Research Paper

Studying the Effect of Conservatism on Accrual-Based Profits Management and Chemical Products and Materials Industry in Tehran Stock Exchange

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Abstract

Managers manage the profit often in order to mislead shareholders about the actual economic performance of the company. So it is not surprising that various stakeholders of the company consider the company profits management inappropriate and try to reduce the authorities and powers of the managers through intensified monitoring. In this regard, the shareholders consider conservatism and corporate governance as a supervisory tool that limits the profits management. This research studies the probability of the effect of conservatism on accrual-based profits management and chemical products and materials industry and to assess the accrual-based profit management and conservatism the Jones modified model was used. The research period was from years 2008 until 2013. The study method is descriptive and correlational, and by using regression model, Eviews7 software and generalized squares method the research hypotheses were examined. The results indicate that by increasing the level of conservatism, the opportunities of profit management are limited, and managers have no incentive to manage accrual-based profits that keeps the reported earnings more accurate and protected from manipulation.

Keywords: conservatism, accrual-based profit management, manipulation of the actual activities.

Introduction

The primary purpose of accounting is to provide useful information for investors to predict economic performance. The importance of profit report as a primary source for investors, managers and analysts' decision-making is well understood and the profit report in different ways and as a criteria to evaluate the company success, a criteria to determine the amount of dividends, and a criteria to manage the distribution of profits, etc. helps the society economy. Also, due to the fact that the value of a company is concerned with its now and future profits, the determination of profit is so important (KARBASI, 2008). Managers manage the profit often in order to mislead shareholders about the actual economic performance of the company. So it is not surprising that various stakeholders of the company consider the company earnings management inappropriate and try to reduce the authorities and powers of the managers through intensified monitoring. In this regard, the shareholders consider conservatism as a supervisory tool and corporate governance that limits accrual-based profit management (Garcia et al, 2012). One of the factors that based on the previous studies can affect the accrual-based profit management is the conservatism variable that can affect the managers performance in managing the profits. In this study we try to investigate the relationship between these two variables in the chemical product and materials industry. According to the issue statement, the main goal of this research is as follows:

Determination of the effect of conservatism on accrual-based profit management in chemical products and materials industry, and as a result, providing actual and useful accounting information for investors and other users (banks, managers, artisans).

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Theoretical literature and research background

An important feature of accrual-based profit management is that the accruals in long-term will be zero, because the total profit should be equal to the sum of cash flows over the life of the business unit. Therefore, any accruals more than usual in a period should be offset with the accruals less than usual in other period. So company managers with weak predictions without discovering the issue could not report the profit more than the actual amount for a long time. Therefore, it is expected that the IPO[2] companies that use freedom in accounting, at least try to manage profit in the financial statements related to IPO, because these financial statements would have the greatest impact on investors' decisions. Regarding this, dealing with decisions that increase the benefit for a short time will lead long-term costs. Since the managers have to return accruals in later periods, there is little chance that they could uncertainly keep the inflated profit figures. This is more evident in the case of companies with poor performance, because the companies with good performance probably without the need to report more than actual rates in other periods can improve their cash flows. Therefore, we expect that profit management discovery help the foreign investors to review their perceptions of the future profit quality, and also modify their evaluation of the IPO companies that manage the accrual-based profits.

Healy & Wahlen in 1999 have presented the following definition of profit management:

Profit management occurs when managers use their personal judgments in the financial reporting and manipulate the structure of transactions in order to change the financial reports. This purpose occurs either to mislead some of the shareholders about the economic performance of the company, or affect the results of the contracts that their conclusion depends on achieving the personal profit.

Beaver et al define the profit management as the profit manipulation by the management in order to achieve some of the

predictions of the expected profit like; (analysts' predictions, previous estimations of management and the reduction of profits' dispersion). Profit management is the intentional interference in the external financial reporting process with the intention of obtaining profits (NORAVESH, NIKBAKHT, 2005). Accounting conservatism leads to investor's benefits, because it causes the adjustment of firm problems associated with managers' investment decisions, the increase of the contracts' efficiency, and reduction of litigations. These conservatism advantages reduce the negative effects caused by the results of the fact that the people associated to a company have no information symmetry. Conservatism provides early warning signs for investors because it presents a quick transfer of bad news. Conservatism that implies to the implementation of precaution in identifying and measuring income and assets is one of the most important covenants limiting financial statements. In the conceptual Statement No. 2 of Accounting Standards delegation in America the conservatism is defined as "Prudent reaction to uncertainty in order to be ensured of the consideration of the unreliability nature of risk in business". Although conservatism largely affect the official value of net assets and net profit, but accountants often concentrate on limited ways of conservatism. For example, some of the conservative accounting methods are; accelerated depreciation method versus straight-line method, immediate costs of research and development expenditure, using the principle of least cost and the net market value in relation to goods inventory. However, empirical studies often rely on a wider range of conservatism that reflects the cumulative effects of accounting decisions used by executives including assumptions and accounting estimates and the selection of accounting policies (Ahmed, A. S., & Duellman 2007).

Conservatism is a different necessary approval for the identification of the income and expenses that result in a low exponential profits and assets (BASU, 1997).

Profit management: Generally profit management occurs when the managers use personal judgments in financial reporting and transactions structure. Their purpose is to change the financial reports or the contracts based on accounting figures in order to mislead shareholders (Healy & Wahlen in 1999).

Accrual-based profit management: due to the flexibility of the accepted accounting principles, the management by using various methods tries to apply its opinion in profit accruals. Applying the managers' opinion can improve the quality of information by the confidential information reports (HELTASEN, 1990). ABBAS ADE et al. in 2015 in their study titled the meta-analysis of corporate governance and profit management have said that in order to precisely collect the opposite results of several conducted studies on the impact of corporate governance mechanisms on profit management; they have used the meta-analysis method that is (derived from the research project of Sanchez, Garcia and Moka, 2009). This method is implemented on a sample of 49 studies, including 30 foreign studies in the period of 2000 to 2014, and 19 internal studies in the period of 2001 to 2014. The results show that: 1.

the type and sign of accruals are considered as moderating variable, the relationship between the broad of directions, institutional ownership, and ownership concentration and profit management, and 2. the model of accruals and type of corporate governance system lead the moderation of the relationship between independence and the broad of directions and profit management. Garcia et al. in 2012 with the aim of studying the accounting conservatism and limitations in profit management have studied the American companies and by using their data for the fiscal period of 1991 to 2010 they have investigated the effect of conservatism on the accruals-based profit management and actual profit management. The results showed that conservatism mainly reduces the accruals-based profit management and increase the actual profit management. ABED et al. 2012, in a study as levels of conservatism in accounting policies and their impact on profit management in period of 2006 to 2009, on a sample of 253 Jordanian companies, using multiple regression and generalized squares method have resulted that there is a negative relationship between conservatism and the extent of company with profit management. Also, they have showed that there is a positive relationship between the company performance and profit management. Kenneth et al. in a study as do the rights of shareholders affect the managers' desire to manage the profit? In 2015 they have investigated the relationship between the shareholder rights and management tends to smooth the profits, they have concluded that increasing the shareholders rights has a huge impact on increasing the managers' desire to manage the profit. Also, the research findings show that the companies with more rules tend to manage the profit at the long-term accruals, and the companies with fewer rules tend to manage the profit at the current accruals.

Research methodology

This research is descriptive and correlational and the research methodology is the after-event type. In this study, the researcher is trying to investigate the correlational relationship between the research variables, so, on that basis; he would study the relation between the variables and its intensity.

Correlation studies only work on variable in cases where they have an effect on a particular phenomenon, and when there is little awareness, or they have similarity in the issues that happened before or the current situation and no information is available, the exploratory study will be used. Exploratory studies are important to achieve a proper perception of the intended phenomenon and to expand the knowledge through theorizing (KHAKI, 2007). The purpose of correlation studies is to establish a relationship, or lack of it and use those relationships to predict the future. In order to estimate the research data the combined data model (Panel) with the GLS method was used.

Research statistical model

To test the research hypothesis the multiple regression model will be used as follows:

Model……….

$$AM_t = \alpha + \beta 1\ Co_t + \delta \sum Controls_t + \varepsilon_t$$

In which:

$^{1}AM_t$: Accrual-based profit management

δ, β, α : Regression coefficients

$^{2}Co_t$: Accounting conservatism

Controls: control variables

Control variables are: company extent, Financial Leverage, The market value of net assets over the official value of shareholders rights, assets efficiency, Cycle of operations, audit extent, Altman Z

Research hypotheses

Based on the theoretical perspectives presented in the study stated that accounting conservatism mainly limit the successful manipulation opportunities of accrual, we expect that there would be a negative relationship between conservatism and accrual-based profit management. According to this hypothesis the research is uttered as follows:

Conservatism has a significant and negative effect on accrual-based profit management in the materials and chemical products industry.

Statistical population

The study population includes all companies listed on Tehran Stock Exchange from 2008 to 2013 that had the following qualifications: 1. the end of their fiscal year would be end of March to increase or maintain the comparability of the obtained financial information, 2. it should not be a part of financial institutions, investment companies, financial intermediaries, and holding and leasing companies, 3. financial

information required for the study in the period of years 2008-2013 would be presented to stock Exchange and be available, 4. Financial periods of the companies should not change.

Methods and tools for data collection

In the case of required information and data, this research through the financial statements of companies listed in Tehran Stock Exchange uses the library method about the discussed subject of collecting data. Also the annual Report by Tehran Stock Exchange available for interested people and the websites of the Tehran Stock Exchange (rdis.ir) and (codal.ir) are used. Also in this study to collect the information needed for theoretical issues, the library method through books, magazines, academic dissertations, reports and scientific internal and foreign papers and World Wide Web were applied. In this research, the measurement tools are the financial data obtained from financial statements information, because these information are the secondary data and they enjoy the required reliability and validity.

Measuring research variables:
Accruals-based profit management measurement:

In order to measure the accruals-based profit management, optional items are used.

In order to estimate the optional accruals, the modified Jones model (1991) is used:

$$TA_{cert}/Assets_{t-1} = \alpha + \beta 01/Assets_{t-1} + \beta 1(\triangle sale - \triangle REC_{it}) / Assets_{t-1} + \beta 2 PPE_t/Assets_{t-1} + \beta 3 ROA_{t-1} + \beta 4 SG_{t} + \varepsilon_t$$

In this model:

$$TA_{cert}/Assets_{t-1}$$

The difference between the profit before unusual items and cash flow resulted from the operating activities during the current period.

$Assets_{t-1}$: Total assets at the beginning of the financial period

$\triangle Sale$: Changes in sales

$\triangle REC$: Changes in received items

PPE : Properties, equipment and machines

ROA : Net profit divided by total assets

SG : The current growth in sales

In this study, the unconditional conservatism is used and to measure it, the three models as follows are used:

Givoly and hain model (2000)

One of the criteria used to measure conservatism, based on Givoly and hain model (2000) is: conservatism= Total assets in the first period × (-1) / (Operating profit + non-cash expenses - operating cash flow)

So: Conservatism=B/M

The criteria of official value to conservative market value are assessed using the ratio of official value to market value regarding the fact that assume the constancy of the conditions and also the conservative accounting reports application, the net assets and the proportion of official value on the market value will be less. The assed coefficient of the company synthetic variable shows a stable ratio of difference between of official value and shares' market value. Lower coefficient indicates more conservatism (the official value is more diverted down). In this structure the average coefficient is zero. Therefore, the mentioned coefficient is measure of the relative conservatism, and it is used as a representative for the level of change in conservatism among the companies.

Givoly and hain (2000) and ZHANG (2008) model:

In order to measure conservatism, based on Givoly and hain (20000 and ZHANG (2008) model, the negative of skewness coefficient of net profit on the cash flow skewness coefficient resulted from operating activities is used. Finally in this research as well as Garcia et al. (2012) research, to measure the conservatism we combine these three models. For this purpose, we use the standardized mean of these three models that each of them represents a criterion for conservatism. In this section first explains the descriptive statistics of variables are explained, and then, the research hypotheses will be studied using multiple regression model to the generalized Squares method or GLS, or due to lack of heterogeneity of variance the white test will be used for this industry. At the beginning, the general model of study with regard to all independent and control variables will be examined.

Table 1: the test of data normality

variable	Jarque - Bera	P-Value
EM: Accrual-based profit management	1.181	0.547
CO: conservatism	2.946	0.112
SIZE: size of the company	2.802	0.247
LEV: Financial Leverage	1.063	0.614
MTB: The market value of net assets to the official value of shareholders rights	1.178	0.564
ROA: Rate of return on assets	4.113	0.100
CYCLE: Cycle of operations	1.767	0.413
AUD: audit extent	3.030	0.164

As it is seen in the above table, the level of significance for all the variables is 0.05, so the studied data has the appropriate level of normality to carry out the analytical test.

Descriptive Test of research data

Table 2: Descriptive test of data

Type of variable	variables	Number of observations	Mean	Maximum	Minimum	Standard deviation
Dependent	EM	210	0.009	0.48265	-0.53639	0.13223
Independent	CO	210	-1.245	25.564	-236.528	16.8116
controlled	SIZE	210	11.868	13.345	10.981	0.48812
	LEV	210	0.631	1.171	0.0405	0.19840
	MTB	210	2.786	14.767	-47.2147	4.00345
	ROA	210	0.154	0.62038	-0.1130	0.12514
	CYCLE	210	310.513	735.927	0.0000	133.352
	AUD	210	-0.119	1.0000	0.0000	0.3246
EM: Accrual-based profit management			CO: conservatism			
SIZE: size of the company			LEV: Financial Leverage			
MTB: The market value of net assets to the official value of shareholders rights			ROA: Rate of return on assets			
CYCLE: Cycle of operations			AUD: audit extent			

The research data correlation matrix

In order to investigate the presence of correlational relationship between the variables of the study the correlation matrix table is used as follows:

Table 3: Correlation matrix

	EM	CO	SIZE	LEV	MTB	ROA	CYCLE	AUD
EM	1.000							
CO	0.020	1.000						
SIZE	0.15	-0.029	1.000					

LEV	0.002	-0.003	-0.169	1.000			
MTB	0.002	0.034	0.152	-0.198	1.000		
ROA	0.082	0.091	0.236	-0.465	0.239	1.000	
CYCLE	0.037	-0.032	0.127	0.197	-0.176	-0.118	1.000
AUD	-0.010	0.020	0.099	0.046	0.063	0.61	-0.051	1.000

Research hypotheses test

The main hypothesis: conservatism has a negative and significant effect on accrual-based profit management in chemical material and products industry

Table 4: the results of white, F Limer and Hausman test

	White test	F limer test	Hausman test
Level of significance	0.705	0.003	0.042
Statistics	0.661	3.462	9.737

As it is seen in table1, the obtained F limer statistic is 0.003 that shows the Suitable arrangements for Panel method. White test is obtained 0.70 that shows homogeneity of variances. The conducted Hausman test with the Prob of 0.042 shows the lack of random variables impact on model.

Table 5: The main hypothesis test results

EM: dependent variable Number of observations:210 Method: Panel EGLS (Cross-section weights)					
Variable	Variable coefficients	Standard error	t statistic	Level of significance	result
Constant coefficient	0.21390	0.18229	1.17339	0.2421	No significance
conservatism	-0.00013	0.00004	-2.79023	0.0043	No significance
Company size	-0.02378	0.01423	-1.67789	0.0950	No significance
Financial Leverage	0.04098	0.06562	0.62452	0.5330	No significance
The market value of net assets on official value	0.000034	0.00182	0.01903	0.9848	No significance
Rate of return on assets	0.18401	0.11661	1.57802	0.1162	No significance
Cycle of operations	0.00008	0.00007	1.13708	0.2569	No significance
audit extent	0.01983	0.02789	0.71103	0.4779	
Determination coefficient:0.366277			Adjusted Determination coefficient:0.299400		
F statistic: 5.165273			F statistic level of significance:0.000308		
Watson-camera statistic:1.925347					
EM = 0.213901919897 - 0.000136179049873*CO - 0.023875230852*SIZE + 0.040982134656*LEV + 3.46592999611e-05*MTB + 0.184013648074*ROA + 8.39378567032e-05*CYCLE - 0.0198351302171*AUD + [CX=F]					

The amount of Watson-camera statistic is 1.92 that shows the lack of autocorrelation. The Determination coefficient shows 29% reliability. The regression model F statistic is 5.16 at the level of significance of 0.000308 that shows the whole of estimated model is verified. The t statistic and coefficient for the conservatism variable respectively are -0.00013 and -2.79 that at the level of significance 0.004 indicates that there is a negative and significant relationship between conservatism and accrual-based profit management. For company size variable, the t statistic and coefficient are respectively -0.023 and -1.67 at the level of significance 0.095 indicates the lack of a significant relationship between company size and accrual-based profit management of the company. Also, for the financial leverage variable the t statistic and coefficient are respectively 0.04 and 0.62 at the level of significance 0.53 indicates that there is no significant relationship between financial leverage and accrual-based profit management. For the market value of net assets on official value variable, the t statistic and coefficient are

respectively 0.00003 and 0.019 at the level of significance 0.98 indicates that there is no significant relationship between the market value of net assets on official value and accrual-based profit management. For the Rate of return on assets variable, the t statistic and coefficient are respectively 0.184 and 1.57 at the level of significance 0.11 indicates that there is no significant relationship between the Rate of return on assets and accrual-based profit management. For the Cycle of operations variable the t statistic and coefficient are respectively 0.00008 and 1.13 at the level of significance 0.25 indicates that there is no significant relationship between the Rate of return on assets and accrual-based profit management. For the audit extent variable, the t statistic and coefficient are respectively 0.019 and 0.711 at the level of significance 0.47indicates that there is no significant relationship between the audit extent and accrual-based profit management. Therefore, the hypothesis is confirmed.

Conclusion and Recommendations

The research method is descriptive and correlational research. The purpose of this research is the applied type. In this study to collect information and data the library method is used. For data analysis and extraction of descriptive statistics, the Eviewa7 software and regression multiple model by the generalized least squares method (GLS) is used. Conservatism has a negative and significant relationship with accrual-based profit management. So the hypothesis about the Chemical materials and product industry is confirmed. As it was seen in the Chemical materials and product industry, by increasing level of conservatism, the opportunities to manage the profit are limited and managers have no incentive to do accrual-based profit management which makes the reported profit to be more accurate and protected from manipulation. According to the extracted results from the study, we can conclude that the companies' management with the increase of conservatism, given that by applying conservatism they will get closer to the aims that in order to achieve them they use the profit management tools, with conservatism increase they will use the profit management and its tools less. In the absence of substantive separation of management ownership on the country economy and the lack of adequate and appropriate mechanisms for monitoring and evaluating the stewardship task of managers of economic units, the conservative accounting standards can partly help to evaluate the stewardship duty of the management. Therefore, it is recommended to users of financial information that by regarding this relationship and issue try to investigate the financial information.

References

Abbas Zadde, Hamidreza, Hesarzade, Reza,Jabari Noghabi, Mehdi, Arefi ASL, Solmaz, (2015) Meta-analysis of corporate governance and - profit management, accounting and auditing Quarterly Reviews, Volume 22, Number 1, Spring 1952, page 31

Accounting Standards Board Audit basics "theoretical accounting and financial reporting in Iran" year 1997

Abed. S,Al -Badainah.J, Abu SerdanehThe.J (2012). Level of Conservatism in Accounting Policies and Its Effect on Earnings Management,International Journal of Economics and Finance 4:78- 85

Ahmed, A. and Duellman, S ٬(2007) ٬"Accounting Conservatism and Board of Director Characteristics: An Empirical Analysis". Journal of Accounting and Economics

Azar, Adel (2010)," Statistics and its application in the management" SAMT publications

Basu, S. (1997), The Conservatism Principle and The Asymmetric Timeliness Earnings,Journal of Accounting and Economic,vol.24 Issue1.pp 3-37

Beaver, W.H. , R. Clarke, and W. Wright,(1998), "The Association between Unsystematic Security Returns and the Magnitude of the Earnings Forecast Error," Journal of Accounting Research: pp.316-340.

García,J.M, and G.Beatriz and F.Penalva (2012).Accounting conservatism and the limlimits to earnings management. http://ssrn.com/abstrac

Givoly, D. and C. Hayn, 2000, The Changing Time-Series Properties of Earnings, Cash Flows and Accruals: Has Financial Reporting Become More Conservative?" Journal Of Accounting and Economics, v. 29 (3), pp. 287-320.

Givoly,D.,C. Hayn and A.Natarajan. (2007). Measuring reporting conservatism. The Accounting Review 82(1): 65-106

Healy .P.M & Wahlen(1999). "A review of the earning management literature and itsimplication for standard setting" , Accounting Horizons,365 – 363

Healy, P.M. and J.M Wahlen.1999. A review of the earnings management literature and it s implications for standard setting.Accounting Horizons 13 (4):365-383

Kenneth Small, Seung Woog Kwag, Joanne Li, (2015) Do shareholder rights influence managerial propensity to engage in earnings management?, Journal of Economics and Finance ISSN: 1055-0925 (Print) 1938-97

KhakiI, GH., 2007, research methodology with a view to the dissertation, BAZTAB publications, Tehran

Karbasi, Yazdi, H, 2008, "Accounting theory (1)" Islamic Azad University of BRUJERD

Noravesh, NIKBAKHT, IRAJ, MOHAMADREZA SEPASI, SAHAR (2005), Evaluation of profit management in listed companies, "the Tehran Stock Exchange Journal of Social and Human Sciences, Shiraz University, the twenty-second period, (2)

Ranjbaran, HADI (2008, "Statistics and probability and its application in management and accounting" NOORE ELM publications

Soori, ALI. (2012), "Econometrics" FARHANG SHENASI publications, fourth version, Fifth Edition

Zhang, X.-J. (2000). Conservative accounting and eqity valuation. Journal of Accounting & Economics 29 (1), 125–149

Zhang, J., (2008). "The Contracting Benefits of Accounting Conservatism to Lenders and Borrowers". Journal of Accounting and Economics, 45, pp.27–54