abnormal return (AR<sub>*it*</sub>) is generated for event days -1, 0, and +1, where day 0 is defined as the date of the forecast disclosure identified by the DJNRS. The market model is utilized along with the CRSP equally-weighted market index and regression parameters are estimated between days -290 and -91. Abnormal returns are then summed to calculate a cumulative abnormal return (CAR<sub>*it*</sub>). Hypotheses 3 and 4 are tested by examining the coefficients associated with coverage of fewer than 14 analysts ( $b_2$ ) and coverage of more than 14 analysts ( $b_3$ ).



## b) Data Sources

The sample consists of quarterly management forecast point estimates made between 2005-2014, a total of 10 years. 1) The management earnings forecast was recorded by the Dow Jones News Retrieval Service (DJNRS). 2) Security price data was available from the Center for Research on Security Prices (CRSP). 3) Earnings data was available from Compustat. 4) Analyst forecast information was available on the Institutional Brokers Estimate System (IBES). 5) The samples consist of firms which made at least one management earnings forecast in each sample period. Table 1(see Appendix) provides details on the samples by firm, while Table 2 (see Appendix) provides details on the samples by industry.

## IV. RESULTS

### a) Tests of Forecast Bias

Tests of hypothesis 1 were conducted on the sample of all 4,996 firm forecasts made between the years 2005-2014. No distinction was made for industry membership. Table 3(see Appendix) indicates that the mean forecast error for forecasts is 0.06 with a p-value of .05. Using the distribution-free rank test, significance is observed at the .01 level. These results are consistent with the preponderance of extant earnings forecast literature that indicates that management forecasts tend to reflect more bad news in the forecast relative to actual earnings. As a result, hypotheses 1, which states that average management forecast error equals zero is rejected since the forecasts in the sample, on average, exhibit downward bias of the management forecast.

Tests of hypothesis 2 were conducted on the sample of 4,996 firm forecasts, disseminated by industry membership. Table 4 (see Appendix). Results indicate that for the three industries with the greatest analyst coverage, mean forecast error is extremely close to zero; Oil/Gas 0.008, Technology 0.002, and Healthcare 0.004. All of these findings have a respective p-value of .01. In addition, the results for these industries show the least variance as represented by standard deviation. For the remaining industries, results are consistent with previous findings that management forecasts tend to reflect more bad news relative to actual earnings with mean forecast errors of; Utilities 0.058, Real Estate 0.062, Transportation 0.070, Banking and Finance 0.060, and Industrials 0.061. These groups have a respective p-value of .05. Using the distribution-free rank test, significance is observed at the .01 level for all industries. As a result, hypothesis 2, which states that average management forecast error equals zero for each industry cannot be totally rejected outright since three industries approximate zero bias. Those industries are the ones with the highest analyst coverage.

## b) Tests of Information Content

Hypothesis 3 first tests all firms in the sample and then assesses the information content of management forecasts by firms with coverage by fewer than 14 analysts, and then assesses the information content of management forecasts with coverage by greater than 14 analysts. Results are represented in Table 5 (see Appendix). As indicated in the table, the coefficient representing overall ERC for all firm forecasts ( $b_1$ ) has a value of .12 with a p-value of .05. This is consistent with prior management forecast literature regarding information content. The coefficient representing management forecasts with coverage of fewer than 14 analysts ( $b_2$ ) has a value of .02 with a p-value of .05, while the coefficient representing management forecasts with coverage of greater than 14 analysts ( $b_3$ ) has a value of .19 with a p-value of .01. All other control variables are not significant at conventional levels. There seems to be some level of difference between the firms with high versus low analyst coverage. The firms with higher analyst following appear to possess more of an information-enhancing signal to investors and other users than do firms with a lower analyst following. Hypothesis 3, which states that the information content of the management forecasts across these samples is not significantly different must be rejected since high coverage firms indicate a difference in results.

Hypothesis 4 tests information content by industry. As can be seen from Table 6 (see Appendix), the industries that provide the greatest information-enhancing properties to investors and others from the perspective of conveying information via their management forecasts are the oil and gas industry (.18, p-value .01), the technology industry (.20, p-value .01), and the healthcare industry (.17, p-value .01). These three industries lead all others in having the greatest analyst following. In fact, the only other industries that convey an information-enhancing signal to investors are utilities (.02, p-value .10), and industrials (.03, p-value .05). All other industries have negative coefficients meaning that the management forecast is not an information-enhancing signal, but represents noisy information that may not be useful to investors or others. As a result of these findings, hypothesis 4, which suggests no difference in information content of the management forecast across industries, must be rejected.

## V. CONCLUSION

This study provides empirical evidence regarding the bias of management forecasts and information content of management forecasts as the number of analyst coverage increases both by firm and industry. Past management forecast research focuses



on a limited data set both from the perspective of years studied and forecasts analyzed. This study encompasses the most recent 10 years (2005-2014) and 4,996 management forecasts. This study also extends prior research by associating analyst coverage with both the potential bias and information content of the management forecast, by firm and industry, something that has yet been done.

Findings indicate that, on average, all management forecasts in the sample exhibit downward bias in the forecast. This is a result that many prior researchers have found. However, when an industry analysis was performed, the industries with the highest analyst coverage (i.e., oil and gas, technology, and healthcare) had minimal bias. In fact, the bias of the management forecast approached zero. In addition, the variance, represented by the standard deviation, was the smallest for these industries. All other industries observed contained negative bias results. Such industry analysis give a clearer picture of the impact that the quantity of analysts following firms in a certain industry might have on the quality of the forecast itself.

With respect to information content of the management forecast, firms with fewer than 14 analysts covering them were compared to firms with coverage of greater than 14 analysts. Findings suggest that firms with analysts exceeding 14 have an enhanced information signal to the investors and other interested parties than do firms with fewer than 14 analysts. When the analysis was conducted by industry, the results were again consistent. The industries with the highest analysts following (i.e., oil and gas, technology, and healthcare) possessed more of an information-enhancing signal to investors and other users than industries with a lower analyst following.

In total, results suggest that there is a potential benefit to stockholders, firm managers, and fund managers to view firms and industries that have greater coverage by financial analysts differently than firms that have less coverage.

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## APPENDIX

### Equation 1

$$\sum_{n} \frac{fe_i}{n} = 0$$

This equation describes how forecast error is determined:

Where:  $fe_i$  = forecast error of firm i (forecast error = actual eps – management forecast of eps), deflated by the firm's stock price 180 days prior to the forecast.

### Equation 2

$$CAR_{it} = a + b_1UE_{it} + b_2UEE_{it} + b_3UEC_{it} + b_4MBit + b_5Bit + b_6MV_{it} + e_{it}$$

Where:  $CAR_{it}$  = Cumulative abnormal return forecast i, time t

a = Intercept term

$UE_{it}$  = Unexpected earnings for forecast i, time t

$UEE_{it}$  = Unexpected earnings for forecast i, time t when fewer than 14 analysts present

$UEC_{it}$  = Unexpected earnings for forecast i, time t when greater than 14 analysts present

$MBit$  = Market to book value of equity as proxy for growth and persistence

$Bit$  = Market model slope coefficient as proxy for systematic risk

$MV_{it}$  = Market value of equity as proxy for firm size

$e_{it}$  = error term for forecast i, time t

This equation indicates the regression model that is used to assess the information content of the earnings forecasts for both firm and industry samples (i.e., H3 and H4). In addition to assessing those two specific periods, (i.e.,  $b_2$  and  $b_3$  variables), an assessment is also made for total forecast samples ( $b_1$  variable), and other variables that have shown significance in prior studies such as growth, risk and size ( $b_4$ ,  $b_5$ ,  $b_6$  variables).

Equation 3

$$UE_i = \frac{(ME_i - EX_i)}{P_i}$$

This equation is used to assess unexpected earnings. Unexpected earnings is measured as the difference between the management forecast of earnings and the expected earnings level as determined by consensus analyst following per Investment Brokers Estimate Service. This value is then deflated by the firm's stock price 180 days prior to the forecast.

Table 1 : Quarterly Firm Point Forecasts by Firm

Year	Firm Forecasts	Analysts Covering
2005	504	3,667
2006	489	3,402
2007	517	4,119
2008	476	3,512
2009	530	4,227
2010	521	4,008
2011	482	3,519
2012	509	3,928
2013	473	3,632
2014	495	3,714
Total Forecasts	4,996	

Table 1 indicates the numbers of quarterly earnings forecasts made by U.S. firms from 2005 through 2014, as reported by IBES and the Dow Jones News Retrieval Service.

Table 2 : Quarterly Firm Point Forecasts by Industry

Year	Industry Forecasts	Analysts Covering
Oil/Gas	736	4,718
Utilities	450	3,414
Real estate	422	3,115
Transportation	399	2,987
Technology	1,049	5,002
Banking/Finance	699	3,452
Healthcare	789	4,229
Industrials	452	3,148
Total Forecasts	4,996	

Table 2 indicates the numbers of quarterly earnings forecasts made by U.S. industries from 2005 through 2014, as reported by IBES and the Dow Jones News Retrieval Service.

Table 3 : Average Management Forecast Error Deflated by Firm's Stock Price 180 Days Prior to Forecast

Model: $\sum_{n} fe_i = 0$					
n forecasts (t-statistic)	Mean	Medium	Minimum	Maximum	Std. dev.
4,996	0.06	0.02 ***	-0.139	0.175	0.011 (2.27)**
** Significant at the .05 level (two-sided test).					
*** Significant at the .01 level using the non-parametric sign-rank test.					
fe <sub>i</sub> = forecast error of firm i (actual eps – management forecast of eps)					
n = sample of 4,996 firm forecasts during 2005-2014					

Table 3 assesses the bias of voluntary earnings forecasts for all quarterly forecasts totaling 4,996, included in full sample, irrespective of industry membership.

**Table 4 :** Average Management Forecast Error by Industry Membership Deflated by Firm's Stock Price 180 Days Prior to Forecast

Model: $\sum_{i=1}^n fe_i = 0$					
n forecasts / industry	Mean	Medium	Minimum	Maximum	Std. dev. (t-stat)
736 (Oil/Gas)	0.008	0.005***	-0.022	0.021	0.0003 (2.46)*
450 (Utilities)	0.058	0.031***	-0.147	0.195	0.0091 (2.24)**
422 (Real Estate)	0.062	0.043***	-0.138	0.201	0.0086 (2.21)**
399 (Transport.)	0.070	0.047***	-0.144	0.177	0.0097 (2.28)**
1,049 (Technology)	0.006	0.002***	-0.011	0.014	0.0002 (2.57)*
699 (Bank/Fin.)	0.060	0.039***	-0.144	0.192	0.0081 (2.23)**
789 (Healthcare)	0.007	0.004***	-0.019	0.018	0.0004 (2.47)*
452 (industrials)	0.061	0.039***	-0.140	0.181	0.0088 (2.27)**
4,996 (Total)					
* Significant at the .01 level (two-sided test)					
** Significant at the .05 level (two-sided test).					
*** Significant at the .01 level using the non-parametric sign-rank test.					
fe <sub>i</sub> = forecast error of firm i (actual eps – management forecast of eps)					
n = sample of 4,996 firm forecasts during 2005-2014					

Table 4 assesses the bias of voluntary earnings forecasts for quarterly forecasts totaling 4,996, by industry membership.

**Table 5 :** Test of Information Content of Management Forecasts by Firm

Model: $CAR_{it} = a + b_1UE_{it} + b_2UEE_{it} + b_3UEC_{it} + b_4MBit + b_5Bit + b_6MV_{it} + e_{it}$							
Where: $CAR_{it}$ = Cumulative abnormal return forecast i, time t							
a = Intercept term							
$UE_{it}$ = Unexpected earnings for forecast i, time t							
$UEE_{it}$ = Unexpected earnings for forecast i, time t when fewer than 14 analysts present							
$UEC_{it}$ = Unexpected earnings for forecast i, time t when greater than 14 analysts present							
$MBit$ = Market to book value of equity as proxy for growth and persistence							
$Bit$ = Market model slope coefficient as proxy for systematic risk							
$MV_{it}$ = Market value of equity as proxy for firm size							
$e_{it}$ = error term for forecast i, time t							
Coefficients (t-statistics)							
a	b1	b2	b3	b4	b5	b6	Adjusted R <sup>2</sup>
0.16	0.12	0.02	0.19	0.09	-0.03	0.09	0.231
(.57)	(2.37)***	(2.33)***	(2.47)**	(0.21)	(-0.08)	(0.41)	
** Significance at the .01 level (two-sided test)							
***Significant at the .05 level (two-sided test)							
b <sub>1</sub> sample = 4,996 firm forecasts							
b <sub>2</sub> sample = 2,918 firm forecasts							
b <sub>3</sub> sample = 2,078 firm forecasts							

Table 5 assess information content of management forecasts by full sample (b<sub>1</sub>), sample of firm forecasts with fewer than 14 analysts covering (b<sub>2</sub>), and sample of firms with greater than 14 analysts covering (b<sub>3</sub>).

Table 6 : Test of Information Content of Management Forecasts by Industry

Model: $CAR_{it} = a + b_1UE0_{it} + b_2UEU_{it} + b_3UER_{it} + b_4UET_{it} + b_5UETech_{it} + b_6UEB_{it} + b_7UEH_{it} + b_8UEI_{it} + b_9MB_{it} + b_{10}B_{it} + b_{11}MV_{it} + e_{it}$												
a	b <sub>1</sub>	b <sub>2</sub>	b <sub>3</sub>	b <sub>4</sub>	b <sub>5</sub>	b <sub>6</sub>	b <sub>7</sub>	b <sub>8</sub>	b <sub>9</sub>	b <sub>10</sub>	b <sub>11</sub>	Adj. R <sup>2</sup>
.03	.18	.02	-.07	-.15	.20	-.10	.17	.03	.04	.11	.21	.257
(.29)	(2.44) <sup>a</sup>	(1.79) <sup>c</sup>	(1.95) <sup>b</sup>	(1.51) <sup>c</sup>	(2.57) <sup>a</sup>	(2.05) <sup>b</sup>	(2.52) <sup>a</sup>	(1.96) <sup>b</sup>	(.39)	(.72)	(.33)	
b <sub>1</sub> = information content for oil/gas firms (736 firm forecasts)												
b <sub>2</sub> = information content for utility firms (450 firm forecasts)												
b <sub>3</sub> = information content for real estate firms (422 firm forecasts)												
b <sub>4</sub> = information content for transportation firms (399 firm forecasts)												
b <sub>5</sub> = information content of technology firms (1,049 firms)												
b <sub>6</sub> = information content for banking and finance firms (699 firm forecasts)												
b <sub>7</sub> = information content for healthcare firms (789 firm forecasts)												
b <sub>8</sub> = information content for industrial firms (452 firm forecasts)												
b <sub>9</sub> = control variable for growth and persistence												
b <sub>10</sub> = control variable systematic risk												
b <sub>11</sub> = control variable firm size												
a = significant at .01 level												
b = significant at .05 level												
c = significant at .10 level												
n = sample of 4,996 firm forecasts during 2005-2014												

Table 6 reflects the results of the assessment of information content by industry through the running of the regression formula above.



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# Strategies to Increase the Affordability of Publically Built Houses to Lower and Middle Income Households in Dessie Town, Ethiopia

By Muleye Tarekegn Dires

*Wollo University, Ethiopia*

**Abstract-** The provision of affordable housing is a challenge in Ethiopia which is urbanizing fast. Hence, integrated housing development program is being undertaken on affording house to lower and middle income as one objective. This study, therefore, was conducted to forward strategies to increase affordability of publically built houses particularly Dessie town condominium houses to lower and middle income groups. Data were collected randomly from 550 respondents who have condominium house and who don't have yet but wants to acquire it. The condominium house form of installment payments are the most constraint factor for the households to purchase a condominium house. Actions in all those constraints increase affordability of condominium houses to lower and middle income group.

**Keywords:** *condominium house, affordability, down payment, periodic payment, completion cost, strategies.*

**GJMBR - D Classification :** *JEL Code : H83*



*Strictly as per the compliance and regulations of:*



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**Abstract-** The provision of affordable housing is a challenge in Ethiopia which is urbanizing fast. Hence, integrated housing development program is being undertaken on affording house to lower and middle income as one objective. This study, therefore, was conducted to forward strategies to increase affordability of publically built houses particularly Dessie town condominium houses to lower and middle income groups. Data were collected randomly from 550 respondents who have condominium house and who don't have yet but wants to acquire it. The condominium house form of installment payments are the most constraint factor for the households to purchase a condominium house. Actions in all those constraints increase affordability of condominium houses to lower and middle income group. However reducing the current amount of condominium house's down payment and it to be paid in longer year significantly increases the affordability of condominium houses to lower and middle income group. A one-sample t-test depicted that reducing initial payment and pays it for long year along with periodic payment increases ability of the respondents' household to purchase a condominium house.

**Keywords:** condominium house, affordability, down payment, periodic payment, completion cost, strategies.

## 1. INTRODUCTION

Everyone needs a place to live. However, it is a critical problem for millions of poor people in developing countries, and Ethiopia is no exception (Azeb Kelemework, 2007). Ethiopia's urban centers are characterized by poorly developed economic base. More daunting to that ever mounting cost of living and labor, rising prices of building materials owing to devaluation of local currency, escalation of land lease price, and others make house owning process difficult.

Ethiopian government designed a condominium house project which is under the program of the Ethiopian Integrated Housing Development Program (IHDP), to minimize the housing problem. The program has built several condominium houses in Dessie city since 2007 and distributed them to the people. In Dessie, so far 3306 condominium housing units are built in two rounds. The selling price of the different typologies' of houses are averagely 80,000 birr for

studio, 167, 000 birr one bed room and 205, 000 birr double bed room.

Access to adequate and affordable housing is a current and growing problem in all countries in Africa. Housing problems are largely to do with affordability: housing is expensive and incomes are too low. Ethiopia is a pertinent example of the challenges facing many African countries (United Nations Human Settlements Programme, 2011). Mekonen (2007) found out that the development of affordable housing for the low-income groups in the city is the challenging issues because of the scarcity of land and high cost of building materials. In general, the affordability of housing is an important subject for Ethiopia, and it has received considerable recent public attention.

Shelter cost is the biggest expenditure most households make and its affordability can have an impact on the wellbeing of household members. For this reason, housing affordability is closely watched by a wide range of stakeholders (Minister of Industry, 2008). Public concern over housing affordability is due to the fact that housing is the single largest expenditure in the budget of most families and individuals (Quigley and Raphael (2004) described in Prince Christian R. Cruz, 2008). Housing affordability is also a critical input to a country Mortgage and Housing Corporation's core housing need indicator which is used by governments to help design, deliver, fund and evaluate social housing programs (Canada Minister of Industry, 2008).

Housing affordability is more than just a personal trouble experienced by individual households. It has implications not only for housing but also for employment, health, labour market performance, aged care, finance, community sustainability, economic development and urban and regional development (Michelle Gabriel, Keith Jacobs, Kathy Arthursen, Terry Burke and Judith Yates, 2005). Housing in its very nature has different connotations that range across social, economic and cultural spirits beside its direct function of sheltering. It is a universal fact that shelter is one of the basic necessities of life and occupies the biggest portion of any human settlement.

This study is initiated, more, because the different researches done in Ethiopia (Azeb Kelemework, 2007; UN Habitant, 2011a; Mekonen Wube Ermed, 2007; Tameru Woundimagegnehu, 2010)

particularly in Addis Ababa regarding condominium houses affordability lacks inclusiveness in measuring affordability and their recommendations to increase affordability of condominium houses. The strategies they suggested to increase affordability are about subsidizing and changing construction designs which don't work yet, but other than these, this current research found out the possible strategies to increase the affordability of condominium houses on the existing condition by analysing the instalment payments as well as the sites distances of CH. Due to these reasons this study sets an objective of identifying the strategies which increases the affordability of condominium house to lower and middle income households.

## II. METHODS OF THE STUDY

This study was conducted to identify the possible strategies to increase the affordability of condominium houses to middle and low income households in Dessie town. A descriptive study was used to test the strategies to increase affordability of Dessie town condominium houses. For this study, data were collected from potential condominium houses' buyers who are living in Dessie town permanently. Hence data were collected from 550 sample

households. A simple random sampling design was used for this research to select the representative sample with equal chance from the population. Here, as discussed above, we stratified the population into two different heterogeneous groups to select samples from each group and collect data from different source who have different experience. Self-developed questionnaire was distributed to collect data for this study. Data collected were analyzed by using descriptive statistics and t-test.

## III. RESEARCH FINDING

To forward strategies to increase affordability of condominium houses to those income groups, people in Dessie who have purchased condominium houses and who did not purchased yet were taken to participate in the study. Of this infinite population of the study 550 respondents' response were used for this study.

Respondents were asked on their own cost burden experience, whether an adjustment on the current condominium houses payment patterns increase their ability to purchase condominium house. Below the opinions of respondents were described and tested for their significance.

Table 1 : Description of strategies to increase affordability of condominium houses

	increased highly	Increased	Indifferent	not increased	not increased highly
the extent that the reduction of initial payment & it to be paid for longer period along with a periodic period payment increases ability to own CH	34.1%	24.6%	15.6%	14.7%	10.9%
the extent that the reduction of periodic payment & it to be paid for longer period increases ability to own CH	33.5%	33.5%	11.5%	12.9%	8.6%

a) *Does Reduction of current initial payment and it to be paid in the long run with periodic payment increase affordability of condominium houses?*

Respondents were asked about whether reducing the initial payment and paying it in the long run increases their ability to purchase a condominium house. Accordingly, majority of the respondents which consists of 34.1% of the total respondents replied that it highly increases their ability. The other second majority respondents which comprise 24.6 % of the total respondents reported that the scenario fairly increases their ability to purchase a condominium house. In cumulative, 58.8% of the respondents indicated that the scenario is favorable for them to purchase a condominium house of their choice. The smaller proportion of respondents which consists of 10.9% of the total respondents reported that it doesn't increase highly. And 15.6% of the respondents are indifferent about the issue and the remaining 14.7% of

respondents reported that it doesn't increase their ability to own a condominium house. In general, this finding informs us that reducing the initial payment and pays the amount in long period increase the affordability of condominium houses to majority of the respondents.

b) *Does Reduction of the current periodic payment and it to be paid for longer increase affordability of condominium houses?*

As it is depicted in the above table, more than half of the respondents (67%) reflected that reduction of the current amount of condominium house periodic payment and it to be paid in longer year enhances their ability to own a condominium house. The respondents which consist of 11% of the total respondents are indifferent about the issue. The other remaining respondents which consist of 11.5% and 12.9% of the total respondents reported 'not increased' and 'not increased highly' respectively. From this result we can

understand that reducing the periodic payment by extending the installment year increase the affordability of condominium houses to most of the households.

c) *Test of mean for significance of respondents opt about the possible ways that increase affordability of condominium house*

Beyond a percentage description as discussed above below we test the significance of the majority opt from the total average of the scale.

Note: Not increased highly = 1, not increased = 2, indifferent = 3, increased = 4, and increased highly = 5. The average mean for this scale is =  $1+2+3+4+5=15/3 = 3$

**Table 2 :** One-Sample Statistics of Test of mean for significance of respondents opt about the possible ways that increase affordability of condominium house

Strategies to increase affordability of CH	N	Mean	Std. Deviation	Std. Error Mean
- the extent that the reduction of initial payment and it to be paid for longer period along with periodic payment increase ability to own CH	211	3.56	1.373	.095
- the extent that the reduction in periodic payment and it to be paid for longer period increase ability to own CH	209	3.70	1.289	.089

The mean of both initial payment and periodic payment reduction scenarios are above the average of the scale which is 3. This implies that both scenarios

enhance the ability of the majority of households purchasing ability of condominium house.

*One-Sample Test*

Strategies to increase affordability of CH to lower and middle income group	Test Value = 3					
	t	Df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
the extent that the reduction of initial payment and it to be paid for longer period along with periodic payment increase ability to own CH	5.967	210	.000	.564	.38	.75
the extent that the reduction in periodic payment and it to be paid for longer period increase ability to own CH	7.888	208	.000	.703	.53	.88

A one-sample t-test was run to determine the extent reducing initial payment and pay it for long year along with periodic payment increase ability of the respondents household to purchase a condominium house. The average mean of the scale is 3 used which is used for comparison. According to the test result as it is depicted in the above table, mean of initial payment reduction score ( $3.56 \pm 0.137$ ) was higher than the average score of the scale 3.0, a statistically significant difference of 0.56 (95% CI, 0.38 to 0.75),  $t(210) = 5.97$ ,  $p = .000$ . this indicated that majority of the respondents reported that the scenario increases their ability to own a condominium house.

And also, the extent reducing periodic payment and pays it for longer year increases the ability of the household to purchase condominium house is tested in

respect with the average values of the scale which is 3. Accordingly, the mean score of the respondents on the extents that reduction of periodic payment scenario increases households to own a condominium house ( $2.70 \pm 1.29$ ) was statistically different from the average score of the scale 3 by 0.70, (95% CI, 0.53 to 0.88),  $t(208) = 7.89$ ,  $p = .000$ . Therefore, based on the above test result, we can say that the reduction of periodic payment increases the majority of the households ability to purchase a condominium.

We have also checked, of the two, which one is most preferable by the respondents by conducting a Wilcoxon Signed Ranks Test. The test below signify that there is no statistical significant difference between the opt of the two means,  $z = -1.48$ ,  $p = 0.138$

### Ranks

Strategies to increase affordability of CH	N	Mean Rank	Sum of Ranks
the extent that the reduction in periodic payment enable the household to buy CH - the extent that the reduction of initial payment enable the household to buy CH	51 <sup>a</sup>	48.49	2473.00
Negative Ranks	57 <sup>b</sup>	59.88	3413.00
Positive Ranks	98 <sup>c</sup>		
Ties			
Total	206		

a. the extent that the reduction in periodic payment enable the household to buy condominium < the extent that the reduction of initial payment enable the household to buy condominium

b. the extent that the reduction in periodic payment enable the household to buy condominium > the extent that the reduction of initial payment enable the household to buy condominium

c. the extent that the reduction in periodic payment enable the household to buy condominium = the extent that the reduction of initial payment enable the household to buy condominium

### Test Statistics<sup>b</sup>

	- the extent that the reduction in periodic payment enable the household to buy CH - the extent that the reduction of initial payment enable the household to buy CH
Z	-1.483 <sup>a</sup>
Asymp. Sig. (2-tailed)	.138

a. Based on negative ranks.

b. Wilcoxon Signed Ranks Test

The Correlation between Instalment Payments Influence to Own CH, Strategies Increase Affordability and Respondents' Impact Rating Of Instalment Payments

**Table 3 :** the correlation between instalment payments influence to own CH, strategies increase affordability and respondents' impact rating of instalment payments

			DPR	PPR	SDR	DPil	PP il	CC il	SDil
Spearman's rho	DPI	Correlation Coefficient	.295**	.237**	-.086	.277**	-.127	.030	-.201*
		Sig. (2-tailed)	.000	.001	.212	.000	.122	.718	.014
		N	210	208	210	155	149	148	150
	PPI	Correlation Coefficient	.004	.177*	-.145*	.038	.004	.041	-.227**
		Sig. (2-tailed)	.959	.011	.037	.641	.965	.627	.006
		N	206	204	207	150	144	143	145
	CCI	Correlation Coefficient	.022	.039	-.048	-.060	-.077	.230**	.004
		Sig. (2-tailed)	.757	.582	.493	.465	.357	.005	.958
		N	205	205	207	152	146	145	147
	SDI	Correlation Coefficient	.027	.143*	.166*	-.172*	-.173*	.107	.326**
		Sig. (2-tailed)	.702	.041	.017	.033	.036	.200	.000
		N	207	206	208	153	147	146	148

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

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



Note: *DPI* = the extent that the existing down payment influences the household to buy a CH

*DPR* = the extent that the current down payment reduction and it to be paid in long period enable the household to buy

*PPI* = the extent that the existing periodic payment influences the household to buy CH

*PPR* = the extent that reduction of the current periodic payment and it to be paid in longer enable the household to buy

*SDI* = the extent that the site distance influences the household to buy CH, r

*SDR* = the extent that the reduction of the site distance enable the household to buy CH

*PPil* = periodic payment impact level

*CCI* = the extent that completion cost influences the household to buy a CH

*CCil* = completion cost impact level

*DPil* = down payment impact level

*SDil* = site distance impact level

The relationship results of the above correlation table are discussed separately for each below

#### i. *Relationship between DPI and DPR*

The spearman's correlation of down payment influence to own a condominium house (*DPI*) and reduction of down payment in enabling households to purchase a condominium house (*DPR*) have positive relationship,  $\rho = 0.295$ ,  $p = 0.000$ . This tells us that for respondents who are highly impacted by down payment to own a condominium houses, more likely, the reduction of down payment highly increases their ability to purchase a condominium house.

#### ii. *The relationship between PPI and PPR*

Correlation analyses were used to examine the relationship between the extent that the existing periodic payment influences households to own a condominium (*PPI*) and the extent that the current periodic payment reduction and to be paid in longer period increases households' ability to purchase a condominium house (*PPR*). The result suggest that the relationship between those two scenarios ( $\rho = 0.177$ ,  $p = 0.011$ ) is statistically significant. This confirmed that for respondents who are strongly impacted by periodic payment to own a condominium houses, more likely, the reduction of periodic payment highly increases their ability to purchase a condominium house. when the influences of down payment to own a condominium house is going from 'not strongly impact' to 'strongly impact', the ability of respondent to purchases a condominium house in the reduction of down payment moves also from not increase to highly increase.

#### iii. *The relationship between SDI and SDR*

The relationship between the influence of site distance to own a condominium house (*SDI*) and the extent the reduction of site distance increases the ability of households to purchase a condominium house (*SDR*) is statistically significant at  $\rho = 0.166$ ,  $p = 0.017$ , which means that for respondents who are not impacted by site distance to own a condominium houses, more likely, the reduction of site distance don't increases their ability to purchase a condominium house.

#### iv. *The relationship between DPI and DPil*

Do respondents who are strongly influenced by condominium houses current down payment to own a condominium houses more likely to rank the impact of down payment first among periodic payment, completion cost, and site distance? A spearman's correlation were undertaken to get answer for the above. Accordingly, the extent that down payment influences households to purchase a condominium house (*DPI*) has a positive relationship with down payment rating of the respondents (*DPil*),  $\rho = 0.277$ ,  $p = 0.000$ . this informed us that respondents who are highly impacted by down payment to own a condominium houses are more likely to rate the impact of down payment to purchase a condominium house at first from among periodic payment, completion cost and site distance.

#### v. *The relationship between PPI and PPil*

As to the  $\rho$  correlation coefficient the extent of periodic payment influences household to own a condominium house (*PPI*) and the periodic payment rating of the household (*PPil*) have no statistically significant relationship,  $\rho = 0.004$ ,  $p = 0.965$ .

#### vi. *The relationship between CCI and CCil*

The correlation result of the extent that completion cost respondents assumed influenced households to own a condominium house (*CCI*) and completion cost rating of the respondents (*CCil*) indicated that the *CCI* and *CCil* have a positive relationship,  $\rho = 0.230$ ,  $P = 0.005$ . The relationship reflects that respondent's expression of the completion cost influence to own a condominium houses are more likely be similarly with their rating of the impact of completion cost to purchase a condominium house.

#### vii. *The relationship between SDI and SDil*

Correlation analyses were also undertaken to examine the relationship between the extent that the site distance influences households to own a condominium (*SDI*) and the site distance rating of the respondents (*SDil*). The result suggest that the relationship between *SDI* and *SDil* ( $\rho = 0.326$ ,  $p = 0.000$ ) is statistically significant. This indicated that the respondents who are not influenced by site distance are more likely to rate site distance at fourth.



#### IV. CONCLUSION

The financial burden of condominium houses in the households own experiences also confirmed that condominium houses are unaffordable to lower and middle income group. Beyond the measurement results of affordability, respondents themselves experienced the burden of condominium house payments to them to own a condominium houses. Statistically a significant majority of respondents are highly impacted by condominium house initial payment, periodic payment and completion cost they assumed to purchase a condominium house. That burden makes houses unaffordable for middle and low income families. However, site distances of condominium house don't hinder households to purchase a condominium house. In fact, though one of the IHDP main objectives was to carry out slum upgrading, so far the implementation of the programme in Dessie has been carried out in open spaces. The sites of condominium houses in Dessie town looks they are far from market places as well as work place of most of the residence of the town. But, the interest of the residence/respondents of this study to own a condominium house wasn't influenced by site distance of the condominium houses because the influence of site distance to own a condominium house as a burden for the household like initial payment and periodic payment was not statistically significant to say it does have an impact to own a condominium house. Site distance was not the factor for those majority of individual who were booked to purchase a condominium house but latter become reluctant to purchased while they were asked to take their condominium house. From Among condominium house required down payment, periodic payment, completion cost and distances of sites, Condominium house down payment is the most constraining factor for household to purchase condominium house. Respondents themselves rate them based up on the burden they have to them to own a condominium house from high burden to lower burden. Accordingly though we don't have a statistically significant difference between the burden rate of periodic payment and completion costs, just to know which one is the second and which one is the third, initial payment and site distance are leveled as first and fourth respectively. Among the factors which give a burden for the household to purchase a condominium, initial payment required took the highest followed by periodic payment and completion cost. The burden of periodic payment and completion cost to own a condominium house is, in fact, statistically equal.

There are some means that reduce those burdens for the household as well as increases the affordability of condominium houses to the households. The first one is just reducing the amount of current initial payments required for condominium house and makes

it to be paid periodically in a longer period perhaps after the total payment of required periodic payments. This strategy is normally design considering initial payment is the significant factor which influences households to own a condominium house as it is discussed above with statistical significance. For the designed strategy statistically a significant majority of the households' ability to purchase a condominium house will increase. More specifically, if instalment payments are to be adjusted a priority has to be given to down payment because significant number of respondents put it in the first level based upon its impacts in comparison with periodic payment as well as distance of sites. This way we can make condominium houses affordable to households. The Ethiopian new housing project which is called usually as "Arba Silisa" complies with this scenario.

The other strategy is that there are also statistically significant majority of respondents whose affordability will increase if the amount of current periodic payment reduced and paid for longer period. If these periodic payments are reduced to a certain amount and to be paid for longer period than the above, majority of households could afford the periodic payment of a condominium house.

#### V. RECOMMENDATION

If reducing the current cost of construction of condominium houses as well as any housing project has no alternatives, as a second option, making some adjustments in the payment system of a house is needed. Small amount of periodic payment as well as down payment to be paid for longer period/years significantly increases the affordability of houses to lower and middle income group. Condominium house down payment is the most factor that impact individuals to purchase a condominium house than others like periodic payment, completion cost and site distance. Hence when a new housing program is designed it should propose a means to avoid or minimize the down payments requirement to make houses affordable to many households.

Housing projects which will be conducted to make lower and middle income group house owner should do the finishing activities of the house to the most possible level because there are significant majority of households which are impacted by costs to be incurred for such activities to purchase a condominium house.

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# A Survey of the Effects of Capital-In-Flow Strategies on the Stock Output of Companies Accepted in Tehran's Stock Exchange Market

By Gholam Reza Rahimi

*Tehran University, Iran*

**Abstract-** This study investigated the effects of various capital-in-flow strategies on the stock output. To undertake the study, companies' strategies were divided into four categories: Perky, conservative, moderate and unknown. Based on the results, perky strategy was found to be significantly different from other strategies. No significant difference was observed between other strategies.

**Keywords:** capital-in-flow, stock output, capital-in-flow strategies, stock exchange market.

**GJMBR - D Classification :** JEL Code : D24, F21



ASURVEYOFTHEEFFECTSOFCAPITALINFLOWSTRATEGIESONTHESTOCKOUTPUTOFCOMPANIESACCEPTEDINTEHRANSSTOCKEXCHANGEMARKET

*Strictly as per the compliance and regulations of:*



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**Abstract-** This study investigated the effects of various capital-in-flow strategies on the stock output. To undertake the study, companies' strategies were divided into four categories: Perky, conservative, moderate and unknown. Based on the results, perky strategy was found to be significantly different from other strategies. No significant difference was observed between other strategies.

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## I. INTRODUCTION

Investment is viewed as a development factor in current century. It, in fact, brings in capital for people and directs it towards economy-building divisions and sectors according to investors' orientation – based on risk and output. Investment is directed towards industries with higher interests and lower risks. And this, eventually, results in optimum resource allocation. In today's world, countries – especially developing countries – face multiple threats, and to resolve their economic problems, they need to find appropriate strategies to make a better use of facilities and the assets available. Therefore, an important job is to develop and expand investments.

Investment is the premise of financial management discussions and all sorts of activities require capital. Capital includes all financial resources used by a company and thus financial management determines a framework for relationship between the capital and the company. Capital holds a high position in organizational processes and is, hence, considered as one of the five vital resources for organization survival and persistence.

Due to the great importance of capital in organizational processes, its management is of utmost importance. Capital-in-flow generally includes a great deal of capital in companies, especially small ones. Further, capital management based on supply chain elements management mechanism is of great value. For a given company, capital-in-flow is the amount of total sums invested in the current assets. Similarly, the capital-in-flow management includes determination Due to the great importance of capital in organizational processes, its management is of utmost importance.

**Author:** Department of Financial management, Tehran University, Tehran, Iran. e-mail: reza\_rahimi@ut.ac.ir

Capital-in-flow generally includes a great deal of capital in companies, especially small ones. Further, capital management based on supply chain elements management mechanism is of great value. For a given company, capital-in-flow is the amount of total sums invested in the current assets. Similarly, the capital-in-flow management includes determination of the volume and combination of the resources and capital-in-flow expenditures such that it increases the stockholders' equity.

## II. LITERATURE REVIEW

Lazaridis and Trifonidis (2006), Teruel and Solano (2007) as well as Ran Chieu and Wang (2006) studied the effects of capital-in-flow management on profitability and stock output. They drew on cash conversion cycle to evaluate capital management and profitability ratios such as operational profit, gross operational profit, the assets' output and the stockholders' equity output. The study results showed that there was a significantly negative relationship between cash conversion cycle and profit-making. It was further found that capital-in-flow management had a great impact on the companies' profitability; managers' influence on the process was for the sake of stockholders and finally profitability would grow with a reduction in cash conversion cycle (Lazaridis & Tryfonidis, 2006).

Lambrix and Singhvi (1979) applied capital-in-flow cycle to manage capital-in-flow and found that capital investment should be optimized and that cash flow could be optimized by reducing the time span between the physical flow of raw material and the final product sale – this simply means managing the product inventory.

Copeland and Khoury (1980) used CAPM to expand the trust expansion theory. They found that trust should be expanded on the condition that the expected rate of the trust return be more than or equal to the market return rate. Also, they used CAPM for the determination of the required return rate to expand the trust. In the literature, the interest rate has been labeled as the index for the required cost evaluation for retaining the product inventory. This factor has been elaborated on in studies by Hilton (1976) and Irwin (1981).

Agrawal (1983) studied the capital-in-flow based on a sample extracted from 34 manufacturing companies in ten industries from 1966 to 1967 and 1976 to 1977. With the use of techniques such as ratio analysis, questionnaire and personal interview, Agrawal concluded that although capital-in-flow, for every single rupee sold, signifies interest reduction in consecutive years, an appropriate perspective can still be observed for investment reduction in almost all investment parts of capital-in-flow.

Gupta (1987) determined the investment determining factors in Aluminum production public corporations. Verma (1989) evaluated capital-in-flow management in Iron & steel industries by taking samples from selected units in private and public corporations between 1978-79 and 1985-86. Using ratio analysis techniques, growth rate and linear regression analysis, the study concluded that private corporations in comparison to public corporations had better performance on the capital-in-flow management.

Porters (2004) and Filebelk (2007) carried out a number of studies on the relationship between capital-in-flow and cash adequacy. The results indicated that there was a significant relationship between cash conversion cycle and cash adequacy, on the one hand, and the market value of the company, on the other. The results also showed that reduction in cash conversion cycle is a key factor in increasing the profitability and accordingly growth in the company market value.

Shewin Bacher (2006) studied financial funding strategies. He considered two financial funding strategies, conservative and perky, in his studies. In conservative strategy, business entities postpone the main operation until they are supplied with sufficient cash. In contrast, in perky strategy, despite limited resources and even before financial supply by external resources, business entities do some parts of the main projects. So, strategy selection process is effective in the project choice.

Ramor and Pahor (2000) studied the existence of non-linear relationship between financial proportions and the excess output rate. They used the U.S. and Japan markets as their research sample. At first, they selected their samples from ten American companies, and five Japanese ones, in 1995 from ten different industries. They tabulated the results in a table with the rows and columns given to industries and countries. They later calculated financial ratios for the above samples and regarded the excess output rate as the dependent variable. Regression and non-regression relationships were computed between dependent and independent variables. The results indicated a mostly nonlinear relationship between the excess output rate and financial ratios. Based on the study, the current ratio and the instantaneous ratio of the companies' behavior, known as the reimbursement ability, were more or less the same. Moreover, a relationship was found between

the excess output rate and these ratios – of course, the relationship type in each country is independent of others.

Lazaridis and Tryfonidis (2006) in their research studied the relationship between profitability and capital in-flow management in 131 companies in Athena Security Market (ASE), between 2001 and 2004.

The objective of the research was to evaluate the relationship between profitability and cash conversion cycle. The results showed that there was a significant relationship between profitability (net operational profit) and cash conversion cycle. Managers can create a good deal of profit with appropriate management of cash conversion cycle in an optimum level from its constituent elements (i.e. receivable accounts, payable accounts and merchandise inventory).

Amry Asramy (2001) dealt with the profit information contents, operational cash flow and capital-in-flow. In this study, 198 companies in the Stock Market were evaluated. This research was done based on the census method and statistical procedures like regression, R2 coefficient, correlation coefficient, r, and variance analysis (ANOVA) were taken advantage of. The results show that (a) the profit before the unexpected items and capital-in-flow stemmed from the individual operations of each are important factors in changes in current proportions. But, cash flow from the operations in current proportions changes are not determining factors, and (b) each of the three accounting variables plays roles in the instantaneous ratios changes.

### III. HYPOTHESES

The main hypothesis: There is a meaningful relationship between practicing various policies for capital-in-flow management and stock output in different manufacturing industries.

The main hypothesis can be expressed through three separate sub-hypotheses:

1. There is a significant relationship between the exertion of conservative capital-in-flow management policies and stock output in different manufacturing industries.
2. There is a significant relationship between the exertion of moderate capital-in-flow management policies and stock output in various manufacturing industries.
3. There is a significant relationship between the exertion of perky capital-in-flow management policies and stock output in various manufacturing industries.

### IV. METHODOLOGY

The current study is a practical one and the design used is evaluative-heuristic. Linear regression



and correlation were used to test the hypotheses. The hypotheses were codified with the use of comparative inference and were tested by deductive researches. Statistical tests used to analyze the data included correlation analysis (Pearson correlation test) and variance analysis (ANOVA).

## V. PARTICIPANTS AND SAMPLES OF THE STUDY

The study population comprised all the companies accepted in Tehran Stock Exchange Market. Their financial information had been qualified according to the following terms and conditions between 1383 and 1389:

- From the above population, the study sample was drawn according to the following conditions:
1. Companies accepted in the Stock Exchange Market before 2004.
2. The end of the financial year for them is 29th of Esfand (March 20th).
3. They have not changed their financial year during the study period.
4. The data needed from those companies for the test is available.
5. During the study period no operational cease more than 30 days has happened.

According to the above terms, 777 company years were chosen as the test sample. To undertake the study, the statistical sample was selected from companies accepted in Tehran Exchange Market. To determine the statistical sample, and to reduce the estimation error, screening method was used.

## VI. VARIABLES AND MODELS

*Stock output:* The discrepancy per share in the end of the financial year and the price of every share at the beginning of the financial year plus the adjustments stemmed from the stock gains (including interest, reward shares, etc.) divided by the stock prices at the beginning of the financial period.

*Current ratio:* The ratio between the current assets and the current debts is called current ratio. Instantaneous (quick) ratio: Instantaneous assets divided by current debts.

*Debts ratio:* Total amount of the debts divided by total amount of the assets. The ratio of the debts to the total stockholder equities: This ratio is acquired by the total debts divided by the total amount of the stockholders equities.

## VII. THE STUDY METHOD

In this study, to test the three sub-hypotheses of the main hypothesis:

1. We calculate the current and instantaneous debts, and debts to stockholders shares ratios for the companies-years.

2. We calculate the aforementioned ratios averages per industries-years in item 1 above.
3. We compare every companies-years with every industries-years based on the following areas, every ratio related to every company-year is categorized in each of the areas higher than, around or lower than industry (Mikaeeli & Ebne Shahr Ashub, 2000):
  - Higher: More than average, with the difference more than 25% of the standard deviation from the average.
  - Around: More than or less than average, with a difference less than 25% of the standard deviation from the average
  - Lower: Lower than average, with a difference more than 25% of the standard deviation from the average.

Based on the results obtained from this section we can speculate, from the four calculated financial ratios, three modes (higher, around, lower) for every company-year, therefore every company-year is divided into four parts (ratios).

4. Based on the predetermined strategies, we classify every company-year into one of the three categories, 'perky', 'moderate', and 'conservative'.
5. Using uni-direction and bi-direction variance analysis and LSD chase test – these tests show the differences between groups in the multi-comparison of the variables (ANOVA) – and based on the statistical methods used, we test the significance of the averages' differences. In the variance analysis, output is the dependent variable and strategy type (generally and based on the industry) is the dependent (operative) variable.

## VIII. TESTING THE HYPOTHESIS

In the present study, to express the observed amounts of the dependent variable, F and ANOVA tests were used. For the ANOVA test, the F significant level is compared with the significant level of 5% and if the F is lower than 5% the null hypothesis, linearity of the relationship between the dependent variable and independent variable, is confirmed.

In the present study, the significance of the average differences between various strategies was tested using four methods TOKI, CHEF, LSD, and BENFRONI. If the differences observed are meaningful, it can be concluded that the two strategies are significantly different.

*Data analysis:*

Table 1 shows average scores, standard deviation, maximum, minimum and median for the regression model variables. The following table shows the correlation coefficient among the study variables with the use of Pierson and Spearman. In each box Table 2, the upper digit indicates the Spearman correlation coefficient whereas the digit below indicates

the significance level. In this study, the KS test was used to check for the normality of the data. The results showed that all the variables applied were normal. Then, the expected tests were performed the results of which were Table 3.

a) *Findings related to the relationship between the implementation of various strategies of cash-in-flow management and stock output in different manufacturing industries*

To test the study hypothesis, firstly the sample companies were classified into four categories (perky, moderate, conservative and unknown). Later, significance of the averages differences in various industries were assessed with the application of statistical tests. With the use of four popular and well known tests (TOKI, CHEF, LSD, and BENFRONI), the significance level of the averages differences in different industries were evaluated.

Within these four methods, perky and moderate strategies were observed to be significantly different. The significant difference between moderate and perky strategies was rejected based on this method. Also, unknown strategies did not have any significant relationship with other strategies. The obtained results from the four main tests of ANOVA could be summarized Table 4.

With the use of the maximum and minimum scores obtained in the ANOVA table, the following results can be inferred:

- There is a significant relationship between conservative and perky strategies. The difference observed shows that conservative strategy creates higher output in comparison to the perky strategy.
- There is a significant difference between moderate and perky strategies. The difference observed shows that moderate strategy creates higher output in comparison to perky strategy.
- There is a significant difference between unknown and perky strategies. The difference shows that unknown strategy creates higher output in comparison to perky strategy.
- Based on the results of ANOVA, the perky strategy output is more than that of the moderate strategy, and also the perky strategy output is more than those of conservative and unknown strategies. It could be concluded that perky strategy has the highest output among all other strategies studied.

Table 4 provides a summary of the significant differences observed for different industries. Digits denoting a significant difference also accompany a negative sign. The blank boxes show that no significant difference was observed.

## IX. CONCLUDING REMARKS

Based on the results of data analysis, from among the capital-in-flow strategies inspected, the

effect of perky strategy was found to be significantly different from the effect of other capital-in-flow strategies, that is, the difference observed was statistically significant. No significant difference was observed between other capital-in-flow strategies. Further, the highest significant difference among the outputs was observed in metal equipment, medical-metal products, drugs and other nonmetal minerals industries.

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**Table 1 :** Descriptive statistics for the regression model variables at the beginning of the period assets.

row	variable	1	2	3	4	5
1	return		-0.073*	0.063	0.379**	-0.517**
			0.041	0.078	0.000	0.000
2	AR	-0.090*		0.043	0.473**	0.517
		0.012		0.231	0.000	0.000
3	INV	0.082*	-0.012		0.786**	0.649**
		0.023	0.734		0.000	0.000
4	AP	0.414**	0.473**	0.781**		0.546
		0.000	0.000	0.000		0.000
5	CCC	-0.546	0.517**	0.643**	0.534**	
		0.000	0.000	0.000	0.000	

**Table 2 :** Tabulation of the Pierson and Spearman correlation coefficient (The lower digit in each box shows the significance level.)

Row	variable	1	2	3	4	5
1	Return		-0.073	0.0630	.379	-.517
			0.041	.078	0.000	0.000
2	AR	-0.090		0.043	.473	.517
		0.012		.231	0.000	0.000
3	INV	0.082	-0.012		.786	.649
		0.023	.734		0.000	0.000
4	AP	.414	.473	.781		.546
		0.000	0.000	0.000		0.000
5	CCC	-.546	.517	.643	.534	
		0.000	0.000	0.000	0.000	

**Table 3 :** The results of the four tests

Strategy(I)	Strategy(J)	TUKEY HSD	SCHEFF	LSD	Bonferroni
conservative	Moderate				
	Unknown				
	Perky	*	*	*	*
Moderate	Conservative				
	Unknown				
	Perky	*	*	*	*
Unknown	Conservative				
	Moderate				
	Perky	*	*	*	*
Perky	Conservative	*	*	*	*
	Moderate	*	*	*	*
	Unknown	*	*	*	*

*Table 4 :* Significant differences observed for different industries.

	<b>Machinery and equipments</b>	<b>Other nonmetal minerals</b>	<b>Metal products</b>	<b>Essential metals</b>	<b>Automobile and spare parts</b>	<b>Medicine</b>	<b>Chemical</b>	<b>Lime gypsum cement</b>	<b>Ceramic and tile</b>
Machinery and equipments		12.5	130.0				10.6	12.1	12.3
Other nonmetal minerals	-12.5			-5.8	-6.4	-13.4			
Metal products	-130.0				-6.9	-13.9			
Essential metals		5.8				-7.6			
Automobile and spare parts		6.4	6.9			-6.9		6.2	
Medicine		13.4	13.9	7.6	6.9		11.5	13.2	13.2
Chemical	-10.6					-11.5			
Lime gypsum cement	-12.3				-6.2	-13.2			
Ceramic and tile	-12.3					-13.2			



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# The Survey of the Relationship between Auditing Quality and the Profitability in the Companies Accepted in Tehran's Exchange Market

By Gholamreza Rahimi & Samira Mohammad Amini

*Tehran University, Iran*

**Abstract-** The present study deals with the evaluation of the relationship between auditing quality and the profitability in the companies accepted in Tehran's securities exchange market. To determine the auditing quality there has been made use of two scales of auditor size (DeAngelo, L.E., 1981) and the auditor's tenure period (Myers, J.N., Myers, L.A. & Omer, T.C., 2003). The total number of 52 companies accepted in Tehran's securities exchange market has been surveyed. The study findings show that generally there is a positive and weak relationship between the auditor size (auditor's good fame) and the auditor's tenure period and the profitability ratios. To survey the auditor's size the member auditing institutions of the formal accountant society are regarded as small auditing firms and accounting organization due to the great many staff members working in it and also due to their long working history is considered as the big auditing institution.

**Keywords:** *auditing quality, auditor's tenure period, auditor's size, profitability ratios and tehran's securities exchange market.*

**GJMBR - D Classification :** JEL Code : M40



THE SURVEY OF THE RELATIONSHIP BETWEEN AUDITING QUALITY AND THE PROFITABILITY IN THE COMPANIES ACCEPTED IN TEHRAN EXCHANGE MARKET

*Strictly as per the compliance and regulations of:*



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# The Survey of the Relationship between Auditing Quality and the Profitability in the Companies Accepted in Tehran's Exchange Market

Gholamreza Rahimi<sup>α</sup> & Samira Mohammad Amini<sup>σ</sup>

**Abstract-** The present study deals with the evaluation of the relationship between auditing quality and the profitability in the companies accepted in Tehran's securities exchange market. To determine the auditing quality there has been made use of two scales of auditor size (DeAngelo, L.E., 1981) and the auditor's tenure period (Myers, J.N., Myers, L.A. & Omer, T.C., 2003). The total number of 52 companies accepted in Tehran's securities exchange market has been surveyed. The study findings show that generally there is a positive and weak relationship between the auditor size (auditor's good fame) and the auditor's tenure period and the profitability ratios. To survey the auditor's size the member auditing institutions of the formal accountant society are regarded as small auditing firms and accounting organization due to the great many staff members working in it and also due to their long working history is considered as the big auditing institution. Also, there is a positive but non-significant relationship between profitability and auditors size and there is a positive and significant relationship between tenure period and profitability. This is indicative of the fact that in the employer firms in which an auditor performs the job of auditing for several years, the amount of profitability and also its sustainability is higher on the condition that the auditor's tenure period is due to the auditing organization.

**Keywords:** *auditing quality, auditor's tenure period, auditor's size, profitability ratios and tehran's securities exchange market.*

## I. INTRODUCTION

One of the items in the financial statements which is regarded as the performance evaluation scale and for-profit unit profitability competency is the "profit reporting". But, the net profit calculation of a for-profit unit is influenced by the accounting methods and estimations. The managers authorization in the usage of actualization and adaptation, estimation and prediction and also the implementation of methods such as the change in the method of the inventory evaluation, goodwill depreciation, current costs or considering the research and development costs as capital and the determination of the costs of doubtful debts are among the subjects through the exertion of which managers can change the profit. From one hand, due to the most of the managers' awareness of the firm status, it is

expected that the data be procured and offered in a manner which is most reflective of the company status. From the other hand, because of some reasons such as retention in the company, receiving reward etc. The for-profit manager may intentionally or unintentionally manifest the company's status as optimum through the manipulation of the data. Under such circumstances, there would be a discrepancy between the real profit and the reported one in the financial statements and there would be expected an incident under the title of profit management.

Also, quality which is the determinant of the auditing performance is a function of numerous factors such as auditor's capabilities (including knowledge, experience, adaptation power and technical efficiency) and professional implementation (including independency, objectivity, professional caring, interest conflict and judgment). (Mojtahedzadeh, Vida and Parvin Aqae, 2004)

## II. A REVIEW OF THE STUDY THEORETICAL FOUNDATION

Generally speaking, auditing has long meant scrutinizing the accounts in order to discover the frauds and misuse and during the course of history there has always been some sort of auditing in the governmental and private organizations, but auditing in its new and modern meaning is the examination and commenting on the financial statements and the reason behind this novel meaning is the growth and the emergence of the enterprises in which the shareholders responsibility is confined to the amount of the capital they have put in the company. The origin of this modern usage of auditing is England. But, the wonderful change that is now on the way, is the auditing evolution from financial auditing to comprehensive and inclusive auditing in which besides the examination of the entities financial statements reports from the point of view of observing the due policies, its operations and transactions are also examined by the decision making authorities (such as general meeting) and the observance of the rules and regulations governing the economical entities and the entities managers efficiency is also evaluated from the perspective of the quality of using the extant resources and the method of implementing the plans and

*Author α:* Department of Financial management, Tehran University, Tehran, Iran. e-mail: reza\_rahimi@ut.ac.ir

*Author σ:* Education of nonprofit institution of Mehregan, Mahallat, Iran.



operations and the obtained results will be reported. This type of auditing which its recent aspect is termed as management audit generally regarding the big firms possessing macro-resources and their area of activity is vast and its management is different from capital possession is being implemented in response to the management performance evaluation necessity of such organizations by the qualified experts (accountants and experts from the other disciplines) and it is the professional accounting evolution future trend.

In other words, auditing is the inspection seeking for accounting evidences and other documents at the foundation of financial statements.

*Types of auditing from various perspectives:*

From the point of view of referring the task:

1. obligatory
2. optional

*From the nature of examination and auditing:*

1. systematic examination
2. verificational examination
3. case examination (special)

*From the task fulfilment point of view:*

1. implied audit
2. final audit
3. continuous (ongoing) auditing

*Auditing objective:*

Validating the financial statements in order to create confidence in their presentation favorableness and their reliability. Validation is consisted of two separate stages:

1. Collecting auditing documents
2. Reporting the findings or the so-called audit reports

Which communicates the auditors notions and comments regarding the presentation favorableness and reliability of the financial statements to the financial statements users. (Abbas Arbabsoleymani and Mahmood Nafari, 2009)

### III. AUDITOR AND AUDIT QUALITY

Auditor quality: is defined as the overall quality of the auditing services in generally all of the organization auditing processes.

*Audit quality:* the word audit quality conveys different meanings to different people. With this explanation that the auditing process should be defined separately for every auditing task since it is likely that all of the auditing tasks performed by the same auditing institution are not with the identical quality level.

From one hand, the auditing quality can have various meanings for the auditors. Moreover, in its examinations auditing can evaluate business risk as well in the preservation of the generally accepted auditing standards in order to prevent lawsuits and the dissatisfaction of the employer and also limiting the damage to the professional reputation which is an

outcome to malauditing. Deangelo (1981) defines the auditing quality as the likelihood of the discovery and the report of the important extant distortions in the financial statements by a certain auditor.

Davidon and Neo (1993) in a more comprehensive definition, define the auditing quality as the auditor competency in the discovery and resolution of the important distortions and manipulations performed on the reported profit. Therefore, the auditor's capability is a crucial subject in the auditing quality which has been interpreted from various aspects and it has an extensive relationship with the internal and external factors, auditors' characteristics (such as experience, competency, ethics etc.), auditors' independency (independency from employer, market competition etc.) And legislative environment (obligatory substitution, auditing and nonauditing services etc.). According to the fact that the auditing quality is multifaceted, it is not evident that which of the aforementioned factors is influential in determining the auditors' qualities and therefore the auditing quality cannot be directly observed and measured.

And also the process of completing the servicing activities is not tangible in the process of progress and contrary to the merchandise under construction. (Morteza Asadi and Majid Darabi, 1391)

*a) Factors affecting the auditing quality*

Conceptually, the auditing quality can be measured through the three basic aspects of inputs, outputs and environmental factors. Except auditing standards, there are other inputs for the auditing quality. One such an input is the unique and prominent features of the auditor such as his or her experience, moral values and his propensities. One of the other important factors, is the auditing process. This process includes auditing methodology, the amount of the effects of the applied auditing methods and the amount of access to the required auditing documents and evidences.

Auditing outputs also bring about important outcomes for the auditing quality, since the outputs are taken to consideration by the users for the auditing quality evaluation. For instance, when the auditor's report clearly expresses the result subsequent to the auditing act can exert a positive impact on the auditing quality. Also, the relationship between the auditors and the leadership foundations in such subjects as financial reports quality aspects and the internal control weaknesses can have a positive effect on the auditing quality.

*b) The relationship between auditing quality and profitability*

More qualified auditing firm with better quality can affect the management discretions in the selection of the accounting procedures and its motivation for manipulating the profit. Also, the more there are accounts such as accounts receivable, accounts

payable, and inventory (of the optional accrual items), the more there would be observed demands for better supervision and more qualified auditing.

The bigger the size of the auditing and the longer the tenure period of auditor, the higher the quality of the auditing will be and the higher the quality of auditing the extent of its influence will be greater on the management discretions in the choice of the accounting procedures and his or her motivation for manipulating profit to reach personal interests and the higher would be the reliability of financial statements. (Asghar Azizi, 2010)

#### c) Auditor size

The quality of the auditing institutions differ from one another and the researchers use alternatives for the differentiation between the auditing firms with high qualities and those with low qualities. The size of the auditing firms, their history and the trade mark are but some of the discriminating factors. That is to say that bigger institutions and those with more respectful and famous trade mark in relation to the others exhibit higher quality auditing job.

#### d) The relationship between the auditing quality and the auditor's size

The auditing size is one of the features which influences the auditing quality. Deangelo believes that the bigger auditing companies offer auditing services with higher qualities, since they are intending to acquire better fame in the work market and because the number of their clients is great they are not concerned with and worried about losing them. It is stipulated that such institutions due to having access to more interests and facilities for training their own auditors and performing various tests offer auditing services with higher qualities. (Mojtahedizadeh and Aghaee, 2004)

Firms with bigger auditing size besides their fame and credit perform more successfully in issues such as training the staff and maintaining independence (seeming and real) in the face of the employees and other important issues influencing the increase in the quality of auditing. Therefore, the audited companies by the auditing organization are rated among the companies that their financial statement items are of a great value and in the end they will enjoy from a higher auditing quality. And on the contrary, the companies audited by the other auditing institutions (auditing firms which are members of the formal accountant society) are regarded as having smaller size in relation with the auditing organization. These auditing firms have lower validating and valuational power in comparison with the auditing organization and subsequently they will have lower quality auditing from the independency, staff training etc (Yahya Hassas, Yeganeh and Kaveh Azinfar, 2010)

#### e) Auditor's tenure period

Auditor's tenure period is one of the measures for measuring the auditing quality which is expressed as the number of consecutive years that an auditor examines and audits the auditing firms.

#### f) The relationship between auditing quality and the auditor's tenure period

Regarding the effect of the continuous appointment of the auditor on the audit quality there exists two perspectives:

1. It is believed that the long-term relationship between the employer and the auditor causes their extreme closeness and this in its turn hurts the auditors independence and the auditing quality mitigation.
2. Refers to the auditing problems of the relationship between the auditor and the employer in the early years. In this perspective, having no exact familiarity with subjects such as operation type, accounting system and the internal control structure of the audited company plus increasing the auditing costs may add to the possibility of the auditor not getting to the errors and basic violations. Therefore, in case of the continuation of the auditor's appointment the possible mistakes in the accounting information will be easily discovered and this per se brings about the increase in the accounting information quality and therefore increase in the predictive potential of the information. (Mohammadramazan Ahmadi and Kamran Jamali, 2013)

Output is the reward that an investor expects from his or her investment in a project.

### IV. THE EFFECT OF THE AUDITING QUALITY ON THE OUTPUT

Shareholders and investors are continuously searching for information which assists them in the selection of the best investment and appropriate portfolio. One of the important discussions which influences the investors decisions is the accounting information quality. Financial researchers are constantly looking for variables to be able to predict the stock return for the future terms with a higher percentage of confidence in relation to the prior variables and models. The recognition of the way that the stock market responds to the accounting information is of a great value for the recognition of the capital market efficiency and also the evaluation of the utility of the financial statement information. Experimental researches show that the accounting figures have predictive power and the accounting information predictive value can be accepted as one of the qualitative features of accounting information. Therefore, the financial statement auditing is counted as one of the most crucial tools for confiding in the companies' financial data clarity and it makes the accounting information, for example financial ratios of each of the shares, predictive

power grow more. Therefore, the quality of such information increases with the auditing quality and the prospective output obtained by relying on such information gets closer to the reality. (Mohammadramazan Ahmadi and Kamran Jamali, 2013)

## V. THE RELATIONSHIP BETWEEN AUDITING QUALITY WITH PREDICTIVE PROFIT

Prediction is the key element in the economical decisions. Investors, creditors and other entities rely on the predictions and expectations in their decision-making. For instance, an investor in making decisions regarding purchase, sale or the retention of shares is willing to become aware of the time and the amount of the partitioned profits and their risks. To become aware of such future partitioned profits characteristics which is not readily available apriori and with absolute precision therefore prediction should be perforce resorted to. Creditors are interested in the prospective profit of the company as well.

Audit high quality increases the reliability of the reports via decreasing the intentional and unintentional errors in the historical profit. The historical profit information is not a proper index for the evaluation of the prospective performance evaluation. Therefore, the prediction of the future profit is of a particular position. The profit predictability power increases with the existence of reliable financial information. Previous researches show that the business entity makes use of the historical profits information to predict the future profits. Financial analysts process the available information such as prior profits and prices in order to be able to estimate the future profit and because one of the sources for the companies to procure budget is the profit prediction, financial statements are historical, therefore, the validity and the financial statements reliability is of great importance for them. (Dr.Seyyed Hossein Alavi Tabari, 2009)

### a) Study background

There are few researches performed on the subject in Iran and most of the performed researches regard the audit quality which is explained below.

Mashayekhi et al dealt with the survey of the optional accrual items role in the profit management of the companies accepted in Tehran's securities exchange market. The results of their study suggests that in the studied companies profit management has been exerted through the increase in optional accrual items.

Karami and his colleagues (2011) in a study came to this conclusion that there is a direct relationship between audit selection continuation and profit management (in the orientation of showing lesser profit). Bozorgasl and Shayestehmand (2011) found that with the increase in the audit continuous appointment, the

probability of profit management becomes more likely, whether in an ascending or descending manner.

Hassasyeganeh and colleagues (2005) in a study entitled as "influencing factors on independence and competence of members of Iran's formal accountant society in offering deposition services", dealt with the audit quality the result of which was the determination of the 7 affective factors for enhancing the audit quality as stated below:

1.specialism, 2.audit efficiency, 3.discovery of the important distortions, 4.interest conflicts, 5. The existence of the rules and regulations, 6.market mechanism, 7. the size of the audit firms

Nourvash et al (2006) dealt with the survey of the accrual items quality and profit with an emphasis on the accrual items estimation error. The results obtained shows that the quality of accrual items has a positive and significant relationship with profit sustainability and the accrual items are more interpreted as lower quality and lower sustainability of the profit.

Ebrahimi Kordlor and Seyyedi in their study surveyed the relationship between the independent auditors and the type of auditor's comment and profit management and they came to this conclusion that only auditing firm type is in relationship with the optional accrual items.

Azizkhani et al performed a study under the title of "auditing tenure period, auditing partners and financial reporting validity. The results of their study shows that auditing tenure period and audit partners have a relationship with the forecasted costs of the equity holders' rights. Also, the researchers found that the increase in the auditor's tenure period leads to the high quality financial reporting.

### b) Foreign study backgrounds

De Angelo, Palmerose, Tendello and Vastraelen and Chen et al, consider the auditing firms which are members of the top 4 big auditing organizations (previously they were famous as 6 big auditing organizations and 8 big aditing organizations) as the great auditing organizations with credibility and fame and proposed the auditing performed by these organizations as the high quality auditing and presented it as the scale and the measure of the auditing quality in their studies, since the firm members of the 4 top big auditing organizations besides their reputation and credibility, perform successfully in the field of personnel training and education and preserving independency before the employers and the other items influencing the quality enhancement.

Chen, K.; Lin L. K. & Zhou, (Chen, K.; Lin L. K. & Zhou, J. 2005)(Palmrose, Z. 1988)

(J. 2005)

Becker et al (1998) and Fransis et al (1999) in their studies came to this conclusion that in cases other

than initial offering, higher quality of auditing is accompanied with profitability.

(Francis, J. R.; Maydew, E. L. & Sparks, H. C. 1999)

Mayers et al (2003) in a study indicated that the longer auditing commission for the auditor provides him or her with recognition and expertise in the employer's

industry and the longer the auditor's tenure period the longer the sustainability of the profit.

(Myers, J. N., Myers, L. A & Omer, T. C. 2003)

Chen et al (2005) in a study under the title of the auditing quality and profit management for the companies involved in the initial public offering (IPO) of Taiwan stock market by selecting top 4 big auditing firms as the quality auditors and the comparison of the profit in the audited firms by these four firms and the profit in the audited firms by auditors other than these four big firms studied the auditing quality relationship

and profit management in the stages before and after the IPO and they came to this conclusion that, firstly, in such companies profit management takes place and secondly, there is a significant relationship between profit management and audit quality, and it is in a way that the higher the quality of auditing the lower the profit management of such firms.

(Chen, K.; Lin L. K. & Zhou, J. 2005)

Also, Bal and Shiva Kumar (2005) stated that the private companies in comparison with the

governmental companies are in short for the timely announcement of their losses.

(Ball, R. & Shivakumar, L. 2005)

Tendello and Vanstraelen (2008) also in a study under the title of "profit management and auditing quality in Europe: private distribution firms", by considering the top 4 big auditing firms as the high quality auditors and the survey of the profit management in the audited firms by these four firms and the profit

management came to this conclusion that there is a significant relationship between profit management and audit quality and the high quality of auditing in the companies having similar taxation regulations causes the profit management to go down.

(Tendello, B. & Vanstraelen, A. 2008)

Ken Chen et al (2005) in the article auditing quality and profit management for the companies involved in the initial public offering (IPO) of Taiwan stock market by selecting top 4 big auditing firms as the quality auditors and the comparison of the profit in the audited firms by these four firms and the profit in the audited firms by auditors other than these four big firms studied the auditing quality relationship and profit management in the stages before and after the IPO in Taiwan came to this conclusion that, firstly, in such companies profit is managed and secondly, there is a significant relationship between profit management and audit quality, and it is in a way that the higher the quality of auditing the lower the profit management of such firms. (Chen, K; Lin L.K.&Zhou, J.2005)

Kim et al (2003) showed that the discrepancy between the big auditing firms effectiveness and the small auditing firms originates from the companies' managers conflict with the auditors regarding the auditing reports. When the managers are sufficiently motivated to increase the amount of the profit via the use of profit generating accounting procedures, the auditors impartiality results in the conflict between the managers and auditors. They found out that the big auditing companies are more effective in preventing the profit manipulation than the small firms (supposing the existence of the contradiction between the managers and the auditors).

Lahm and Chang (1994) found out that generally the big auditing companies do not necessarily offer better auditing quality than the smaller firms. (Hay David, Davis David, 2002).

In the study performed by Louis Hencock (2005) it became evident that the bigger auditing firms usually offer better services than the smaller organizations. But there was also found that the smaller auditing firms provide their employers with better consult. (Louis Hencock, 2005)

Fuerman (2006) in his study came to this conclusion that the bigger auditing firms have lesser auditing negligence. (Fuerman R. Comparing 2006) Deltas and Doogar (2004) in their studies came to this conclusion that the lower the diversity of auditing



products the higher the quality of the financial statements will be (Deltas G, Doogar R.2004)

Chuntao and colleagues (2007) in their study dealt with the analysis of the cognition (perception) of the stock exchange market through the auditing quality among some of the small auditing institutions in China's auditing market. These researchers found that there is positive relationship between the size of the auditing firms and the investor's perception of the profitability quality. The results of the studies performed by Chuntao et al showed that different sizes of the auditing firms affects the auditing quality. (Chuntao Li., Frank M.song,2007)

Chi and Doogar (2005) showed that with the increase in the tenure period, the auditors' tendencies for publishing reports containing the cooperation continuation condition decreases. Kapli and Dose (1993) also found that low quality audits increase with the tenure period. The results of the studies by Vanstraelen (2000) signifies that the long-term cooperation between the auditor and the employer increases the likelihood of issuing acceptable reports by the auditors. The results of the studies performed by Batz e al (1982) shows that the auditors' judgment is influenced by the employer-auditor long-term relationships.

Steak (1991) in a study stated that in the sampling performed, 30% of the companies claiming a lawsuit, their auditor's tenure period has been 3 years or shorter. (Ghplamreza Karami et al, 1390)

Kamran et al (2001) in some studies surveyed the profit management and auditor substitution relationship by posing this question that whether changing the auditor will increase the audit quality? The results indicate that in case that the auditor substitution is voluntary, this change (shorter commission periods) will increase the auditing quality.

Gaiger and Raganandan (2002) with the survey of the companies filing a bankruptcy during the years from 1996 to 1998 came to this conclusion that there is a positive relationship between the auditor's tenure period and the possibility of the bankrupted company receiving a conditional report demanding the cooperation continuation in the year before bankruptcy.

Fundano et al (2010) studied the relationship between the audit quality and the company size and the cost of equity. In this research, the tenure period, auditing firm size, and the auitor's expertise are considered as the scales of the auditing quality. The rsults of the study shows that there is a negative and significant relationship between the auditing firm size, the auditor's commisssioning period and the auditor's expertise in the industry with the cost of equity.

Jule, Job and Hugton (2005) in their study for the measurement of the audit quality besides the auditing firm size made use of the audit firm expertise in the employer's industry. They believed that the audit

companies who are expert in the employer's industry would do the auditing with higher qualities.

Amongst these, the results of the study performed by Davis et al (2009) comes striking. They found evidences which indicates that the predicted profit, for the companies with short appointment continuation (of less than three years) and the long appointment continuation (of 15 years or more) normally are accompanied with lower error rates and these companies usually by making use of the optional accrual items achieve the expected profit or more than what is forecasted. These results show that as it is possible that the auditing quality decrease with the enlarging the auditor's appointment period, there is the possibility that the auditing quality suffers in the early years of the employer-auditor relationship. (Davis, L.R., Soo,B.,&Trompeter, G.2009)

Davis and Soo (2002) noted the positive relationship between the auditor's continuous appointment and the amount of the optional accrual items and the negative relationship between the auditor's continuous appointment and the error in the forecasted profit by the analysts. These results show that due to the auditor's continuous appointment the auditing quality succumbs and the management will bear witness to more flexibility from the auditors side in the reports and would be able to acquire the forecasted profit. (Davis, L.R., & Soo,B., 2002).

### c) *Study Hypotheses*

In the current study the hypotheses have been compiled based on the objectives and the importance of the theoretical foundation as follows:

1. There is a significant relationship between auditor tenure period and the profitability ratios.
2. There is a significant relationship between the auditing size and the profitability ratios.

## VI. STUDY POPULATION AND STATISTICAL SAMPLE

The study population is all of the companies accepted in Tehran's securities exchange market and the sample is determined based on demography taking the following conditions into consideration:

1. The fiscal year ends in Esfand (March) every year.
2. The companies had not changed their fiscal yer during the study period.
3. Companies had provided the stock market with their finacnial statements during the study years.
4. The companies had been audited during the study years.

According to the bove mentioned conditions the number of the statistical sample has been determined as 52 companies. It is worth mentioning that the outlier observations were not taken into consideration.\

a) *Study methodology*

The current study deals with the relationship between the audit quality and profitability of the companies accepted in Tehran's securities exchange market. Therefore, this is an applied research. In the present study the library method was taken advantage of for collecting data and information. In the library part, the basic theories of the study were compiled from the Persian and English books and journals. The methodology of the study is exploratory-surveying of correlation type. The temporal scope of the study is the years from 2008 to 2013. The present study data have been extracted from the financial statements and the explicatory notes by making use of the Rah-Avard-e-Nowin and Tadbir-Pardaz softwares. And for data analysis the SPSS and Excel softwares were used.

b) *Study variables*

i. *Independent variable*

1. Auditing size: to survey the auditing size it was taken advantage of the reliable auditing firms in the stock market.
2. The auditor's tenure period: the auditor's tenure period is one of the measures of audit quality measurement which refers to the consecutive years that the auditing firms are appointed for the

examination and auditing the accounts of other companies.

ii. *Dependent variables*

1. Profit margin: it is obtained by dividing net profit by the net sale.
2. The investment return rate: it is obtained by dividing the net profit by the total assets.
3. The equity return rate: it is obtained by dividing the net profit by the equity.

c) *Data analysis*

i. *Inferential statistics*

One of the linear regression presupposition is that the dependent variable data distribution should be normal or near normal. To figure out the data normality or otherwise the data abnormality, the one-sample Smirnov-Kolmogorov test and the descriptive tests were used.

In the interpretation of the Smirnov-Kolmogorov test, if the test significance level is more than 0.05 then it can be said that the observatory and the theoretical distribution are identical and there is no difference between the two that is to say that the obtained distribution is closer to the normal. As it can be seen the investment return rate is not normally distributed.

**One-Sample Kolmogorov-Smirnov Test**

		profitmargins	ROI	ROE
N		300	300	300
Normal Parameters <sup>a</sup>	Mean	0.231465644	0.145232	0.340410
	Std. Deviation	0.166113386	0.112564	0.172015
Most Extreme Differences	Absolute	.096	.111	.057
	Positive	.096	.111	.057
	Negative	-.083	-.110	-.026
Kolmogorov-Smirnov Z		1.667	1.922	.992
Asymp. Sig. (2-tailed)		.008	.001	.278



### One-Sample Kolmogorov-Smirnov Test

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	Negative	-.083	-.110	-.026
Kolmogorov-Smirnov Z		1.667	1.922	.992
Asymp. Sig. (2-tailed)		.008	.001	.278
a. Test distribution is Normal.				

In the interpretation of the descriptives if the amount of this error is in the range of 2,-2, then the data distribution is normal. As it can be seen the investment

return rate is not present in this range, so it is not normal.

### Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
profitmargins	300	0.00127042	0.85395877	0.231465644	0.16611338679	1.177	.141	1.667	.281
ROI	300	0.00168024	0.94210469	0.14523231	0.11256425900	2.874	.141	14.400	.281
ROE	300	0.00693819	0.92289443	0.34041093	0.17201599808	.380	.141	-.179	.281
Valid N (listwise)	300								

If the results of the test showed that the data distribution is not normal, for the implementation of regression the normal data log should be applied.

*First Hypothesis:* there is a significant relationship between the auditing tenure period and the profit margin:

R: it is known as the multiple correlation coefficient and it is indicative of the amount of the multiple correlation between the entire collection of the dependent and independent variables. It takes a

number from 1 to -1. The closer it is to 1 it is more indicative of the strong correlation between dependent and independent variables.

The amount of the adjusted coefficient is equal to 0.008 which suggests that the tenure period independent variable has been able to account for 0.8% of the variations of the dependent variable profit margin. Therefore, the rest of these variations (99.2%) are subjected to the effects of the variables exogenous to the model.

Model Summary<sup>b</sup>

Model	R	R Square	Adjusted Square	R Std. Error of the Estimate	Durbin-Watson
1	.105 <sup>a</sup>	.011	.008	0.16548007388	1.996

a. Predictors: (Constant), Tenure

b. Dependent Variable: profitmargins

T-value shows the relative importance of the presence of each of the independent variables in the model. To recognize which variables significantly and meaningfully influences the dependent variable we can look at t-value. Usually, when the t numerical value modulus is bigger than 2.33 the error level will be lower than 0.05 and therefore it can be said that the

questioned variable has a significant statistical effect on the elaboration of the dependent variable variations. As it can be observed the standardized regression coefficient for the profit margin variables (0.071) in the error level bigger than 0.05 is not significant. Therefore, it can be said that there is no significant relationship between the tenure period and the profit margin.

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
1 (Constant)	.190	.025		7.670	.000
Tenure	.012	.006	.105	1.815	.071

A. Dependent Variable: profit margins

*Second Hypothesis:* there is a significant relationship between the investor's return rate and the tenure period. R: it is known as the multiple correlation coefficient and it is indicative of the amount of the multiple correlation between the entire collection of the dependent and independent variables. It takes a number from 1 to -1. The closer it is to 1 it is more indicative of the strong correlation between dependent and independent variables.

The amount of the adjusted coefficient is equal to 0.018 which suggests that the tenure period independent variable has been able to account for 1.8% of the variations of the dependent variable profit margin. Therefore, the rest of these variations (98.2%) are subjected to the effects of the variables exogenous to the model.

Model Summary<sup>b</sup>

Model	R	R Square	Adjusted Square	R Std. Error of the Estimate	Durbin-Watson
1	.147 <sup>a</sup>	.022	.018	.85094	2.050

a. Predictors: (Constant), Tenure

b. Dependent Variable: Inroi

T-value shows the relative importance of the presence of each of the independent variables in the model. To recognize which variables significantly and meaningfully

influences the dependent variable we can look at t-value. Usually, when the t numerical value modulus is bigger than 2.33 the error level will be lower than 0.05

and therefore it can be said that the questioned variable has a significant statistical effect on the elaboration of the dependent variable variations. As it can be observed the standardized regression coefficient for the

investment return rate variables (0.11) in the error level lower than 0.05 is significant. Therefore, it can be said that there is a significant relationship between the tenure period and the profit margin.

**Coefficients<sup>a</sup>**

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	-2.515	.127		-19.747	.000
Tenure	.085	.033	.147	2.572	.011

**a. Dependent Variable: Inroi**

*Third Hypothesis:* there is a significant relationship between the equity return rate and tenure period.

R: it is known as the multiple correlation coefficient and it is indicative of the amount of the multiple correlation between the entire collection of the dependent and independent variables. It takes a number from 1 to -1. The closer it is to 1 it is more indicative of the strong correlation between dependent and independent variables.

The amount of the adjusted coefficient is equal to 0.000 which suggests that the tenure period independent variable has not been able to account for the variations of the dependent variable of profit margin. Therefore, the rest of these variations (100%) are subjected to the effects of the variables exogenous to the model.

**Model Summary<sup>b</sup>**

Model	R	R Square	Adjusted Square	Std. Error of the Estimate	Durbin-Watson
1	.057 <sup>a</sup>	.003	.000	0.17202191332	1.859

**a. Predictors: (Constant), Tenure**

**b. Dependent Variable: ROE**

T-value shows the relative importance of the presence of each of the independent variables in the model. To recognize which variables significantly and meaningfully influences the dependent variable we can look at t-value. Usually, when the t numerical value modulus is bigger than 2.33 the error level will be lower than 0.05 and therefore it can be said that the questioned variable has a significant statistical effect on the elaboration of the dependent variable variations. As it can be observed the standardized regression coefficient for the profit margin variables (0.323) in the error level bigger than 0.05 is not significant. Therefore, it can be said that there is no significant relationship between the auditing tenure period and the equity return rate.

Coefficients<sup>a</sup>

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	.317	.026		12.306	.000
Tenure	.007	.007	.057	.990	.323

a. Dependent Variable: ROE

*Fourth Hypothesis:* there is a significant relationship between the profit margin and the auditing size.

R: it is known as the multiple correlation coefficient and it is indicative of the amount of the multiple correlation between the entire collection of the dependent and independent variables. It takes a number from 1 to -1. The closer it is to 1 it is more indicative of the strong correlation between dependent and independent variables.

The amount of the adjusted coefficient is equal to 0.019 which suggests that the tenure period independent variable has been able to account for 1.9% of the variations of the dependent variable of profit margin. Therefore, the rest of these variations (98.1%) are subjected to the effects of the variables exogenous to the model.

Model Summary<sup>b</sup>

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.150 <sup>a</sup>	.023	.019	0.16449767289	2.020

a. Predictors: (Constant), TrusteExchange

b. Dependent Variable: profitmargins

T-value shows the relative importance of the presence of each of the independent variables in the model. To recognize which variables significantly and meaningfully influences the dependent variable we can look at t-value. Usually, when the t numerical value modulus is bigger than 2.33 the error level will be lower than 0.05 and therefore it can be said that the questioned variable has a significant statistical effect on the elaboration of the dependent variable variations. As it can be observed the standardized regression coefficient for the profit margin variables (0.009) in the error level smaller than 0.05 is significant. Therefore, it can be said that there is a significant relationship between the auditor size and the profit margin .

Coefficients<sup>a</sup>

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
1 (Constant)	.288	.023		12.304	.000
Trusteexchange	-.041	.016	-.150	-2.627	.009

**A. Dependent Variable: profitmargins**

*Fifth Hypothesis:* there is a significant relationship between the auditing size and the investment return rate. R: it is known as the multiple correlation coefficient and it is indicative of the amount of the multiple correlation between the entire collection of the dependent and

independent variables. It takes a number from 1 to -1. The closer it is to 1 it is more indicative of the strong correlation between dependent and independent variables.

**Model Summary<sup>b</sup>**

Model	R	R Square	Adjusted Square	Std. Error of the Estimate	Durbin-Watson
1	.036 <sup>a</sup>	.001	-.002	.85978	2.001

**a. Predictors: (Constant), TrusteExchange**

**b. Dependent Variable: lnroi**

T-value shows the relative importance of the presence of each of the independent variables in the model. To recognize which variables significantly and meaningfully influences the dependent variable we can look at t-value. Usually, when the t numerical value modulus is bigger than 2.33 the error level will be lower than 0.05 and therefore it can be said that the

questioned variable has a significant statistical effect on the elaboration of the dependent variable variations. As it can be observed the standardized regression coefficient for the profit margin variables (0.537) in the error level smaller than 0.05 is not significant. Therefore, it can be said that there is no significant relationship between the auditor size and the investment return rate .

Coefficients<sup>a</sup>

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
1 (Constant)	-2.144	.122		-17.551	.000
Trusteexchange	-.050	.081	-.036	-.618	.537

**A. Dependent Variable: lnroi**

*Sixth Hypothesis:* there is a significant relationship between the auditing size and the equity rate.

R: it is known as the multiple correlation coefficient and it is indicative of the amount of the multiple correlation between the entire collection of the dependent and independent variables. It takes a number from 1 to -1. The closer it is to 1 it is more indicative of the strong correlation between dependent and independent variables.

The amount of the adjusted coefficient is equal to 0.003 which suggests that the tenure period independent variable has been able to account for 0.3% of the variations of the dependent variable of profit margin. Therefore, the rest of these variations (99.7%) are subjected to the effects of the variables exogenous to the model.

**Model Summary<sup>b</sup>**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.080 <sup>a</sup>	.006	.003	0.17175493564	1.848

**Model Summary<sup>b</sup>**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.080 <sup>a</sup>	.006	.003	0.17175493564	1.848

**a. Predictors: (Constant), TrusteExchange**

**b. Dependent Variable: ROE**

T-value shows the relative importance of the presence of each of the independent variables in the model. To recognize which variables significantly and meaningfully influences the dependent variable we can look at t-value. Usually, when the t numerical value modulus is bigger than 2.33 the error level will be lower than 0.05 and therefore it can be said that the

questioned variable has a significant statistical effect on the elaboration of the dependent variable variations. As it can be observed the standardized regression coefficient for the profit margin variables (0.168) in the error level smaller than 0.05 is not significant. Therefore, it can be said that there is no significant relationship between the auditor size and the equity return rate.

**Coefficients<sup>a</sup>**

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	.310	.024		12.686	.000
TrusteExchange	.022	.016	.080	1.382	.168

**a. Dependent Variable: ROE**



## VII. CONCLUSIONS AND THE SUGGESTIONS

The objective of the current study is the survey of the auditing quality and the relationship between its variables and the profitability ratios and according to the study and the proposition of the hypotheses we came to the following results: there is no significant relationship between the tenure period and the net profit margin ratios and ROE while there is a significant relationship between the tenure period and ROI and the results of the current study conforms with the results of the studies performed by:

Mayers et al (Mayers, J.N., Mayers, L.A., & Omer, T.C., 2003)

Chen et al (Chen, K.; Lin, L.K. & Zhou, J., 2005) contrary to the results obtained by Burgstahler et al (Burgstahler, D.C.; Hail, L. & Leuz, C. 2006).

Therefore, based on the current study there is a significant relationship between the auditing size and the net profit margin profitability ratios and ROE while this relationship with the ROI ratios is not significant. There has not been performed a study in Iran which deals with the relationship between the auditing quality and profit management. So, the comparison between this study and other internal studies regarding the subject is not possible for the time being.

	Durbin-Watson	Test significance level	
No relationship exists	1.996	0.071	The relationship between the tenure period and profit margin
Relationship exists	2.050	0.011	The relationship between the tenure period and ROI
No relationship exists	1.859	0.323	The relationship between the tenure period and ROE
Relationship exists	2.020	0.009	The relationship between the auditing size and profit margin
No relationship exists	2.001	0.537	The relationship between the auditing size and ROI
No relationship exists	1.848	0.168	The relationship between the auditing size and ROE

## VIII. SUGGESTIONS FOR FUTURE RESEARCH

1. The comparison of the explicatory power of the other auditing quality scales with scales such as auditor size, auditor tenure period in order for the companies profit management to be determined.
2. The survey of the nonlinear relationship between profit management and the auditing quality scales.
3. The determination of the profit management via using a model except the adjusted model by Jones and the study of its relation with the auditing quality scales.

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Table 1: Descriptive Statistics and Correlations

Panel A : Descriptive Statistics of Internal Audit Characteristics

Variable	Mean	Std. Dev	Min	P25	Median	P75	Max
IAQuality	2.42	1.15	0.00	2.00	2.00	3.00	5.00
IAQuality	6.35	4.18	1.00	3.00	6.00	8.00	28.00
Certification	0.59	0.30	0.00	0.40	0.55	0.71	2.00
CAEAC	0.69	0.46	0.00	0.00	1.00	1.00	1.00
TimeFin	31.79	20.01	0.00	12.00	33.00	48.00	80.00
Training	59.21	26.32	0.00	40.00	60.00	80.00	160.00
IASize	0.51	1.27	-0.79	-0.27	0.14	0.78	9.71

*Panel B:* Descriptive Statistics of Variables Included in our Models

Variable	Mean	Std. Dev	Min	P25	Median	P75	Max
AbnAccruals	-0.049	0.108	-0.883	-0.083	-0.022	0.013	0.325
ACEffectiveness	9.36	2.18	0.00	10.00	10.00	10.00	10.00
AuditorSpecialist	0.52	0.50	0.00	0.00	1.00	1.00	1.00
Gindex	9.87	2.34	3.00	8.00	10.00	11.00	16.00
Assets	21,425	36,478	162	3,589	11,274	26,056	370,782
Age	44.66	13.14	14.00	35.00	52.00	54.00	56.00
Leverage	0.48	0.14	0.05	0.39	0.48	0.57	1.21
Complexity	3.55	2.14	1.00	1.00	3.00	5.00	10.00
CFO	2,218	4,022	-3,657	270	828	2,198	33,764
SalesGrowth	0.10	0.33	-0.94	-0.01	0.06	0.15	4.62
MB	2.68	16.58	-280.44	1.45	2.06	3.47	115.84
CFOVolatility	538	877	7	92	223	571	6,409
ROA	0.04	0.07	-0.34	0.02	0.04	0.07	0.51
Loss	0.15	0.35	0.00	0.00	0.00	0.00	1.00
NYSE	0.92	0.27	0.00	1.00	1.00	1.00	1.00



Table 2 : Continued from Previous Page

Panel C: Spearman and Pearson correlations (Above/Below the diagonal, respectively)

Variable	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)
1 AbnAccruals		--	--	-0.08	-0.09	-0.16	<b>0.11</b>	-0.07	-0.17	-0.09	0.01	0.04	-0.20	<b>0.30</b>	<b>0.13</b>	<b>0.20</b>	0.06	-0.07
2 +AbnAccruals	--		--	0.00	0.03	-0.03	0.07	-0.03	-0.08	0.06	0.06	-0.18	-0.20	0.14	<b>0.17</b>	0.00	0.05	0.06
3 -AbnAccruals	--	--		<b>0.12</b>	<b>0.11</b>	<b>0.17</b>	-0.14	0.08	<b>0.21</b>	<b>0.11</b>	0.03	-0.07	<b>0.22</b>	-0.30	-0.10	-0.22	-0.07	<b>0.11</b>
4 IAQuality	-0.07	-0.04	0.09		-0.08	0.02	0.01	-0.20	-0.03	<b>0.18</b>	0.08	-0.21	-0.01	-0.14	-0.25	-0.09	0.01	<b>0.15</b>
5 ACEffectiveness	-0.04	0.03	0.03	-0.09		<b>0.12</b>	0.00	<b>0.10</b>	<b>0.14</b>	0.01	-0.01	0.07	-0.02	-0.02	0.05	-0.08	0.07	0.03
6 AuditorSpecialist	-0.12	-0.14	0.09	0.02	0.08		-0.15	0.08	<b>0.13</b>	<b>0.09</b>	0.03	0.02	-0.05	-0.04	0.03	-0.05	-0.08	<b>0.17</b>
7 Gindex	0.03	0.03	-0.03	-0.01	0.06	-0.14		-0.14	0.04	0.03	<b>0.09</b>	-0.10	-0.05	0.01	-0.06	0.04	-0.08	0.05
8 Assets	-0.07	0.06	0.09	-0.20	0.08	<b>0.09</b>	-0.09		<b>0.23</b>	-0.03	0.08	<b>0.84</b>	-0.02	<b>0.18</b>	<b>0.83</b>	0.00	-0.04	0.05
9 Age	-0.16	0.00	<b>0.20</b>	0.07	0.04	0.04	0.08	<b>0.25</b>		0.04	<b>0.18</b>	<b>0.17</b>	-0.03	-0.01	<b>0.12</b>	0.04	-0.12	<b>0.28</b>
10 Leverage	0.01	0.04	-0.03	<b>0.16</b>	0.01	<b>0.10</b>	0.00	-0.03	0.05		-0.07	-0.10	0.00	-0.05	-0.06	-0.19	<b>0.12</b>	<b>0.19</b>
11 Complexity	0.00	<b>0.15</b>	0.03	0.07	-0.03	0.03	0.08	<b>0.09</b>	<b>0.22</b>	-0.09		0.03	0.07	-0.02	0.00	-0.04	0.04	<b>0.10</b>
12 CFO	<b>0.12</b>	0.07	-0.10	-0.21	0.00	-0.09	-0.13	<b>0.64</b>	0.03	-0.22	0.00		0.00	<b>0.36</b>	<b>0.76</b>	<b>0.26</b>	-0.18	0.05
13 SalesGrowth	-0.11	-0.02	<b>0.15</b>	<b>0.09</b>	-0.02	0.00	-0.02	0.00	0.00	0.05	0.05	0.00		<b>0.09</b>	-0.10	<b>0.23</b>	-0.24	0.00
14 MB	-0.15	<b>0.17</b>	<b>0.23</b>	-0.05	0.00	0.08	-0.02	0.07	0.08	-0.09	0.03	0.05	-0.02		<b>0.23</b>	<b>0.52</b>	-0.16	-
15 CFOVolatility	<b>0.10</b>	<b>0.17</b>	-0.08	-0.20	0.02	-0.02	-0.14	<b>0.63</b>	0.03	-0.12	-0.01	<b>0.79</b>	-0.03	0.04		0.07	0.07	-
16 ROA	<b>0.33</b>	0.05	-0.37	-0.02	-0.07	-0.05	0.03	-0.03	0.02	-0.09	-0.02	<b>0.20</b>	<b>0.12</b>	-0.14	0.03		-0.57	0.01
17 Loss	0.00	0.00	-0.01	0.02	0.06	-0.08	-0.08	-0.04	-0.13	<b>0.12</b>	0.03	-0.10	-0.16	0.01	0.07	-0.54	-	-
18 NYSE	-0.05	0.03	0.06	<b>0.15</b>	0.02	<b>0.17</b>	0.04	<b>0.09</b>	<b>0.30</b>	<b>0.22</b>	<b>0.09</b>	-0.11	0.02	-0.03	-0.07	0.02	-0.12	<b>0.12</b>

Italics – p-value ≤ 0.10; Bold – p-value ≤ 0.05

# GLOBAL JOURNALS INC. (US) GUIDELINES HANDBOOK 2015

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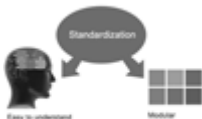
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4. Manuscript's Category,
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Search engines for most searches, use Boolean searching, which is somewhat different from Internet searches. The Boolean search uses "operators," words (and, or, not, and 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

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<i>References</i>	Complete and correct format, well organized	Beside the point, Incomplete	Wrong format and structuring



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