Original Article

The Level of Conservatism and its Effect on Earnings Management of Listed Companies in Tehran Stock Exchange

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ABSTRACT

The main objective of this research is the level of conservatism and its effect on earnings management of listed companies in Tehran Stock Exchange. The research methodology is a descriptive research from methodology point of view and is an analytical research. Therefore for data collection the scientific websites, journals and books related to the topic of the study will be used. The research result showed that taking note of the statistical tests for the main hypothesis we can see that there is a significant relationship between the level of conservatism and earnings management. Considering the results of the statistical test of the secondary hypothesis we can see that there is a significant relationship between the level of conservatism and discretionary accruals.

Keywords: Level Of Conservatism, Effect Of Earnings Management, Tehran Stock Exchange, Finance.

Introduction

The Financial statements are from the main part of the financial reporting process. The aim of which is to provided grouped data about the financial status, financial performance and financial flexibility of the commercial unit which is in turn useful for an extensive spectrum of users in economic decisions. The aims of financial reporting and accounting basics require the data provided by the financial reporting to have specific characteristics. These information has a fundamental role in the performance of the market, because most of the decisions including investments decisions in the capital market, decisions regarding the entrance and exit of the competitors to the industries, the financial funding (*via* debt or equity) or decisions regarding the disclosure of flexible information are performed in uncertain situation. The aim of financial reporting is to provide useful information to users. Useful information is that information which has qualitative characteristics such as reliability and relevance. One of the dimensions of reliability is to follow the principle of confidentiality which is referred to as precautionary principle by the Iranian accounting standards committee. Basu (1997), states that conservatism is a different verifiability for identification of incomes and

costs which leads to underestimation of profit and assets. Therefore, taking conservative policies with provision of an improper image from the financial statues and the low profitability of the commercial unit, on one hand reduces the pressures and threats resulting from competition and on the other hand reduces the expectations of the investors and shareholders from the future performance of the business unit. The management with evaluation of the profits and costs, taking conservative or bold approach seek to maximize the wealth of their beneficiaries. It seems that when the increase of competitive pressures the level of conservatism increases as well. However, at the time of need to financial resources the conservatism level decreases. One of the main aims of financial reporting is to provide the economic impacts of the events and financial operations on the status and performance of the business unit for helping the actual and potential users for making financial decisions regarding the business unit. The necessary condition for obtaining this aim is the measurement and provision of information to users in the form of basic financial statements including balance sheets, profit and loss statement and cash flow statement. Preparation of the mentioned financial statements in accounting is performed based on the liability assumption. The Financial Accounting Standards Board expresses the nature and reason of using accrual accounting in this manner: accrual accounting uses accruals, transfers and allocation procedures and with the help of reporting a series of cash received and paid seeks to related the incomes, costs, profit and loss to a specific period, so that can have a correct reflection of the institution's performance in that specific period (The Financial Accounting Standards Board, 1985: 145).

Problem Statement

Considering the fact that profit is one of the most important effective factors on economic decisions, the awareness of the users from the profit reliability can help them in making better decisions regarding profitability and analysis of the financial statements.

One of the fundamental aims of accounting standards establishment is that the users can make correct and relatively relevant decisions with reliance on financial statements. Therefore; the need to accounting professions is to that manner of reporting in which the interest of all the users has been included properly. On the other hand, managers for obtaining certain aims which clearly secures the interests of a certain group of people may report the profit in such a way which will be in conflict with the general interests of the users. The accountants are obliged to confirm the appropriateness of financial statements through evaluating their consistency with the specified framework in the accounting standards. While, the existing flexibility in the accounting standards also in some cases have emphasized on professional judgment of the accountants for the selection of the accounting method. In fact, the problem is rooted in the fact that profit management sometimes causes the financial statements to be misleading; while the financial statements doesn't have any problem in terms of the accounting standards framework and the accountants cannot make any fault with them.

Each business unit contracts with different entities and is related to them. What is common in all these contracts for all the individuals is that each individual have an obligation toward the business unit for resource provision and hence will have right from the created interests / profits. Therefore; the business unit can be assumed to be a set contracts among shareholders, managers, employees, salespersons, customers, creditors, state (government) and

.... In this contract model it is assumed that the parties involved in the contract are all after their own personal profit and interest. As per the agency theory, the owners of the business units will assign a person or a group of persons as their representative and will delegate the decision-making authority to that person/group of persons. In such contracts, the parties, i.e., the representative (manager) and the owner both know that they are acting in line with their own personal interest.

Therefore, it is predicted that the manager with performing opportunistic behaviors causes the reduction of the firm value and therefore, will cause the owner to bear loss. Various incentives have been mentioned for these types of manager's behaviors, one of which is "earnings management" (Mehrani, 2009).

Conservatism which is one of the clear characteristics of financial reporting and in Wattz view and at least from the beginning of the 20th century up to today, it is considered to be a considerable and dominant quality in the field of accounting and financial reporting and the continuous attention to this concept and giving importance to it in establishment of the accounting standards can indicate to the fact that the use of conservative procedures has the feature of interest increase comparing to costs (Mehrani and Mohammadabadi, 2009).

Managers and owners naturally are inclined to be over optimistic of the commercial unit. This over optimism causes the over-statement of the assets and earnings. Conservatism is the necessary cure for this over-optimism. Carl Devine (2006), argues that quelling optimism and inducing pessimism is difficult. The optimism which makes one Rial is more that the pessimism caused by the loss of one Rial. The outcomes of over-optimism are worse than the outcomes of over-pessimism. To bear an actual loss at the result of an over-optimistic

estimation is more serious than losing an opportunity of obtaining profit resulting from an over-pessimistic evaluation; because most probably the investors will prosecute the auditor for the loss of the overstated assets net value and not for the understated assets net value.

Due to the inequality of the outcomes of over-optimism comparing to over-pessimism, the accounting rules for valuating and registering the debts and operational and non-operational costs should not be equal with the accounting rules for valuating and registering the assets and operational and non-operational earnings. The non-operational costs can be estimated, but the non-operational earnings cannot be estimated. If the market values will be less than the final price, it can be identified; however, if it will be more than the final price it cannot be identified. In the information reporting, the accountant may make one of these two mistakes: first, rejecting the information that later on found to be correct and second, accepting the information that later on found to be incorrect.

With recognizing the existence of these two types of risk, it can be said that conservatism is consistent with statistical probability analysis and therefore, it is the way we should deal with ambiguity. The users, especially the creditors, need to know that the financial status of the business unit at least is what it has been stated in the financial statements. They need a safety margin to protect themselves from the negative outcomes. In spite of the criticisms, the advocates of this believe that still in practice conservatism is being followed. It is because years of experience have shown the accountants that conservatism is a useful covenant in an environment full of uncertainty.

The aim of this research is to study whether there is a relationship between the

level of conservatism and earnings management?

The research importance: the income soothing phenomenon is a common topic in the frontiers of accounting knowledge and financial affairs. The fact that this phenomenon has a long background of studies indicates to its importance and the amount of attention it has received from professional and academic circulations. It appears that the importance of this topic is rooted in the special position and rather unique of the topic of earnings in the field of accounting and financial affairs as well as among the users of financial statements, which is considered to be a measure for evaluation of the past performance of the business unit for prediction of the future cash flow of the business unit, which has always been considered as one of the most controversial accounting topics in the professional circulations. In addition, in practice also the accountants, auditors and financial analysts in the process of financial reporting in a way are facing this phenomenon and its outcomes. Therefore, income smoothing is considered as a tool that impacts the decision-making of the users of financial reports and potentially can affect the behavior of the users and cause some outcomes, especially in the inefficient capital markets. Therefore; maybe we can contribute to improving the reporting quality of profit with identification of the different dimensions of income smoothing and providing a theoretical framework for this phenomenon (Badri, 1999).

One of the primary aims of earnings management is to maintain the firm's credit, because it makes the company appear as an efficient and dynamic company. Achieving a proper position among the competitors and the capital market causes the investors and creditors to have a more favorable view of the company which in turn causes the company to become free of making higher expenses for competing with the other similar companies and to receive credit and loan at a lower expense.

The most important incentive of income smoothing is the belief that those companies which are having a good trend of profit and their profit don't undergo significant changes have higher value comparing to the similar companies. Smoothing will increase the stock value of the company in stock market and will attract potential investors for them. The findings of a study conducted on 358 companies listed on United States stock market indicate that companies that their profit hasn't gone under big changes during the previous years have higher value of stock and have lower debt comparing to similar companies. Other incentives which make the managers seek income smoothing are as per the following:

Receiving More Managerial Bonuses Due to the High Value of Stock

When the stock of the company has a higher value comparing to the stock of other similar companies, the managers expect to receive a higher bonus.

Paying Less Interest when Borrowing from Credit Institutions and Banks

Income smoothing show a company at the time of growth and this in turn indicate to the lower risk of that company and allows that company to get loan from credit institutions and banks with a lower interest rate and the liquidity which results from a lower interest can be a financial resource of the company for its development.

Capital Attraction

The development and growth trend of the company is effective in the decision-making of the investors and creditors, because they believe that these companies has lower risk and hence are better for investment.

Various incentives for performing income management:

There are various incentives for income management, with the main ones including:

Bonus incentive: in which the manager manages the income for receiving more bonus.

Loan incentive: in which the manager manages the income for receiving loan from the creditor.

Political incentive: in which the manager for reducing the political attention of different groups manages the earning.

Tax incentive: in which the manager performs earnings management for reducing the tax payments.

It is necessary to note that in some cases it is possible that there will be some discrepancy between various incentives of earning management which is inevitable. For example, discrepancy in the bonus incentive in which the manager seeks to increase the reported earnings of the company and tax incentive in which the manager seeks to reduce the reported earnings of the company (Ahmad Yaghoob Nejad *et al.,* 2012).

The Role of Accrual Items in Earnings Management:

Accrual accounting gives a considerable choice of selection to managers in determining the earnings in different time intervals. In fact, under this type of accounting system, the mangers will have a considerable control on the time of identification of some of the cost items including advertisement expenses as well as research and development.

Of course it should be noted that this difference is due to the application of accounting principles on the time and the way of identification of earnings and expenses (the principle of identification of revenue and the matching principle). The accepted accounting principles at the time of identification and the amount of the revenue

and expenses have given a relative freedom of action to managers of the firms and when the managers identify the accounting earnings to the amount more than the cash flows, the accrual items are created.

A fundamental factor in testing the earnings management in companies is to estimate the factor of authority and using the opinions of the managers in determining the earnings (Ahmad Yaghoobnejad *et al.,* 2012).

Considering the importance of earnings management and conservatism, in this paper the author seeks to study the conservatism and earnings management, with taking note of the following conditions, which distinguishes this study from the previous studies:

In a more recent interval; 2- the current economic situation; 3- development and growth of stock market; 4- comparison of the results of this study with the previous studies.

Research Aims

The main aim of this study is:

- To study the relationship between the level of conservatism and earnings management

The secondary aim of this study is:

- To study the relationship between discretionary accruals and earnings management

The applied aims of this research can be used as a field study as well as in the firmed listed in stock market, in other words, considering the fact that this research is an actual Ex post facto research and has been conducted with the use of real data of the firms listed in stock market, therefore, it can be used as an applied research.

Accounting conservatism can be studies based on four interpretations of contract, tax, political expenses and lawsuits. The contract interpretation states that it the contracts of the firm have been made with various groups such as investors and creditors bases on

accounting figure, then due to the existing conflict between the managers and those groups and the managers will try to manipulate these figures in their own favor with performing biased behaviors; For example to increase the earnings or assets and decrease the debts. Here, conservatism will neutralize the biased behaviors of the managers through delaying the identification of earnings and overstatement of the net assets. Tax as well can be the origin of conservatism. In this view, conservatism by delaying the identification of revenues and expediting the identification of expenses, postpones the tax payments. Therefore, there is a close relationship between conservatism of the accountant and tax (Wattz, 2003).

The earnings management philosophy is using the flexibility of the standard methods of the principles accepted in accounting.

The accruals indicate to the different between accounting earnings and its cash component, which includes changes in inventories, receivables and payables. In case the positive accruals will be big, it indicates the fact that the accounting earnings is larger than the cash flows resulting from the business unit operation. Studying the texts regarding the earnings management, indicate to the existence of different approaches with a different identification in estimation and measurement of the authority of the management in earnings determination has been reported. One of the main of these approaches is the approach which is based on the application of discretionary accruals as an indicator for determining and discovering the earnings management in business units. For discovering earnings management through accruals some models have been proposed, the most important of which are: Hilley model (1985), DeAngelo (1986), industry model (1991), Jones model (1991), adjusted model of Jones (1995), Kaznik model (1999), Dechow and Dichaw model (2002), Kutar et al. model (2005), adjusted

model of Dechow and Dichaw (2006) and Stoben model (2010). In most of the studies which have been conducted in Iran about earnings management, the adjusted model of Jones and Dechow and Dichaw have been used. However, these models have been studied separately in each industry in terms of significance level and prediction ability and the Kaznik model has been selected as the optimized model.

In view of Skerratt & Gregoriou (2007) application of accrual accounting provides the required condition for applying conservatism. For example, the application of conservatism requires identifying the savings, loss and reduction in value for the inventories or investments. Although the identification of these types of loss and savings causes the reduction in accounting earnings, however doesn't have any effect on cash flows. Then, naturally the items and cash flows should not get influence from the exerting conservatism.

The model of Hayn and Givoly (2000) with relying on a certain definition, has applied non-operational accruals for measuring conservatism. As per this definition, conservatism is applied in identification and reporting the financial events when, first of all, the management is facing with ambiguity and lack of confidence and inevitably needs to select from two or more options, and second, when the management wants to select and implement a method which results in the lowest possible retained earnings. Hayn and Givoly, for this reason have used discretionary accruals (non-operational) because on one hand, accrual accounting is a proxy for exerting conservatism and on the other hand, exerting authority from the managers in the condition of lack of confidence will created the condition for exerting conservatism.

Hilley & Wallen (1999) have presented the following definition for earnings management: "earnings management occurs

when the manager uses his personal judgment for financial reporting and this is performed with the aim of misleading some of the shareholders regarding the actual economic performance or for affecting the results of the contracts which are dependent on the reported accounting figures".

In Scott's (2000) view, the earnings management is the authority of the company in selecting the accounting methods and procedures for obtaining the certain aims of the manager. It seems that the earnings management usually results from the managers taking advantage of the information asymmetry of the shareholders. This is the focal point of the definition presented by Scott as well. On the other hand, it seems that a reasonable relationship can be found between the theoretical framework related to earnings management and the literature related to positive accounting theories. The positive accounting theory has been introduced by Wattz and Ziemmerman. The term, positive is useful for distinguishing the accounting studies conducted for explaining the phenomenon from the studies conducted for making and issuing orders. In Wattz and Zeimmerman view, positive accounting theory describes the accounting practices. This theory is used for explaining and predicting the behavior of those companies who wants to make use of a specific practice and also those companies who doesn't want to use a specific practice. This theory doesn't explain anything about the fact that companies should use which of the existing practices. The positive theory attends to the relationships between various individuals who provides the resources of the business unit and explains the contribution of accounting in doing so. Some instances of these relationships are: the relationship between owners (capital providers) and managers (management providers) or the relationship between creditors and firm's managers. These relationships required

decision-making authority delegation from one party (client) to the other party (attorney or representative), which is referred to as the agency relationship. Positive accounting theory is based on the economical assumption that the actions of individuals are performed for their personal interests and that they perform these actions for increasing their wealth in an opportunistic manner (Parsaeean Ali, 2006).

Management Bonus Hypothesis

This hypothesis predicts that if based on one of the measures of performance, such as accounting earnings the manager will receive bonus, then he will try to made use of those accounting methods which increases the earnings and hence his bonus. If the amount paid to the manager is calculated in a direct way based on figures such as profit, sales and assets, any changes in accounting methods that the company is using may be influential on the amounts paid to the manager as bonus. This change might occur due to the release of new standards. Therefore, the managers will try to make use of those accounting practices which increase their bonus. (Ahmad Yaghoobnejad *et al.,* 2012).

Debt Hypothesis

This hypothesis predicts that the high ratio of debt to capital of the firms most likely will result in managers to make use of certain accounting for increasing earnings. The high ratio of debt to capital causes the company to face with requirements and conditions from the creditors in its debt contracts. These requirements increase the probability of occurrence of breach of contract and related costs of default. Managers due to the selection of accounting practices which increase the earnings try to decreases the requirements of debt contracts and related costs of default. (Ahmad Yaghoobnejad *et al.,* 2012).

Political Expenses Hypothesis

This hypothesis predicts that large companies comparing to small companies are more likely to use those accounting practices which understate the earnings. The size and largeness of the company is an indicator of the attention it receives. Therefore, it is assumed that if the entities who are in contract with the company know that the accounting earnings shows the exclusive ownership of the owner to the earnings, then this awareness might become costly for companies. Hence, if managers feel that they have been placed at the focal point of the political attention, they will have the incentive to adopt those accounting practices which understate the earnings. With this behavior they try to reduce the changes of political actions against the company and therefore, reduce the predicted political expenses. (Ahmad Yaghoobnejad *et al.,* 2012).

Research Questions

1.   Is there a significant relationship between conservatism and accruals?
2.   Is there a significant relationship between conservatism and operational accruals?
3.   Is there a significant relationship between conservatism and operating non-accrual items?

Research Hypotheses

Main hypothesis:
1- There is a relationship between conservatism level and earnings management.
Secondary hypothesis:
2- There is a relationship between discretionary accruals and earnings management.

Research Methodology

The present research is a descriptive research from methodology point of view and is an analytical research. Therefore for data collection the scientific websites, journals and books related to the topic of the study will be used.

The required data of the study has been collected from the data banks including Tadbir Pardaz software and www.rdis.com website which belongs to The Research and Islamic Studies Center of Securities and Exchange and data analysis and testing research hypotheses have been performed with the use of Excel and spss software.

Due to limited access to the required information related to the dependent and independent variables , a 5 year time interval from 2006 – 2010 has been considered for the present research.

The location area of the present research includes all the companies listed in Tehran stock market during the time interval under study. The field method of study has been used and the financial data in Iran's stock market has been used. The type of the present research is analytical research, and hence for data collection the scientific websites, journals and books related to the topic of study has been used.

Research Sample

The research sample has been selected with the use of systematic elimination method and based on the following criterion:
1)   The company should have been present in the stock market from 2006 to 2010.
2)   The end of their fiscal year should be at the end of the month of Esfand (the last month of solar year).
3)   The fiscal year of the companies shouldn't have been changes during 2006-2010.
4)   The company shouldn't have operational halt during 2006-2010.

5)   The financial intermediary companies will be eliminated due to the special nature of their activities.

Taking note of the above stated, 131 companies listed on stock market have been selected as the research sample and have been studied.

Data Analysis Method

Since the conduct method of the present research is field method and we deal with actual data from companies, for collecting the data of the companies listed in Tehran Stock Market that considering the research variables the data will be about the financial statements of these companies and hence various sources including CDs of Tehran Stock Market Organization, Tadbir Pardaz software and Rah Avin Novin software and stock market website have been used.

Research Background

1.   Mahmoudabadi & Mehtari (2012) have conducted a research with the topic of "the relationship between conservatism and investment efficiency of the listed companies in Tehran stock market". The aim of this research is to study the relationship between accounting conservatism and investment efficiency, for informing the managers, investors and professional institutions, toward accounting conservatism desirability as one of the qualitative characteristics of accounting information. The sample of this research includes 96 companies in the time interval of 1999 to 2008. The results of this study indicate that there is significant relationship between accounting conservatism and future investment at the level of companies and at the level of 7 groups of industries. Also there is a significant and negative relationship between the company size and future investment at the general level of the companies and in chemical, food and medicine industries and on the other hand there is a significant and positive relationship between market value to book value and future investment at the general level of companies and in wood and textile, chemical, metal, tile and ceramic industries and there is a significant negative relationship between financial leverage and future investment at the general level of companies and in food and medicine industries.

2.   Mojtahezadeh and Farshi (2012) have conducted a research with the title of "to study the relationship between accounting conservatism and investment decisions of managers in companies listed on Tehran stock market". The aim of this research is to study the relationship between accounting conservatism and the managers' investment decisions. For measuring the conservatism, a measure of time asymmetry and another measure based on market value have been used in identification of good news against bad news. Since the investment decisions cannot be observed directly, two measures of profit margin (PM) and adjusted operating cash flow (CFO) have been used for studying the conservatism benefits in reducing the agency problems related to managers' investment decisions. The required information have been extracted from the audited financial statements of 99 companies (297 year-firm) during time interval of 2008-2010. The results indicate that there is a negative relationship between asymmetry in identification and measurement of conservatism and future profitability; this relationship is significant. Also, the measure of the ratio of market value to book value of stock for measurement of conservatism has a positive relationship with profitability; and this relationship is statistically significant.

3.   Khaleghi Moghaddam and Ahmad Khan Beigi (1390), have conducted a study with the title of "the relationship of conservatism with the size of the company and the size of the auditing company at the time of having net profit". In this research the

trend of the changes at the time of having net profit and conservatism as two characteristics of net profit and the impact of two factors of company size and the size of the auditing firm have been studied on these two characteristics. The sample of this research includes 90 companies listed on Tehran stock market during the time interval of 2007 to 2008. The results of this study indicate that while the net profit of companies is generally conservative; however, with the passage of time it hasn't become more conservative. Two factors of company size and the size of the auditing company also have an impact on the two characteristics of net profit under study in this research; in such a way that the net profit of the large companies is not more timely and conservative comparing to that of smaller companies and similarly the net profit of the companies audited by the auditing organization is not again more timely and conservative comparing to the companies audited by the auditing institutions certified by Tehran stock market.

4. The studies of Hayn and Givoly (2000) and Klyne and Marco Art (2006) in the united states as well as Bal Krishna et al., (2007) in Australia with regards to the loss of companies indicate to an increase as well as continuity of their loss during the recent years in these countries. The findings of these studies indicate to the existence of a direct relationship between accounting loss and accounting conservatism and in Iran also, the Admission Board evaluated the companies present in the 4th panel in 2008 and eliminated more than 30 companies from it. These companies have been eliminated from the list of the accepted companies in Tehran Stock Exchange due to disqualification regarding the conditions of the panels and markets.

5. In confirmation of their views (the above mentioned view) Ahmad et al. (2002) have shown that large companies more than other companies make use of conservative accounting practices. Their findings have also shown that if there is any conflict between the creditors and shareholders in dividends, in this case, the managers of the borrower companies are more likely to use conservative accounting practices.

6. Ahmad and Delman (2008) in another study conclude that, conservative accounting prevent the managers from making investment in projects with negative returns. They have also found that there is a direct relationship between the stock percentage that belongs to the members of the board of directors and conservatism.

7. The results of the study conducted by Ghoang (2007) indicate that conditional and unconditional conservatism has different roles in each of the interpretations of conservatism. The contractual interpretation leads to conditional conservatism and lawsuits interpretation lead to both forms of conditional and unconditional conservatism. Other interpretations also lead to unconditional conservatism. He has also found that with the increase of unconditional conservatism, conditional conservatism decreases. Therefore, it is necessary to create some kind of balance between them.

8. Ross and Son (2008) have conducted a study with the title of "a comprehensive study regarding earnings management in Australia". As their sample they have used 4844 companies in 9 different industries in the time interval of 2000-2006. Their findings indicate that earnings management in Australia is performed in multiple industries basically. Also, this study shows that small companies who have less profitability, i.e., have less assets return, are more likely to perform earnings management. In this study, the economy of Australia has been divided into core and periphery sections and they have found that peripheral companies comparing to core companies are more likely to get engaged in

earnings management. In this study, the variables of company size and assets return have been considered as the most important determining factors on earnings management.

Statistical Method

For data analysis the statistic methods have been used.
Statistic methods are in two types: 1- descriptive and 2- inferential

1. Research Model

The topic domain of the present research is the relationship between conservatism and earnings management of all the companies listed in Iran Stock Exchange. For conservatism measurement the following model can be used:

This is the model of Bal and Shivakumar (2005). They have used the simple model of accruals and cash flows of Dechow, Kuttari and Wattz (1998) for highlighting the role of accruals in timely identification of loss. In case of net profit being conservative, it is expected the negative cash flows to accompany by a reduction in accruals.

$$ACC_{it} = \alpha_0 + \alpha_1 DCFO_{it} + \alpha_2 CFO_{it} + \alpha_3 DCFO_{it} * CFO_{it} + \varepsilon_{it}$$

ACC_{it} : The accruals of company i in year t
$DCFO_{it}$= it will take the value of 1 if the operational cash flows of the company i in year t is negative and otherwise will be equal to zero.
CFO_{it} = operational cash flows of i company in year t
e = regression error

All the variables in the above model, with the exception of the virtual variable, have been divided to the sum of the assets of I company at the end of year t-1 and in this way have been de-scaled.

In case of being conservative the net profit coefficient α_3 is positive and the cash flows have a significant relationship with accruals.

The size of this coefficient indicates to the level of conservatism.

In the present research, the Hayn and Givoly model has been used. This model (2000) with relying on a certain definition has used the non-operational accruals (discretionary) for the measurement of conservatism. As per the mentioned definition, conservatism is used in identification and reporting the financial events when first, the management is facing with ambiguity and uncertainty and inevitably should choose between two or more options and second, when the management wants to select and implement a method which results in the least possible retained earnings. Hayn and Givoly, due to this reason have used accruals and non-operational (discretionary). On one hand, accrual accounting is a channel for exerting conservatism and on the other hand, exerting authority by managers in the situations with uncertainty the required condition for conservatism is provided. The sum of accruals and discretionary (non-operational) accruals will be calculated in the following way:

$$ACC_{it} = (NI_{it} + DEP_{it}) - CFO_{it} \tag{1}$$
$$OACC_{it} = \Delta(AR_{it} + I_{it} + P_{it}) - \Delta(AP_{it} + TP_{it}) \tag{2}$$
$$NOACC_{it} = ACC_{it} - OACC_{it} \tag{3}$$
$$NOACC_{it} / ACC_{it} = 1 - OACC_{it} / ACC_{it} \tag{4}$$

ACC = sum of accruals
I = inventories
NI = Net Income before Extraordinary Items Items
AR = Accounts receivable
DEP= Depreciation expense
P = pre-payments
CFO = operational cash flow
AP = Accounts Payable
OACC = Operational Accruals
TP = Tax Payable
NOACC = Non-operational Accruals (discretionary)
C_{svt}= Direct measure of conservatism

Data Analysis

Main Research Hypothesis

There is a relationship between conservatism and earnings management.

1st method

For studying whether the correlation between these two variables is statistically significant, the following hypotheses are tested.

$$\begin{cases} H_0: \rho = 0 \\ H_1: \rho \neq 0 \end{cases}$$

Where, ρ indicates the correlation coefficient value between the two variables under study in the population.

Testing the correlation value

		Conservatism
Earning management	Correlation coefficient	-.373**
	p-value	.000
	Number	469

With comparing the p-value resulting from the test with error level of 0.05, it can be concluded that there is a significant correlation among the given variables.

2nd method

The multiple regression model for studying the effect of multiple independent variable on one dependent variable is used. The below model is defined in the following way:

$$Y_i = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \cdots + \beta_{p-1} X_{p-1} + \varepsilon_i \quad i = 1,2, \dots, n$$

In this relationship X_is are the assumed independent variables.

The significance of the above model will be tested with the use of f-test (Fisher). The tested hypotheses in this test will be define in the following way:

$$\begin{cases} H_0: \text{the fitted model is not significant} \\ H_1: \text{the fitted model is significant} \end{cases}$$

Also, the determining factor calculated in the table shows a percentage of the changes of the dependent variable which is expressed with the use of assumed independent variables.

Testing the significance of the regression model.

Durbin-Watson Statistics	**F -value (P-value)**	**Determining factor R^2**	**R**
2.12	39.04 0.001	.213	.461[a]

As we can see in the above table the p-value related to t-statistics confirms the significance of the fitted model (which is smaller than 0.05). The value of the determining factor is equal to 0.213 which indicates that 21.3% of the changes in earnings management is expressed by the assumed independent variables.

In the following the necessity of the existence of intercept and each of the independent variables in the model will be tested. The tested hypotheses in this stage will be defined in the following way:

$$\begin{cases} H_0: \beta_0 = \beta_1 = \cdots = \beta_{p-1} = 0 \\ H_1: \sim H_0 \end{cases}$$

T-statistics is calculated for each of these variables and based on it the p-value of the above test will be obtained. If the obtained p-value is smaller than the assumed error coefficient (0.05) H0 hypothesis will not be accepted.

Studying the necessity of existence of the variables in the model.

Model	Non-standard coefficients		Standard coefficient	-statistics T	Significance level
	Dip line	Standard deviation	Beta		
Intercept	-.170	.718		-.237	.813
Conservatism	-.098	.009	-.462	-10.871	.000
Company size	.067	.134	.022	1.501	.0417
ROE	-1.291E-9	.000	-.009	-.206	.837

The significance level of the hypotheses tests has been calculated as it has been demonstrated in the above table and has been compared with the assumed error coefficient of 0.05. In this it is confirmed that the variables of conservatism and company size are significant (the obtained significance level is smaller than 0.05).

Secondary Hypothesis

There is a relationship between conservatism level and discretionary accruals.

1st method

For studying whether the correlation between these two variables are significant statistically, the following hypotheses will be tested.

$$\begin{cases} H_0 : \rho = 0 \\ H_1 : \rho \neq 0 \end{cases}$$

Where ρ indicates the value of the correlation coefficient between these two variables in the population.

Correlation level / value

		Conservatism
Discretionary accruals	Correlation coefficient	-.454**
	p-value	.000
	Quantity	469

With comparing the p-value obtained from the test with error coefficient of 0.05 it can be concluded that there is a significant correlation between these two variables.

2nd method

Multiple-regression model is used for studying the effect of multiple independent variables on one dependent variable. The fitted model to the observations will be defined in the following way,

$$Y_i = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \cdots + \beta_{p-1} X_{p-1} + \varepsilon_i \quad i = 1,2,\dots,n$$

In this relation, X_is are the assumed independent variables.

The significance of the above model is tested with the use of F-statistics (Fisher). The tested hypotheses in this test will be defined in the following way:

$$\begin{cases} H_0 : \text{The fitted model is not significant} \\ H_1 : \text{The fitted model is significant} \end{cases}$$

Also, the calculated determining factor shows a percentage of the changes of dependent variable which is expressed by the assumed independent variables.

Testing the significance of the regression model.

Durbin–Watson statistic	-statistics F (P-value)	Determining factor R^2	R
2.18	35.21 0.001	.0.312	.467[a]

As we can see in the above table the p-value related to t-statistics confirms the significance of the fitted model (which is smaller than 0.05). The value of the determining factor is equal to 0.312 which indicates that 35.2% of the changes in the variable.

In the following the necessity of the existence of intercept and each of the discretionary accruals is expressed by the assumed independent variables.

In the following the necessity of the existence of intercept and each of the independent variables in the model will be studied. The hypotheses to be tested in this stage will be defined in the following way:

$$\begin{cases} H_0: \beta_0 = \beta_1 = \cdots = \beta_{p-1} = 0 \\ \qquad H_1: \sim H_0 \end{cases}$$

T-statistics is calculated for each of these variables and based on it, p-value of the above test will be obtained. If the obtained p-value is less that the assumed error coefficient (0.05), the H0 hypothesis will be rejected.

Testing the necessity of the existence of the variables in the model.

Model	Non-standard coefficients		Standard coefficients	T-statistics	Significance level
	Dip line	Standard deviation	Beta		
Intercept	-.310	.212		-.237	.073
Conservatism	-.085	.018	-.762	-7.432	.000
Company size	.067	.134	.022	1.301	.028
ROE	-1.45E-9	0.012	-.014	-.206	.057

The significance level of the hypotheses tests is calculated as it has been shown in the above table and is compared with the assumed error coefficient of 0.05. In this way it is confirmed that the variables of conservatism and company size are significant (the obtained significant level is smaller than 0.05).

Conclusion

Taking note of the statistical tests for the main hypothesis we can see that there is a significant relationship between the level of conservatism and earnings management. Considering the results of the statistical test of the secondary hypothesis we can see that there is a significant relationship between the level of conservatism and discretionary accruals.

Suggestions

Without any doubt conducting studies and its continuity is the requirement of the development and growth of every country. Conducting scientific researches in the capital market in addition to increasing the efficiency of the market leads to provision of solutions and models which predicts and estimates the information requirements of shareholders, investor and analysts for decision-making with a lower level of error and mistake.

The results obtained from the analysis of the above hypotheses indicate that: there is a relationship between conservatism and earnings management and that this relationship is significant. Also, there is a relationship between conservatism and discretionary accruals which is as well significant. Hence, taking note of the

importance of the subject in financial decision – making, one should study these measures in their decisions carefully.

Another side, considering the subject of this study, the impact of conservatism on earnings quality in financially distressed firms can be studied. It is recommended to conduct the present study in various industries separately.

It is recommended to conduct this study with the use of other explaining variables or different time intervals. It is recommended to conduct the present study with the use of comparison in the stock market of a number of different countries.

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