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# Examining the Effect of Firm Size on Conservatism and Earnings Management Relationships; Evidences from Tehran Stock Exchange

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**ABSTRACT:** The main purpose of this study is to examine the effect of the firm size on the relationship between conservatism and earnings management in companies listed on the Tehran Stock Exchange. For this purpose, of the statistical population of Tehran Stock Exchange during the years 1385 to 1389, 72 companies were selected. Obtained results show the effect of firm size variable on the relationship between conservatism and earnings management in companies listed on the Tehran Stock Exchange. Therefore, that, in the large companies, model determination coefficient for determining conservatism was stronger. In other words, we can say that the firm size has a positive effect on the relationship between conservatism and earnings management.

*Keywords*: Conservatism, Jones Model, Earnings Management, Firm Size, Relationship between conservatism and earnings management.

# INTRODUCTION

Companies as economic entities are always in pursuit of more revenue and wealth. Due to various reasons amongst which separation of ownership from management is the most important one, companies are obliged to be accountable to individuals outside the company in addition to performing economic activities. The most efficient form of accountability, based on experimental evidence, is financial reporting. Therefore, it seems that companies not only are expected to carry out economic activities successfully but also they are needed to present the results of those activities in form of financial reporting. In this regard, they need to be as accurate and effective in presenting the financial report as they are expected to decrease the costs and expenses of their economic activities. Besides, they need to prevent the loss of wealth by avoiding any misinterpretations on behalf of the users of these reports (Jones, 1991). In other words, companies apart from honest and true presentation of financial situation and operational results to developing institutions of accounting standards are always cautious about the consequences of such financial reports. This dishonesty generally shows itself in form of higher or lower profits. One kind of inefficient financial reporting in order to avoid unpleasant economic consequences is to step outside the accounting standards which is rarely observed due to the fact that the financial reports are audited and the users only response to the auditor's report.

The reported income is among the most important financial information that is always taken into consideration at the time of decision-making. Financial analysts generally consider the reported profit of a given company as one important and highlighted factor in their studies and judgments. Moreover, investors are also looking for investing their wealth and resources in the most efficient solution. On the other hand, managers' authority for timing and choosing the right form of presenting the financial events in the accepted accounting format makes it possible for them to manipulate the profit. Hence, any form of manipulation can influence the investors' decisions and may result in situations that could become even more influential in inefficient markets. According to Hilly and Wahlen, (1999), profit management happens when managers decide to use their own judgment in order to manipulate the structural transactions or the financial reporting in order to deceive some of beneficiaries whereas the company's economic output or results of a contract in the accounting methods are to be manipulated.

The profit-smoothing phenomenon has been an interesting topic to accounting and financial researchers for half a century. Belkoee believes that smoothing means to consciously coordinate the profit to ultimately reach a desired level (Belkoee, 2002).

Watts, (2003) however, states that conservatism reduces managers' ability for overstatement about company's income and assets through making them dependent to higher standards for recognition. It also lessens their resistance in presenting the needed information about costs.

Another statement by Ball, (2001) is that conservatism monitors the investment policies of companies and prevents faint investments through addressing projects with currently negative value.

According to the above issues and because companies have different sizes which greatly affect their performance, the main question of this study is "Is the firm size effective on the relationship between conservatism and earnings management in companies listed on Tehran stock exchange?

# Research literature

Profit ManagementSchipper (1989): profit management is applied to an intentional interference in external financial reporting in order to increase the profit. Accruals Zi, (2001) described the accruals briefly as something between the operational cash trends and accounting profit. Jones, (1991) described it as the difference between profit and cash achieved from an economic operation. Slova,n (1991) described accruals as a change in non-cash working capital minus depreciation cost. Slovan's definition is derived from Hilli's, (1985) and is exactly according to the definition of accruals in the statement of financial accounting No. 95 (1985). To achieve a total sum of accruals, it is explained that in case of not using the accrual accounting (using cash accounts), only cash accounts will be shown in the balance sheet. Therefore, reporting other asset and debit accounts in balance sheet is the result of using accrual accounting. As a result, accruals are the change in all non-cash assets minus the change in all the debts.

The accruals are divided into two categories simply known as discretionary and non-discretionary accruals. The discretionary accruals consist of those accruals which management can have some control over them. The management can decide on them and they are recorded based on the desire and preference of the management. For example, a company may want to increase the costs of expiration or depreciation; or record debts caused by product guarantee or possible research debts; or considers a high reserve for doubtful receivables or inventory obsolescence. These accruals (outstanding debts) are all optional and discretionary. The discretionary accruals can also be unrealized costs or assets which can be recorded in accounting system such as management reward. Unlike these accruals, non-discretionary accruals are limited by organizational laws\regulations and other external factors and cannot be interfered by the management.

# Conservatism

Conservatism plays an important role in theory and practice of accounting and yet there is no accurate and valid definition of it available (Givoly et al, 2007). The only official definition of conservatism can be found in principal No.2 of FASB standard (1980), where it is described as "a cautious reaction to unreliability in attempt to reach reliability that guarantees that all inherent unreliability and risks within the economic situations are adequately considered." However, this definition was not used in previous studies. More often, the Basu's definition (1997) or an adaptation of it has been used. Basu (1997) discusses that unrealized losses are usually identified sooner than unrealized profit. His major finding was that where good and bad news are respectively representing the annual unexpected shares return, the reported profit shows a faster response to bad news rather than good ones.

# **Corporate Government and Profit Management**

Profit management is a form of profit manipulation which can probably decrease the reliability of reported profits. The less reliable the profits are, the less useful information they can offer. On the other hand, since profit management is controlled by monitoring regulatory systems all the time, accounting profits are more reliable and consist of more useful information (Dechou and colleagues, 1996). Corporate government lessens the managers' ability for profit management and has the ability to increase the reliability of accounting profits. As a result, it improves the reliability of information provided by accounting profit (Kiel and Nixon, 2003). The economic corporation & development organization defines the corporate government as follows: "Corporate Government is a system in which companies are directed and controlled. The structure of corporate government defines the

distribution of responsibilities and rights to various sections of a company such as members of board of directors, managers, shareholders and other beneficiaries. It also assigns tasks and decision-making trends of the given company. The results of Gol and Tsui (2001) support the effectiveness of corporate government as a regulatory system.

#### Firm size, earnings management and conservatism

Large firms are politically more sensitive than the small firms. Positive fluctuations in the profits of large corporations may increase doubts about the exclusive benefits. In other words, significant increases in the earnings of the large firms may create this doubt that these companies have used their monopoly power to increase their earnings. On the other hand, negative fluctuations in the earnings of the large firms may cause concerns about the possible bankruptcy and break the company's image in the business environment in which this entity operates (Pourheidari and Aflatouni, 2006).

Firms (companies) have a number of tactics which can be used to reduce costs. To avoid media attentions, mangers of these companies may reduce the amount of net profit in the reports. The logic behind this tactic is clear, because a lot of media interest in the dissemination of information on large firms, such as polluting feature of their products, abnormal increases in earnings, wages and benefits paid to employees and managers and etc. Normally, managers in the large companies select accounting procedures to enable the current reported earnings in future periods to be less than reported earnings.

Zimmerman empirically examined this relationship between the tax rate and the firm size and he found that the large firms have a higher tax rate than small firms and they incur more political costs.

There are two conflicting aspects of the role and effect of the firm size on earnings management. Larger firms with less earnings management are justifiable. First, the size of a firm is related with its internal control system. Compared to the small firms, large companies may have a more complex internal control system and competent internal auditors. An effective internal control system is more reliable for disclosure of financial information released to the public. In addition, corporate governance smoothes out the degree of earnings management and improves the quality of financial reports (Kim et al., 2003; Basel et al., 2000). Thus, larger firms have more passion to design and install complex systems and effective internal controls compared to the small firms and consequently, the likelihood of earnings manipulation is decreased in these firms. Second, large firms are often audited by the qualified auditors, who have more experience in auditing and can help prevent the manipulation of earnings.

Companies audited by the qualified auditors (Big N), are less inclined to report lower levels of voluntary commitments, even if they have high levels of voluntary (optional) commitments. In addition, firms audited by Big N, report lower levels of optional commitments.(Francis et al., 1999). Third, when large firms enter the Earnings Management, they enter the costs of their reputation. These companies have a good market price and market environment. They have better control over their operations and also have a better understanding of their economic activities compared to the small companies. Large companies build their economic credibility on their own social responsibility. This includes financial information, because compared to the small firms; they are better able to make better use of modern information technology in the production of timely and reliable information. Therefore, the cost of entering into the income management is more for large companies than small companies.

Therefore, their reputation and paying attention to it can prevent the big companies from entering into manipulation of earnings. Finally, large firms have less interest in entering into earnings management because they use more financial analysts. In comparison, in a different and contradictory look, it is understood that the big firms are more interested in entering into earnings management than the small firms. First, as Barton and Simko (2002) stated, large firms face more pressure to meet or to break analysts' forecasts. After studying the profit growth during 14 periods, Myers and Skinner, (2000) collected empirical evidences which showed that the large firms do not express the true earnings. Second, large firms have more power in bargaining and contracting with auditors. Large firms have more bargaining power in their negotiations with the auditors.

Nelson et al, (2002) have documented that the auditors ignore the attempts of the large firms to manage earnings in the work of their clients which are the large firms. Third, large firms have more room for maneuver in a larger space of accounting practices. They have more current assets or in other words, are better able to manage the profitability of small failures. Fourth, big firms have more management power and they circumvent the earnings management even with a strong internal control system and management. Finally, large companies perform earnings management to reduce the political costs. In total, motivations and capabilities to manage earnings among the whole companies may be different in terms of their sizes (Kim et al., 2003).

# History of Research

Alfayoumy et al, (2010) studied governance structures and earnings management. They conducted their own research in medicine between the years 2001 and 2005 in the Jordanian firms. Earnings management was measured by concession commitments. Variables of the governance structure include internal, institutional and concentrated ownership. The results showed that the internal ownership has a positive effect on earnings management. They indicated that this case is consistent with the trench hypothesis. The trench hypothesis states that the internal ownership can be inefficient in the internal decision making to maximize shareholder wealth. They also documented the lack of any significant relationship between institutional ownership, property concentration and the earnings management.

Wen Li, (2010) studied smoothing in 83 Japanese companies in the period 2003 to 2008. The results also showed that the smoothing is done by managers using optional tools. In a research entitled "Factors affecting earnings management in the companies listed on the Singapore Stock Exchange", Ashary, (2011) identified factors associated with the earnings management. This study included four hypotheses for the effect of variables such as size, profitability, industry and nationality on earnings management. The results obtained from examining the above four variables showed that smoothing is performed mostly in the firms with low profitability. Industry is effective on smoothing and firms with higher risk (high-risk industries) are more likely to smooth out their earnings. Nationality is effective on the earnings management.

# MATERIALS AND METHODS

# Methodology

Hypotheses

Main hypothesis: firm size is effective on the relationship between conservatism and earnings management.

Model and Variables

Model 1 is used to evaluate research hypotheses:

Model 1

Variables that are used in this model are as follows:

 $\mathsf{EM}_{i,t} = \beta_0 + \beta_1 \operatorname{CON}_{i,t} + \beta_2 \operatorname{RET}_{i,t} + \beta_3 \operatorname{BAD}_{i,t} + \beta_4 \operatorname{BTM}_{i,t} + \beta_5 \operatorname{MV}_{i,t} + \beta_6 \operatorname{ISS}_{i,t} + \beta_7 \operatorname{COI}_{i,t} + \beta_8 \operatorname{BETA}_{i,t} + \beta_9 \operatorname{OutDir}_{i,t} + \beta_{10} \operatorname{INST}_{i,t} + \epsilon_{it}$ 

Where:

EM: profit management

CON: level of conservatism in current year

RET: annual shares return

MV: Market value

BTM: Coefficient of book value to market

COI: Coefficient of operational profit to total assets

BETA: Shares' Beta index during the study

BAD: Years in which shares had negative return

ISS: No. of shares that company issues per year

INST: average institutional ownership of a regular share

OUT DIR: percentage of not-required members of board of directors to total number of members

Size: Company size which is measured using the asset value logarithm

εit: remaining error

*Profit management:* in current study, the profit management is the dependent variable. We use the adjusted Jones' model to measure this variable. It is measured as follows:

In order to measure discretionary accruals (the measuring standard for profit management), the total and nondiscretionary accruals should be measured using the below formula in the first place: The method:

In the so-called model, initially, the relationship between total accruals in a specific period of time known as event period with variables sales, properties, machineries and equipment is measured using below model:

TAi,t/Ai,t-1=□1(1/Ai,t-1)+□2(□ŘEVi,t/Ai,t-1)+□3(PPEi,t/Ai,t-1)+ε

In this relationship, TA stands for total accruals, A for total assets, REV for total revenue (sales) and PPE for properties, machineries and equipment. After estimating the parameters of the above model, non-discretionary accruals (NDA) are measured for the assessment period based on the below model:

NDAi,t= 1(1/Ai,t-1)+ 2( REVi,t/Ai,t-1)+ 3(PPEi,t/Ai,t-1)+ε

In final stage, the discretionary accruals (DA) are measured using this model:

DA=(TAi,t/Ai,t-1)-NDAi,t

Total accruals are obtained using this model:

TAi,t=Ei,t-OCFi,t

 $TAi,t=(\Box CAi,t-\Box Cashi,t)-(\Box CLi,t-\Box STDi,t)-DEPi,t$ 

CA stands for current asset, Cash for cash, CL for current debt, STD for current share of long term debt and DEP stands for company's depreciation. Also, E is the net profit before unexpected items.

In this study, a second criterion is used to measure the accruals. The current share of long term debt is out listed from the financial invoices of companies.

Independent Variable

Conservatism: in current study, a definition of conservatism measured by Giuli and Hin (2000) is used as the independent variable and as the influential factor over profit management in companies.

Sum of assets in the beginning of period/ operational cash trend- depreciation cost + operational profit = conservatism index

Statistical Population and Sample

In the current study, the registered companies in Tehran stock market were chosen as the statistical population.

The statistical sample was selected from registered companies in Tehran stock market. The sampling process is carried out based on systematic elimination, so that, amongst all registered companies in Tehran stock market only those with below specifications were chosen:

The selected company should have been registered in the market before 2006;

The selected company should have put the end of its fiscal year in Esfand month-solar calendar;

The selected company should not have any change in its fiscal year during the course of study;

The required data regarding the selected company should be available during the course of study;

Investor companies, banks and insurance companies were eliminated.

72 companies were selected in the end of sampling.

Data Gathering Methodology

The required data for this study was gathered from companies' financial invoices that were presented to the stock market organization and also available information regarding companies in the stock market data base. Desk research methodology was used in order to develop the research literature and background. Rah Avard and stock market organization softwares were used to analyze the provided information of financial invoices in order to examine the research hypothesis.

# The Statistical Analysis

Table 1. The descriptive statistics of research variables are presented
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	Ν	Min	Max	Average	Standard Deviance
con	432	-0.8417	0.6669	-0.0607	0.1466
RET	432	-0.6328	4.52	0.2069	0.5295
MV	432	4.125	7.409	5.57	0.6207
BTM	432	-0.6673	2.609	0.7252	0.4957
BAD	432	0	5	2.25	1.2
COL	432	-0.6669	0.8417	0.0604	0.1473
ISS	432	0	2654000000	44884154.06	2.101 <i>E</i> 8
Inst	432	0	0.98	0.3936	0.3298
Outdir	432	0	1	0.556	0.2486
Size	432	4.662	7.724	5.813	0.5843
EM	432	-0.89	0.83	0.0035	0.1831
Beta	432	-3.90	4.8285	0.5727	1.5881

#### Hypothesis Testing

In the research hypothesis, the effect of the firm size on the relationship between conservatism and earnings management is discussed. Model 1 was used for this case using following procedure:

Firms were first divided into large, medium and small groups in terms of their sizes in each year. Then the Model 1 was conducted on each of the subgroups. The relevant results are shown in Table 2. Then the coefficient of determination of 3 models was compared as a criterion and subsequently significance test of differences between correlation coefficients was evaluated.

The null hypothesis and its reciprocating hypothesis are as follows:

H0: Firm size does not affect the relationship between conservatism and earnings management.

H1: Firm size has an effect on the relationship between conservatism and earnings management

	Classes	Coefficient	Error	t Statistics	Prob	H <sub>o</sub>
Fixed coefficient	Size	-0.059	0.049	-1.799	0.0741	Accepted
						(Confirmed)
	Size	-0.139	0.04907	-2.833	0.0053	Rejected
	Size	-0.048	0.0469	-1.039	0.3004	Accepted
						(Confirmed)
Con	Size	-0.149	0.1146	-3.306	0.000	Rejected
	Size	-0.248	0.095	-2.590	0.0106	Rejected
	Size	-0.117	0.0835	-4.4	0.0036	Rejected
RET	Size	0.043	0.021	2.003	0.0472	Rejected
	Size	0.0907	0.024	3.667	0.0004	Rejected
	Size	0.0295	0.022	1.342	0.1817	Accepted (confirmed)
٨V	Size	-0.523	5.32E-9	-2.986	0.0001	Rejected
	Size	1.64E-8	4.61E-9	-2.299	0.0230	Rejected
	Size	-4.34E-8	8.53E-8	-0.508	0.6117	Accepted (confirmed)
3TM	Size	0.0575	0.0218	2.635	0.0094	Rejected
	Size	0.09	0.0245	3.667	0.0004	Rejected
	Size	0.0133	0.0245	0.6165	0.0004	Accepted (confirmed)
BAD	Size	0.0045	0.012	0.3817	0.7033	Accepted (confirmed)
	Size	0.0004	0.01	0.046	0.9627	Accepted (confirmed)
	Size	-0.011	0.0077	-1.419	0.158	Accepted (confirmed)
COL	Size	0.2174	0.0952	2.281	0.0241	Rejected
	Size	0.3572	0.043	8.155	0.000	Rejected
	Size	0.4025	0.0767	5.243	0.000	Rejected
SS	Size	4.88E-11	4.35E-11	1.121	0.264	Accepted (confirmed)
	Size	9.85E-11	9.56E-11	1.302	0.1949	Accepted (confirmed)
	Size	9.79E-10	3.57E-10	2.79	0.0060	Rejected
nst	Size	0.432	0.040	3.064	0.0001	Rejected
	Size	0.3747	0.0395	3.947	0.0051	Rejected
	Size	0.0728	0.0267	2.719	0.0074	Rejected
Dutdir	Size	0.022	0.0469	0.48	0.631	Accepted (confirmed)
	Size	0.015	0.047	0.3244	0.7461	Accepted (confirmed)
	Size	0.0728	0.0267	2.719	0.0074	Rejected
Beta	Size	0.0184	0.007	2.6	0.0104	Rejected
	Size	0.0052	0.008	0.6418	0.5221	Accepted (confirmed)
	Size	-0.0019	0.0094	0.2064	0.8368	Accepted (confirmed)
- statistics	Size	17.826	0.0001	0.2001	0.000	Rejected
	Size	16.197			0.000	Rejected
	Size	7.059			0.000	Rejected
Vatson Camera	Size	1.896			0.000	Rejected
Valson Camera	Size	1.898				Rejected
	Size	1.902				Rejected
Antermination apofficient						Rejected
Determination coefficient	Size	0.6127				
	Size	0.5491				
	Size	0.3467				
Adjusted determination	Size	0.60				
coefficient	Size	0.5152				
	Small Size	0.2976				
Nodel		· · ·	+ $\beta_3$ BAD <sub>i,t</sub> + $\beta_4$ l	3TM <sub>i,t</sub> + β <sub>5</sub> MV <sub>i,t</sub> +	+ β <sub>6</sub> ISS <sub>i,t</sub> + β <sub>7</sub>	$COI_{i,t} + \beta_8 BETA_{i,t} + \beta_9Out$
	i,t + β10 INST i,t	+ ε <sub>it</sub>				

Table 2. The results analysis of the Model 1 in three classes of the firm size

These statistics in all three classes of large, medium and small firms has a significance level of less than 0.05. Therefore, the null hypothesis is rejected and it is concluded that the regression model is significant. Watson Camera statistics indicate that the model errors are not correlated and also showed the results of independence of errors in each of the classes. Adjusted coefficients of determination in the large, small and medium firms were 0.6127, 0.5491 and 0.3467 respectively. As can be seen, these coefficients which are in the order of small to large firms are objectively different from each other. Therefore it should be studied that whether this difference is significant or not and for this aim, the Wald test is used.

This test will be reviewed at the rest of this paper. The results of the Wald test are shown in Table 3.

Significance level
0.000109
0.0000956
0.001821

Table 2. The regults of Wold test

It can be seen in the table that the significance level of any of the subgroups is less than 0.05. Therefore, the null hypothesis is rejected and it is concluded that there are significant differences between the subgroups. Thus, the null hypothesis of this research is rejected and it is concluded that the size of firms has an effect on the relationship between conservatism and earnings management.

# Discussion and Conclusion

The effect of firm size on the relationship between conservatism and earnings management is measured in this study. At first, all the firms were divided into high, medium and small size groups. Then, the regression model No. 1 was performed in each of the subgroups and correlation coefficients were used to compare groups,

This comparison test was performed using Wong test in a manner that the significance of difference between the groups was evaluated 2 by 2. Test results showed that the firm size has a positive effect on the relationship between conservatism and earnings management. In other words, the larger the earnings of a firm, the more interest in earnings management would be in that firm. Wald test for determination of the significant differences between the three classes of firms with different sizes were performed and the obtained results confirmed the significance of the difference.

Wen Li (2010) showed that the large firms have more interests in managing their earnings. Kim and colleagues (2003) indicated that the size of a firm may have two different effects on earnings management. One of them is negative effect which is resulted from following reasons:

A) The existence of a strong internal control system in the large firms to prevent earnings management,

B) Large firms are audited by gualified auditors,

C) To avoid reducing the company's reputation and increasing its credibility

The second aspect is the positive effect which is resulted from following reasons:

A) More pressure on large companies to break or to meet analysts' forecasts

B) More power in bargaining with the auditors,

C) More space to maneuver in the accounting practices in the large firms, and

D) The higher management to circumvent internal control systems

Based on correlation matrix tables, we can say that there have seen a negative correlation between conservatism and the firm size in this study. Based on the conducted test, the explanatory power of the model is higher in the group of large firms. Therefore, we can say that the conservatism in the group of large firms is better able to explain the earnings management. Consequently, the firm size has an effect on the relationship between conservatism and earnings management. This effect is of positive type, because with the increase in the size of the firm, the explanatory power of the model to explain the earnings management is increased.

Recommendations based on the Study

In big companies, stronger regulatory systems must be installed and run. They are needed to prevent the management from practicing profit management;

Number of not-required managers does not have any influence on profit management. Therefore, it is recommended to use managers who can have more control over management;

According to the positive relationship between the percentage of institutional shareholders and profit management, legislators should force the companies to reduce the number of their institutional ownership and increase the number of minority shareholders by considering the ongoing situation so that there will be more supervision over management.

Since the percentage of not-required members of board of directors hold no influence over profit management, it is recommended that members of board of directors become more acquainted with their responsibilities among which supervision and monitoring are the most important ones.

According to the negative relationship between conservatism and profit management, it is proven that conservatism can decrease the occurrence of opportunistic actions on behalf of management. Therefore, it is possible to make managers adopt more conservative methods in accounting actions so that profit management will be decreased.

**Recommendation for Future Studies** 

The same study can be conducted in various industries;

Since auditing quality was considered as an influential factor over management in the research literature, it is recommended to add auditing quality and auditor's specialty variables to the list of influential variables.

Since variables such as Beta and Book value to market have a meaningful relationship with profit management, it is recommended that the influence of these variables be examined in a research on the relationship of conservatism and profit management;

Others may like to include the effects of other variables such as corporate ownership, ownership concentration, level of domestic ownership and ownership of not-required mangers in the model; this may result in more explanatory strength of the model.

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