

Drivers of Earnings Management: The Profit and Loss before Earning Management

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Abstract

This study aims to evaluate the effect of two major drivers including: bad company and also the lower benefit from the profits over the previous year on earnings management process of active companies in the capital markets in Iran. Research time period is 6-year (from 2006 till 2011) and the population is all the listed companies in Tehran Stock Exchange. The sample was obtained by screening method includes 199 company. The results of hypotheses testing using panel data showed the probability of using of discretionary accruals in order to show profitable enterprise increases, when the company has loss before using earning management in Iranian market capital. The results also indicate that when the current company's profit is lower than the previous year's profit, the possibility of using the discretionary accruals increases to show positive changes in profitability. Thus, it can be announced that bad and also lower benefit from last year, are as two major driving of earnings management.

Keywords: earning management, profit before applying earnings management, discretionary accruals.

Introduction

Accounting earnings consist of cash and accrual item and accruals are largely in control by management. Often, investors and executives believe companies that have good profitability trends and their benefits have no major changes, have more value and more predictability in compare with similar company. Also, according to agency theory, managers can also have the incentive to manipulate earnings to maximize their interests. This study attempted to examine the influence of both major drivers of earning management including: being bad company and also have lower benefit from previous year, in active Iranian market.

Problem Statement

Studies have shown that low volatility and stabilize profit, are indicative of its quality. Therefore, investors with more sure invest in the stock of the companies that their profit process is more stable. Earnings management is defined as public involvement management in process of determining profits that is in line with the desired objectives of management (Wild et al, 2001, p238). Corporate earnings management behavior has been studied and it has been linked with a measure of profitability includes profit and increase profits (Bourg AstalrandDichew,1997, p 106). They have concluded that lack of continue in profits to near zero and near-zero changes in earnings leads to managers manipulate they Earnings to report its Earnings or maintain previous year profits.

Despite several studies that have been done in relation to earnings management, still whether or not to achieve the criteria by earnings manipulating are at least two reasons that remain unsolved. First, the claim that the presence of causal link between earnings management and profit criteria is based on reported earnings. Second, although the earnings discontinuity is visible, but regardless of the managerial manipulation, the level of normal profit is not defined (Kristian and Ray, 2007, p 402). In reality, the management recognizes in order to achieve the goal of real benefit is contingent on the nature real earnings which is remembered as earnings before applying earnings management. Infact, profit before applying earningsmanagementis a function of executive recognition in order to adjustearningsor decrease the lossforthestateto increase profitability or benefit reporting. So the main question in this study is as following:

Being a bad company or reduce its profitability increase the possibility of using the discretionary accruals for showing a large company is profitable?

Research hypotheses

H1: the possibility of using the discretionary accruals in order to show profitable firm increase, when the firm is a bad company before applying earnings management.

H2: the possibility of using the discretionary accruals in order to show positive changes in profitability increase, when current earning is lowers than the previous year's earnings the firm.

Research methodology

Research methodology can be set of rules and tools and systematic reliable way to evaluate the facts, discover the unknown and achieve absolution to the problem. In humanities

several division of the researches been done. Based on objective, research can be fundamental, applied or scientific. The purpose of applied research is practical application of knowledge in a particular field (Khaki, 2002, p 74). Based on the method of data collection, research can be historical, descriptive, correlation, experimental or casual. Descriptive research consist of a set of methods that aim to describe conditions or phenomena. Correlational studies, including studies in which the relationship between different variables, we can be explored and explained using the correlation coefficient. The main objective of correlative studies is to determine the type, size and value of the relationship between two or more variables (Sarmad et al, 2011, p92). The present research is descriptive-correlation methodologically and will attempt to use the correlation coefficient and regression in order to explore and explain relationships between variables. In terms of the survey data, this study is an ex-post, because the previous year data are studied. Also, in terms of the purpose, this research is in there of applied research.

The population and statistical sample:

The statistical population of this study is listed companies in Tehran Stock Exchange. The sample consists of limited number of sections of the population that express the main features of the population (Azar & Momeni, 2010, p 5). The study will be used elimination method to select a sample. For this purpose, four criteria are considered. If a company has met all the criteria will be selected as one of the companies in my sample. The criteria are as follows:

Firms listed in Tehran Stock Exchange before 2006 and is active in the exchange by the end of 2011.

Firms did not change the fiscal year and it ends in March.

The firm does not participate in group investment firms or financial intermediation.

The required information is available on the firm.

After considering all of the above criteria, 199 companies remain as the screened population that all of them were selected as sample. Thus, our observations reached to 1194 firm-year that these observations are part of 28 different industries.

Methods of data analysis and hypothesis testing

In this research, multivariate linear regression model is used to data analysis and hypothesis testing. Statistical method that is used in this study is a panel data approach. First, the accuracy of data integration is tested using the F-test bound, then the type of testing method determined based on the results of the Hausman test (fixed effects or random effects) and the model is estimated according to the type of approach. F statistic is used to evaluate the significance and to evaluate the significance of the coefficient of the independent variables in the model, t-statistics were used and confidence level of 95% is used to make decisions to accept or reject hypotheses. Also, to verify the normality of variables, being equal variance and independent errors we used Jarque-Bera test and Durbin-Watson respectively. In this study, we used SPSS and Eviews software to data analysis.

Research key words:

Earnings management: earnings management is a method used by management to manipulate data. In this study, consistent with the approach of Sun and Roth (2012, pp 30) adjusted discretionary accruals is applied as a measure of earnings management.

Earnings before applying earning management: management recognition to achieve profit target, contingent on nature of real benefit to those dealing with it referred to as earnings before applying earning management. For example, management may improve the profit before applying earning management when it is less than optimal point. Also, management may decrease the profit before applying earning management when it is more than optimal point and some of them may reserve to cover profit next year (Income smoothing). Moreover, when the profit before earnings management is extremely lower than target profit and management efforts to achieve it has not results practically, usually accruals are used to reduce profit (Sun and Roth, 2012, p 31).

Discretionary accruals: accounting earnings is separable into two components: cash and accrual. Accrual component involves reflecting profit estimates and judgments of management (Dechew and Dechew, 2002, p41). Where accruals are also separable into two components: optional and non-optional. Discretionary accruals are items which management has control over them and can delay or eliminate them or accelerate the identification and record and used as criteria of detecting earnings management.

Financial reporting: purposes and quality

According toast's research (1997, p 13) timeliness of financial statements is the identification of economic losses, because the changes in the quantity of the balance sheet occur if the following of income statement. Identifying the profit and loss timely leads to timely appeal all financial variables and financial ratios. Profit represents the ultimate performance of the companies and a high level of it represents that the performance is good (Israeli, 2006, p 38).

Income and the concepts related to concepts

Income or revenue is the increase in equity, except what is related to bring by the capital owners (Iranian accounting standards, 2008). Reported profit help the economy in various ways, such as providing a basis for tax calculation, criteria for evaluating the successor performance, criteria for determining the amount of divisible profits, a measure to manage an economic unit and other items. Accounting Income is the difference between the capital of the business unit at the end and first of financial period and the capital considered to be synonymous with net assets. Therefore, the measurement of Income is affected by the basics of measuring assets and liabilities and in determining accounting earnings although expressing the accounting activity, but has constantly been criticized (Kordestani & Keshavarzi, 2010, pp.118).

Income types: operational income versus non-operational income

The concept of profit includes both of operating income and non-operational incomes. Operating income is defined as income achieved from continuing operations of the business

and will be discussed by different headlines such as sales, fees, guaranteed interest, dividends, and patents (Iranian accounting standards, 2008). The concept of operating profit of business unit focuses on measuring the efficiency. In calculating the operating profit emphasize is on the term "operational". This means that changes only are due to the main operation and so, it is possible to compare it with other operations. Despite the emphasis of financial analysts on the number of only net income, -disclosure

of operating items and non-operating is important. So if the reference is to a profit figure, according to proponents of the concept of operating income, net income from current operations is better criteria for evaluating current performance (Safarpur and Safarpur, 2008, p 13). In addition to operating income, there's also other income that is created by the effects of the side activities and operations of the company and is reported after operational income in income statement. Degree of repeatability and stability, as well as the content information of them that are part of the Non-operational component of income, is the subject that created disagreement between scholars and is a question between accounting information users. Non-operational nature of these items have caused a lot of questions and uncertainty about the other features of these items, such as stability, their relevance to future earnings, as well as their relevance to the market value of the company (Izadinia & Dorri, 2010, pp. 32-17).

Earnings Manipulation

Britton and Astolovy (2000, p 76) defined manipulation of accounts areas: Using management insights to select accounting procedures or transactions designed so that effects on the transfer of wealth between the company and society (political costs), funds providers (cost of capital) or managers (compensation plans). The company will benefit from the wealth transfer in wealth transfer between the company and society as well as company and providers of funds, but in the transfer of wealth between the company and the directors, managers will act in their favor and the company's losses. Appropriately to apply the requirements of accounting standards with additional disclosure when necessary, is desirably result in financial statements and if managers manipulate their accounts using managerial insights within the generally accepted accounting principles, presentation of Financial Statements would not be fair. If this manipulation is done in violation of generally accepted accounting principles, be considered cheating (Zamani, 2009). In the framework of Astoloy & Britton (2000, p 81) to classify the types of accounts, they offered this fundamental principle that financial information has a major impact on reducing the cost of financing. This reduces is dependent on improvement in investors' perception of the risk the company (Mashayekhi et al, 2005, pp. 74-61). Earnings manipulation is changing Earnings by directors consciously and with specific purposes. The aim is to manipulate the accounts, which may affect the perception market from firm risk.

The concept of earnings management

Since the calculation of economic profits are affected by the method of accounting estimates and business unit management is responsible for preparing financial statements and may, for various reasons, management may attempt to manage earnings (Valizadeh, 2008, p 27).

The Molford and Kamsky (2002, p 27) Earnings management is a conscious and

active manipulation of accounting results in order to show the change in trade status of economic units. In Accounting Theory Scott (1997) Earnings management defined as a company's choice of accounting policies to achieve some specific goals by the administrator. According to Giroux (2004), earnings management consists of a range which starts from conservative accounting and continues with moderate or unbiased accounting and then with deviations from the accounting principles, rules and conventions, courageous accounting and eventually leads to fraudulent or deceitful accounting.

Administrators' view can be conservative or cautious. In this case, circumventing accounting standards and presence of unexpected items less View and of course, full disclosure is made. With realizing this ideal result, showing the figures nearly to reality in the financial reports and provide high quality and favorable earnings. The reverse case is managers extreme view mode in the aggression of regulation, and violation of rules and norms accepted accounting principles that adjust deceitful and misleading financial reporting (Baharmoghadam, 2006, p 52).

Models and theories related to earnings management

There are different patterns of earnings management. The first model in this regard is proposed as relaxation model. This model is the most damaging type of earnings management. Destructive character of this model is that firm performance does not justify the price of the stock market. In such circumstances, artificially of the earning provided by the company appears. That this not only reduces shareholder value, but also hurt the company's reputation (Ahmadpoor and John M. Farr, 2002, p. 61). Another model is profit maximization that is applicable about the management bonus plan and management tries to increase profits in order to achieve a more rewarding. In contrast to this pattern, there is minimization model. This pattern holds true in the case of companies that have a conservative approach to long-term profitability. But the most common pattern of earnings management is income smoothing model. This model tries to reduce reported earnings due to temporary fluctuations that is inconsistent with the economic profit (Ahmadpoor and Karimi, 2006, p 25). Various theories have been presented regarding earnings management. One of the theories that have emerged as the earnings management explanation is demonstrability theory. The theory was expanded by Watz & Zymberman (1986). According to this, with presence of the efficient market hypothesis, two companies that have same cash flow have the same value, even though they have different accounting practices. According to the original content, the main problem in demonstrability theory is determining the manner in which accounting practices will be effective on the company's cash flow and consequently the benefits of management and lead to changes in the market price of the shares firm value. Another theory is the agency theory which Makling by Jensen (1976) has been expressed their basics. This theory emphasizes on freedom contracts and comes into action between different organizational groups as an efficient solution to eliminate the conflict of interest. The evolution of theory has led to the view that the organization is a ring of contracts that through Judgment of delegating with certain tasks are performed by higher authorities. Manager as the benefit of its shareholders looks for maximization of his benefits. But his interests lie in the interests of shareholders as specified in the contract. On this basis the company's performance and financial information provided to

the Company, resulting in a balance of benefits between the two groups and earnings management practices by management (income smoothing) not only provides benefits management, It also provides shareholders' benefits (Ahmadpoor and Karimi, 2006). Other theories are discussed in relation to earnings management is income smoothing theory that the first time is provided by Gordon (1964, p 251). According to this theory: 1) administration criteria for selection of accounting principles, is promoting its own interests. 2) With the increasing in job security, the management benefits, revenue growth and company growth rate increases. 3) Achieving the objectives stipulated in the second paragraph depends on the consent of shareholders. That is much more shareholders are pleased, the job security of management, salary and benefits will be more. 4) Average growth rate of corporate profit and its stability increases shareholder satisfaction.

Views of supporters and opponents of earnings management

Research conducted by Mychelson and others (1995) show that firms that have more smooth earnings considerably have higher average annual returns than firms that do not have income smoothing operation. According to proponents, large fluctuations in earnings make difficult overall planning and budgeting. In the other hand, opponents of the smoothing and earning management defined that smoothing is distortions in financial reporting purposes. Emhaf (1981, p 23) believed that when the variables are manipulated for profit flat, it appears that disclosure is not enough. Beidleman (1973, p 653) believes that income smoothing makes difficult analyzing financial statements.

Types of earnings management

Types of earnings management can be divided into five groups: 1-earnings management through scheduling events: The administrator can control the timing of events, Such as the allocation of costs to future periods, constitute capital of some expenditure. Management has the authority to how and when identify events. Timing of buying and selling property can also affect the accounting profits (Nazmi Ardakani, 2010, p. 114-119). The first research on earnings management was scheduled through asset sales by Barreto (1993). The results of these studies suggest that managers using the timing of the asset sale smooth the temporary changes of profit and manage the earning.

Earnings management through selecting and changing accounting policies

Accounting policy choice effects on the timing of revenues and expenses recognition in profit calculation. For example, management has authority in estimate of service life, residual value, intangible assets age, fuel rate of receivable accounts (Nazmi Ardekani, 1389, pp. 119-114).

Earnings management through accruals

In fact, under this type of accounting system, managers have considerable control over the diagnosis of some cost items, including costs of advertising and R & D expenditures. On the other hand, administrators faced with several options at the time of revenue recognition in the accrual accounting system, including diagnosis faster revenue from credit sales (Mashayekh et al, 2002, 74-61).

Earnings management through real activities manipulation(real earnings management)

Schipper(1989) notedin their study that earnings managementcouldbeincluded real activities. Thistype ofearnings managementcarried outthrough changes inoperational activitiesthewith the intentionto misleadstakeholders. Manipulationof realactivities effects oncash flowsandaccruals in somecases(Valizadeh&Larijani, 2008, p 47). Roychodahry(2006, p 335) argues thatalthoughthesedeviations inthe company's operationsmanagerhelpsin achievingthe objectives offinancial reporting butit does not increasefirm value. The methods ofrealactivitiesmanipulate such asdecreasingssellingprices in order to increase in sales orreduceddiscretionary spendinginthe economiccrisis, includingoptimizationtechniquesthat helpmanagers. So althoughadministratorscanachieve toshort-termprofits by performingsuch activities butin the longtermtheywill not be ableto increasefirm value.

Earnings management by changing the classification

WhencurrentstatisticsonIncomeother thanprofit be managementissuesand makeup profit, administrators can categorizeitems of components related to profit and therebyreducethe changes related to operating profit. Forexample, showing somenon-operating revenues in the form of operating revenues ortransfersome ofoperating expenses to generaland administrativeexpenses, all of these willlead toan increase inoperating profit of business units(MakVeigh, 2006, p501).

Incentives for earning management

Incentivessuch asjob security, bonuses, escaping the law,to avoidreportinglossesand reducedprofit, contracts of liabilities, increased wealth, achieve shareholderexpectations andanticipatedprograms, createan incentiveto managethedifferent methods manipulatingearnings intheirown interestandconflict with theinterest ofother groups 1385(BaharMoghadam, 2006, p 59). OtherIncentives forearnings management includetax incentives.Fourmaincontractual positionsmay lead to earnings management: 1) debt covenantrequirements, 2) compensation management contracts,3) job security, and 4) negotiations with theunions. Considering the fact thata violation of thedebt covenantrequirements(including complianceofworking capital ratio) imposesheavy costson companies, it is expected thatmanagers prevent fromearnings managementby applyingit.Managers canalso influence on the current and future rightsand benefits through earning management. Managersmay also attempt to income smoothingdue tojob security(Rahmani, 2009, p. 104-111). Earning management Incentives may be the resultofimplicitcontracts(unconditional) as well. Thesecontractsoccur ofcontinuous communicationwithstakeholders(shareholders, employees, materialsuppliers, customers, etc). Administrators canmanage Stakeholder confidence by earning management and highprofitreported infulfillingitscontractual obligations(Bowen et al, 1995, p 255). PoliticalIncentives are as other incentive forearningsmanagement. (Pourheydari&Hemmati, 2002, p.47-63). Market incentives are as therIncentives forearnings management. Marketincentivesinearning managementarisewhencorporate executivesunderstandthe relationship betweenreported earningsandthe company's marketvalue. (Rahmani, 2009,pp.111-104).

Earnings management tools and methods:

Hendrikson & vanBerda(2006) uses accountingsolutionon theexpressionofearningmanagement toolsandthenoutlined thesepolicies as followings:

Inventoryvaluation(FIFOvs.LIFO), depreciation anddepletionof natural resources, the allocation of income tax, pensions, research &development research,goodwill, the time of income realization,comprehensive incomevs.operational profit concept from income statement ,joint ventures, long-termleases, theprinciples related to incorporating and combinecommercial entities, measuring of gains ininvestmentcorporations,intangible assets in theoil and gas industry, changes inclassification.

According toBurtonandAstoloy(2000, p 39) earnings managementtoolsshouldhavethe following features:

- Earnings management tools should be used once so that a company does not have a specific action in response to do next.
- Earnings management tools should be based on professional judgment in the context of generally accepted accounting principles and should not be forced to disclose the fact of manipulation and lead to paragraph in audit report.
- Earnings management tools should lead to a basic transfer of income from one year to another.
- Earnings management tools should not require actual transactions, but should be required to classify the internal accounts.
- Earnings management tools need to be act alone or with other acts and should be used during each successive period (Yaghoubi , 2007 , p 57).

Accruals:

Accruals are differences between net incomeand cash flowsfrom operations. Dechewand Skinner(2002) state that earning managementis concerned withmanagement incentive and this is linked tostockperformance, Therefore, if theincome smoothingresearchemphasis oncorporate value, the researchwould be beneficial.Obviously,income smoothing does notnecessarily lead to increase thecompany's value, butincome smoother should alsothink about theearnings qualityat the same time.

MacNicholsandWilson(1988, p 1179)divided earnings quality into threecategories:IncomeStability, accrualslevels andbenefitthat reflecttheeconomictransactions. Make relationship between qualitiesIncome and beneficial in making decisions and the economicdefinition of income. Income smoothingreduces thevarianceof reported earnings, butdoes not guaranteehigh quality ofIncome (the article that examines the relationshipbetween income smoothing, earnings quality and firm value).

Research background

Richardson et al (2002) in their study examined accounting information advantage in predicting the behavior of earnings management in companies offering direct further income statement. The results showed that accruals are key indicators of earnings manipulation that are leading to renewed reporting. Also, companies that provide renewed income statement are more likely to use earnings management. The results showed that companies that manipulate the financial statement report high profits, after the restatement of financial statements encountered with a larger reduction in the price of the stock.

Dechewand Skinner(2002) examined the behavior of earnings management in companies that have strong incentives to break the income chain model, but the result of research do not indicate that to what extent and at what time, managers tend to break the chains of corporate profits.

Morhady (2010) examined the earnings management relationship and its relation with the laws and standards Indonesia. The results show that earnings management in companies under study are not effected by accounting and auditing rules.

Recently San & Rat(2012, pp.56-29) examined earning management and earning before applying earning management in Australian companies. This study has been evaluated criteria which managers attempt to increase profits to achieve the optimum income point. They showed that two measures including positive earnings and earnings changes are positively related to earnings manipulation. Those using data of Australian companies during the years between 2000 and 2006 concluded when the primary earnings is negative or is lower than the previous year's earnings, the possibility of using discretionary accruals to increase corporate earnings to achieve optimal point may be higher.

In Iran also Pourheydari and Hemmati(2004, pp. 63-47), in a study entitled "the effect of debt contracts, political costs, bonus plans, and ownership on earnings management of listed companies in Tehran Stock Exchange" investigate the effective factors on earnings management. Statistical population of the study was listed companies in Tehran Stock Exchange during the years 1987 to 2001. The results show that, there is no significant positive relationship between the ratio of debt to equity and earnings manipulation. The examination of the relationship between the size (total sales) and earnings manipulation showed that with increases in firm size, management has greater incentive to increase profits and to provide a better picture of its performance to shareholders. Another variable used to examine the effect of political pressures related to earnings management was number of employees. The results indicate that companies that have a large number of employees are also more political pressure. As a result, the management of these units reduce their earnings to alleviate the pressure. Hypothesis test results (bonuses and ownership as variables) indicated no significant relationship between these variables earnings manipulation.

Hasas Yeganeh & Yazdanian(2008, pp.171-151) studied the impact of corporate governance mechanisms on earnings management in Iran. The corporate governance principles of the present study that their effects on the decline in earnings management were examined, are as following: Ownership of institutional investors, non-responsible managers (non-executive) in board composition, lack of CEO as chairman or vice chairman of the board, and the

presenceinternal auditors. In this researchthe discretionary accrualsusing themodified Jones modelhave been used as an indicator of corporateearnings to determine earning management. For this purpose,datafrom 177companies during years of 2002to2004 has been used.The results ofthisstudyshow that when thepercentage ofinstitutional ownershipin thecompanyismore than45%, earnings managementdecreases. In addition,the research findingssuggestthereis no relationship between the presence of non-executives managers in composition ofthe board ofdirectors, thelack ofCEOasChairmanor ViceChairman of theBoard of Directors, the presence of internal auditors in companies and earnings management.

Badaghi and Bazzazzadeh (2008, pp. 216-173) is about the relationship between earnings management and disclosure quality. The population of the research was firms listed in Tehran Stock Exchange during the years 2003 to 2004. Multiple regression was used to examine the research hypothesis, the results showed that no significant relationship between earnings management and the quality has not been disclosed. In thisstudy,themodified Jones model used to measurearnings management and tomeasure the amount ofdisclosure235cases of mandatory disclosurewere collected according to theaccounting standardsof Iran, the IranianCommerce Act, Direct Taxation Act andthe rules and regulationsofthe stock market. Multiple regression was used to examine the research hypothesis, the results showed that there is no significant relationship between earnings management and the quality of disclosure.

Saghafi and Bharmoghadam(2008, pp.125-103) in their research studied drivers affect earnings management. In this paper, in addition to examination of earnings management literature, fifteen factors were identified as the most common incentives that affect earnings management. To consider the economic environment, social and cultural in Iran, seven factors (financial structure, ownership structure, major supply, reward management, quality of work for auditing, firm growth and firm size) of the drivers mentioned in the theoretical reasons were tested on the Tehran Stock Exchange market. In order to test hypotheses, the models commonly used in Western countries was discussed and examined, and finally the model was presented consistent with local situation.

Moradzadehfard et al (2009, pp.98-85) have been examined the relationship between institutional ownership and earnings management of listed companies in Tehran Stock Exchange. The research has been conducted to provide insights about the role of institutional investors, whetherinstitutional ownershipof shareshas an impactonprofitmanagement method.In previous studies about the relation betweeninstitutional ownership andearnings management, it is assumedthat corporations havethe sameabilityto createabnormal accrualstoearning management andthe impact ofcorporate governanceon managers' ability to earning management, have been ignored. Institutional investorsimprovethe quality ofcorporate governanceinfinancial reporting.Companies listedinTehran Stock Exchangeconstitutedthe population of the study. Two typesoftests, including correlation test and multiplergression analysishasbeen used toexamine therelationship between earnings managementand institutional ownership.Overall,these resultsindicatea significant negativerelationshipbetween the level ofinstitutional ownership andearnings management.

Noravesh&Hoseini (2009, pp.134-117) usinghistorical data during 2002 to 2006 fromthe51companies listed inTehran Stock Exchange have beenstudied the relationship between corporatedisclosurequality(includingreliabilityand timeliness) andearnings management.The underlying assumption ofthe researchis thatimproving the quality ofcorporatedisclosureisnegatively related toearnings management. Inthis study, thecriteria of timeliness andreliability were used for measuring disclosurequality, andthe management ofcorporate profitsis estimatedby using themodified Jones model. The finding of this studyindicate that there is a significantnegative relationship between thequality ofcorporatedisclosureand earnings management, thefindingsindicate there is a significantnegativerelationshipbetween timely corporatedisclosureand earnings management.

Ahmadpoor et al(2008, pp.89-69) examined earnings managementbehaviorand its relation to regulatory tools of corporate governance, non-executive directors(internal supervisory tools of corporate governance) andmajorinstitutional investors(external monitoringtools of corporate governance). The treatment of earnings managementin this study that is based ona thresholdmodelandis determined through maximization ofreported earnings and meet theoptimalthresholdtoprofitability(level of zero for profit andthe profitreportedof previous years) is defined as Increasing earningsmanagement anddecreasingearnings managementandabnormalaccruals in working capitalisrepresentative for earnings management. Theresearch hypotheses testing were conducted with the help ofregression analysisusingdata from185companies listed inTehran Stock Exchangeduring the period2003-2006andbycombiningtime seriesand cross-sectionalstudy. The results of treatment ofopportunisticearnings managementshowed thatabnormalaccrualscan't justify changedin futureprofits and is as asign toprofitabilityinfuture years. Theresults ofexamining corporate governancemonitoring toolsonearnings managementbehaviorindicatesthatWhenthemotive for income manipulation is high, non-executives managersandmaininstitutional investors have poor roleinreducingmalformations of abnormalaccruals.

Modarreset al(2009, pp.78-59) also explores the motivationsofearnings managementof listedcompaniesinTehran Stock Exchange. For this purposetheycalculated discretionary accrualsas a measureto detectearnings managementusingmodified Jones modelbetweenthe years2002-2007.The resultsshow thatfirm sizeanddebt contractsare stimulus for earning management for companies inbothexamined industries, but avoidlow-loss variable affected on earningmanagement in companies in theindustry ofoil products andchemicalproducts. Furthermore, we didn't find a significant relationship between deviationinoperating activities and earning management in the both industries. Also the results suggestthatmotivationsof firm size anddebt contracts has morestrength for earning management in basicmetalsand miningindustryin thedebt contractsin compared tooil products andchemicalindustry.

Tariverdi&Rostami (2011) studied theeffect of earnings management on the quality offinancial reporting. They considered the Predictionaccuracyoffutureoperatingcash flowsandearningsstabilityasan indicatorwhichmeasuresearningsqualityof financial reporting and Arsenic model is applied forcalculatingearnings management and cash flowapproach is used for accruals.Also, the adjusted Barth modelBarth was used for measuring of

forecasting future operating cashflows through operational income components and the income before abnormal items was used for predicting the stability of earnings before abnormal items. The results of this study indicate that earnings management through accruals reduce the quality of financial reporting. It means that the purpose of earnings management is orientation towards distorts financial reports and management opportunistic benefits. Since earnings management will bring reducing in the prediction of future operating cash flows. Also the results indicate that earnings management does not increase the income stability. (S. Qakem Shirazi, 2012, p 53).

The model and research paradigm:

In this study we test the hypothesis according to Sun and rat studies (2012, p 36) will be used in the following models:

$$Adj(DA)_{it} = \alpha_0 + \beta_1 CLUSTER_N_{it} + \beta_2 SIZE_{it} + \beta_3 GROWTH_{it} + \beta_4 ROA_{it} + \beta_5 WC_{it} + \beta_6 LEV_{it} + \epsilon_{it}$$

In this model we have:

$Adj(DA)_{i,t}$ = the adjusted discretionary accruals for firm i in t year.

$CLUSTER_N_{it}$ = virtual variable of earnings before earning management for firm i in t year

$SIZE_{it}$ = firm size of firm I in t year

$GROWTH_{it}$ = growth opportunities for the firm i in t year

ROA_{it} = Profitability for the firm i in t year

WC_{it} = working capital for firm i in t year

LEV_{it} = financial leverage for the firm i in t year

Research variables:

The study included 7 variables:

Dependent variable:

Adjusted discretionary accruals: in the model Haley (1985, p 85) this item calculated from the comparison of the total accruals mean accruals (scaled for prior period total assets) of the previous period (period estimates) with the event period. In the literature there is an edited version of the Jones model, which is called the modified Jones model. This model was

used the first time by Dechewand others (1995). Jones performed this adjustment for non-discretionary accruals in the event period (ie in the period that is assumed in which earnings management have been occurred) in this figure:

$$NDA_t = a_1 \left(\frac{1}{A_{t-1}} \right) + a_2 (\Delta REV_t - \Delta REC_t) + a_3 (PPE_t)$$

In this study discretionary accruals is used as a measure of earnings management. Pensel et al (2000, p 313) have proposed a new approach in estimating discretionary accruals, where operating cashflow changes entered into the Jones model as an explanatory variable (1991, p 193).

$$TAC_{it} / TA_{it-1} = \alpha_1 (1 / TA_{it-1}) + \alpha_2 (\Delta REV_{it} / TA_{it-1}) + \alpha_3 (PPE_{it} / TA_{it-1}) + \alpha_4 \Delta CF_{it} + \varepsilon_{it}$$

In this model:

TAC_{it} = total accruals in the firm i in which is calculated from the difference between operating income and operating cashflow

TA_{it-1} = total asset for firm i in t-1 year

ΔREV_{it} = the difference between net sales in t year with net sales in t-1 year

PPE_{it} = the net property and equipment in the firm i for t year

ΔCF_{it} = the difference between operating cash flow in the firm i for t year with in the company's operating cash flow in the t-1 year which are homogenized using the total beginning assets of the first period. In this connection, the modified Jones model is estimated and the resulting residuals as discretionary accruals are considered. Then the companies are classified in each year based on the return on assets ratio in decile and the median for discretionary accruals are computed for each deciles will be deducted from discretionary accruals for each company. Thus, the adjusted discretionary accruals will be achieved.

$$Adj(DA_{it}) = DA_{it} - Median(DA)_{pt}$$

The research independent variables:

The earnings before applying earning management: this variable is an indicator variable that is calculated as follows:

First the earning before applying earning management is calculated using this equation:

$$PME_{it} = E_{it} - Adj(DA)_{it}$$

$$\Delta PME_{it} = \Delta E_{it} - Adj(DA)_{it}$$

PME_{it} = Profit before earning management for firm i and t year

ΔPME_{it} = changes in Profit before earnings management for firm i and t year

E_{it} = Net profit that is homogenization using total assets in the first year

ΔE_{it} = changes in net profit that is homogenization using total assets in the first year

$Adj(DA)_{it}$ = Adjusted discretionary accruals for firm I in I year

Then, Transversedistanceof management earnings and earnings before earnings management is calculated using this relationship:

$$2(IQR)n^{-1/3}$$

Where n is equal to the number of observations and IQR is the inter-quartile range.

Then depending on the amount of transversedistance CLUSTER_N_{it} is classified to four categories as follows:

CLUSTER_N_{it} takes four constrained form as follows:

CLUSTER_1_{it} = 1 if ($PME_{it} < 0$ OR $\Delta PME_{it} < 0$), 0 otherwise;

CLUSTER_2_{it} = 1 if ($PME_{it} < 0$, $E_{it} \geq 0$ OR $\Delta PME_{it} < 0$, $\Delta E_{it} \geq 0$), 0 otherwise;

CLUSTER_3_{it} = 1 if ($-0.07 \leq PME_{it} < 0$ OR $-0.07 \leq \Delta PME_{it} < 0$), 0 otherwise;

CLUSTER_4_{it} = 1 if ($-0.07 \leq PME_{it} < 0$, $0 \leq E_{it} < 0.07$ or $-0.07 \leq \Delta PME_{it} < 0$, $0 \leq \Delta E_{it} < 0.07$), 0 otherwise;

Control variables:

Firm size: this item is equal to natural logarithm of total assets

$$SIZE_{i,t} = \ln(TA_{i,t})$$

In this relationship TA is equal to total assets.

Growth opportunities(Growth): In this study, growth opportunities is measured by the percentage growth in sales.

Profitability (ROA): profitability is measured by return on assets ratio. In this relationship OI is operating profit in firm I and TA is total asset.

$$ROA_{it} = \frac{OI_{it}}{TA_{it}}$$

Capital turnover ratio (WC): In this research, capital turnover ratio is calculated using the difference between current assets and current liabilities and is homogenization using the total debt.

Financial Leverage (LEV): In this study the capital structure is calculated and control using financial leverage ratio. The financial leverage ratio is equal total debt to assets. In this model DEPT is equal to sum of total debt for firm I in the end of t year and TA is equal to total assets for firm year at the end of t year.

$$LEV_{i,t} = \frac{DEBT_{i,t}}{TA_{i,t}}$$

Descriptive statistics for variables

In general, the methods by which data can be processed and summarized, called descriptive statistics. These statistics describe the population or sample only and its purpose is calculating the parameters or sample research (Azar and Momenie, 2010, p 8). In descriptive statistics, data analysis is done using central index such as mean and dispersion index such as standard deviation, skewness and stretching.

Figure4.1) theadjusteddiscretionary accruals for sample firmsduring the years2006-2011

According to this chart, adjusted discretionary accruals of sample firms have a downward trend until 2010 but since 2011 has an increasing trend.

Figure 4-2) the status of the Earning before earnings management for sample firm during the years 2006 to 2011

The models estimation:

Considering to that in the present study the status of the loss before the earnings management has been studied in four levels, therefore, this hypothesis will be tested through the following four regression models and using panel data methods:

$$\begin{aligned} Adj(DA)_{i,t} = & \alpha_0 + \beta_1 CLUSTER_1_{i,t} + \beta_2 SIZE_{i,t} + \beta_3 GROWTH_{i,t} + \beta_4 ROA_{i,t} \\ & + \beta_5 WC_{i,t} + \beta_6 LEV_{i,t} + \varepsilon_{i,t} \end{aligned} \quad (1)$$

$$\begin{aligned} Adj(DA)_{i,t} = & \alpha_0 + \beta_1 CLUSTER_2_{i,t} + \beta_2 SIZE_{i,t} + \beta_3 GROWTH_{i,t} + \beta_4 ROA_{i,t} \\ & + \beta_5 WC_{i,t} + \beta_6 LEV_{i,t} + \varepsilon_{i,t} \end{aligned}$$

$$\begin{aligned}
 Adj(DA)_{i,t} = & \alpha_0 + \beta_1 CLUSTER_3_{i,t} + \beta_2 SIZE_{i,t} + \beta_3 GROWTH_{i,t} + \beta_4 ROA_{i,t} \\
 (2) \quad & + \beta_5 WC_{i,t} + \beta_6 LEV_{i,t} + \varepsilon_{i,t} \tag{3}
 \end{aligned}$$

$$\begin{aligned}
 Adj(DA)_{i,t} = & \alpha_0 + \beta_1 CLUSTER_4_{i,t} + \beta_2 SIZE_{i,t} + \beta_3 GROWTH_{i,t} + \beta_4 ROA_{i,t} \\
 & + \beta_5 WC_{i,t} + \beta_6 LEV_{i,t} + \varepsilon_{i,t} \tag{4}
 \end{aligned}$$

In figure 4.6 the results of the estimation of the four models and classical regression model assumptions are presented.

Figure4-6), the first research hypothesis test results

Independent variables	Model 1	Model 2	Model 3	Model 4
C	**8526/0-	*2508/2-	**3993/7-	**5328/7-
T-statistics	(976/4-)	(022/2-)	(259/6-)	(446/6-)
P-Value	(0000/0)	(0434/0)	(0000/0)	(0000/0)
CLUSTER_1	**5396/1	-	-	-
T-statistics	(502/48)			
(P-Value)	(0000/0)			
CLUSTER_2	-	**5366/1 (605/33)	-	-
T-statistics		(0000/0)		
(P-Value)				
CLUSTER_3	-	-	1681/0 (921/1) (0549/0)	-
T-statistics				
(P-Value)				
CLUSTER_4	-	-	-	1846/0 (494/1) (1353/0)
T-statistics				
(P-Value)				
SIZE	0014/0-	0943/0	**4656/0	**4756/0
T-statistics	(126/0-)	(133/1)	(469/5)	(655/5)
(P-Value)	(8997/0)	(2573/0)	(0000/0)	(0000/0)
GROWTH	*0900/0-	*1615/0	*1565/0	**4548/0-
T-statistics	(231/2-)	(122/2)	(974/1)	(748/6-)

(P-Value)	(0258/0)	(0341/0)	(0486/0)	(0000/0)
ROA	0321/0	**1775/1	**1293/5	1504/0
T-statistics	(901/0)	(922/2)	(579/13)	(887/1)
(P-Value)	(3678/0)	(0036/0)	(0000/0)	(0594/0)
WC	0321/0	*1615/0	*1565/0	1504/0
T-statistics	(901/0)	(122/2)	(974/1)	(887/1)
(P-Value)	(3678/0)	(0341/0)	(0486/0)	(0594/0)
LEV	0890/0	4155/0	**8957/0	**9015/0
T-statistics	(902/0)	(128/1)	(647/5)	(694/5)
(P-Value)	(3670/0)	(2595/0)	(0000/0)	(0000/0)
The coefficient of determination	6758/0	6023/0	2982/0	2990/0
F-statistics	**31/350	**270/7	**039/2	**047/2
(P-Value)	(0000/0)	(0000/0)	(0000/0)	(0000/0)
Jarque-Bera -statistics	931/2	841/1	344/4	685/2
(P-Value)	(0750/0)	(1523/0)	(1139/0)	(2611/0)
statisticsBreusch-Pagan	262/4	865/0	162/4	023/2
(P-Value)	(0003/0)	(5332/0)	(0004/0)	(0598/0)
Watson-Durbin statistics	949/1	045/2	889/1	893/1

**Indicates significant at the 1% error level and * indicates significance at the 5% error.

At reviews of overall model according to that the probability of (P-VALUE) F statistics in all four models is lower than 0.05 (0000/0) with a 95% significance of overall model is confirmed. The coefficient of determination on the models also indicate that the first model with the rate of 58/67%, the second model with the rate of 23/60%, the third model with the rate of 82/29% and the fourth model with the rate of 90/29% explain the changes in adjusted discretionary accruals. Also to evaluate the validity of the model and the assumptions of classical regression it should be done tests in related to residues normality, homogeneity of variance and independence residuals. In this research Jarque-Bera test was

used to evaluate normality of error terms. The results of this test indicate residuals obtained from the estimated in each four models have normal distributions at % 95 confidence interval. So that the probability (P-VALUE) in this test is greater than 0.05 for all four models. Other assumptions of classical regression are homogeneity of residual variance. In this study the Breusch-Pagan test has been used to evaluate homogeneity of residual variance.

In this Relevance, the probability (P-VALUE) related to the second and fourth models are greater than 0.05 and homogeneity of residual variance is approved. But in the first and third models the probability (P-VALUE) of Breusch-Pagan is less than 0.05 and indicates lack of consistency in residual variance between the two models. In this study we address this problem by using the generalized least squares method and in estimation weighting coefficients are given to the model by statistical software.

In this connection, the probability (P-VALUE) of CLUSTER_1 Variable of t-statistic is less than 0/05 (0/0000). Therefore, we can say with 95% confidence there is significant correlation between being choking for firm, the earning before applying earning management and adjusted discretionary accruals. Also according to that the coefficient of variable (CLUSTER_1) is positive (1/6935), It can be said that there is a direct relationship between loss before applying earning management and adjusted discretionary accruals. Thus it can be concluded that when the company has losses before applying earnings management, the possibility of using discretionary accruals in order to being profitable for firm increase. Therefore, the first hypothesis is confirmed at the level of 95%. In this study the subject has been studied to examine the issue. In the second level, the status for firms when they have losses before applying earning management and have earnings after applying has been considered (the second model). In this connection, the probability (P-VALUE) for t-statistic related to CLUSTER_2 Variable is less than 0/05 (0000/0) and the coefficient is positive (1/6635). So we can say with 95% confidence level when the firm has losses before applying earning management and has earning after applying, the possibility of using discretionary accruals in order to being profitable for firm increase. In the third and fourth levels (models III and IV) being a choking company before applying earnings management has been studied in a small range. In other words, at the level the possibility of using discretionary accruals when the loss is small has been explored. According to the probability value (P-VALUE) for t-statistics related to both variables (CLUSTER_4 and CLUSTER_3) are greater than 0/05, thus we can say has a low loss before applying earning management effect on the possibility of using discretionary accruals significantly and the possibility of using discretionary accruals in order to being more profitable is appeared when the losses before applying earnings management is high.

The model estimation:

According to the study carried out the status of earning before earning management at four levels, so this hypothesis has been tested through following models and by using panel data method:

$$\begin{aligned} Adj(DA)_{i,t} = & \alpha_0 + \beta_1 \Delta CLUSTER_1_{i,t} + \beta_2 SIZE_{i,t} + \beta_3 GROWTH_{i,t} + \beta_4 ROA_{i,t} \\ & + \beta_5 WC_{i,t} + \beta_6 LEV_{i,t} + \varepsilon_{i,t} \end{aligned}$$

$$Adj(DA)_{i,t} = \alpha_0 + \beta_1 \Delta CLUSTER_2_{i,t} + \beta_2 SIZE_{i,t} + \beta_3 GROWTH_{i,t} + \beta_4 ROA_{i,t} \\ + \beta_5 WC_{i,t} + \beta_6 LEV_{i,t} + \varepsilon_{i,t}$$

$$Adj(DA)_{i,t} = \alpha_0 + \beta_1 \Delta CLUSTER_3_{i,t} + \beta_2 SIZE_{i,t} + \beta_3 GROWTH_{i,t} + \beta_4 ROA_{i,t} \\ + \beta_5 WC_{i,t} + \beta_6 LEV_{i,t} + \varepsilon_{i,t}$$

$$Adj(DA)_{i,t} = \alpha_0 + \beta_1 \Delta CLUSTER_4_{i,t} + \beta_2 SIZE_{i,t} + \beta_3 GROWTH_{i,t} + \beta_4 ROA_{i,t} \\ + \beta_5 WC_{i,t} + \beta_6 LEV_{i,t} + \varepsilon_{i,t}$$

The results of the estimation of the four models and classic regression assumptions are presented in figure 4.9.

Figure 4-9) the second hypothesis test results

Independent variables	Model 5	Model 6	Model 7	Model 8
C	**5879/2-	**4458/3-	**6781/7-	**6839/6-
T-statistics	(237/3-)	(151/4-)	(994/5-)	(188/4-)
P-Value	(0012/0)	(0000/0)	(0000/0)	(0000/0)
CLUSTER_1	**5403/1			
T-statistics	(461/44)	-	-	-
(P-Value)	(0000/0)			
CLUSTER_2		**4710/1		
T-statistics	-	(529/40)	-	-
(P-Value)		(0000/0)		
CLUSTER_3			0652/0	
T-statistics	-	-	(698/0)	-
(P-Value)			(4852/0)	
CLUSTER_4				0660/0
T-statistics	-	-	-	(443/0)
(P-Value)				(6575/0)
SIZE	1063/0	*1318/0	**4868/0	**4231/0
T-statistics	(789/1)	(165/2)	(267/5)	(592/3)
(P-Value)	(0738/0)	(0306/0)	(0000/0)	(0003/0)

GROWTH	**1358/0-	**1171/0-	**4603/0-	**4005/0-
T-statistics	(325/3-)	(699/2-)	(076/6-)	(808/4-)
(P-Value)	(0009/0)	(0071/0)	(0000/0)	(0000/0)
ROA	**1046/2	**4811/2	**1607/5	**6419/4
T-statistics	(706/7)	(391/8)	(397/12)	(073/9)
(P-Value)	(0000/0)	(0000/0)	(0000/0)	(0000/0)
WC	0282/0	**1253/0	1443/0	1439/0
T-statistics	(566/0)	(705/3)	(641/1)	(320/1)
(P-Value)	(5711/0)	(0002/0)	(1009/0)	(1870/0)
LEV	2420/0	**1019/1	**8960/0	7591/0
T-statistics	(238/1)	(628/5)	(719/4)	(782/1)
(P-Value)	(2160/0)	(0000/0)	(0000/0)	(0750/0)
The coefficient of determination	7479/0	7098/0	2939/0	1669/0
F-statistics	**240/14	**742/11	**997/1	*961/1
(P-Value)	(0000/0)	(0000/0)	(0000/0)	(0310/0)
Jarque-Bera -statistics	637/3	366/3	857/3	576/2
(P-Value)	(0903/0)	(0861/0)	(1453/0)	(2757/0)
statisticsBreusch-Pagan	516/0	718/4	296/4	224/2
(P-Value)	(7963/0)	(0001/0)	(0003/0)	(0386/0)
Watson-Durbin statistics	310/2	225/2	898/1	866/1

**Indicates significant at the 1% error level and * indicates significance at the 5% error.

According to the probability value (P-VALUE) of F statistics in all four models are lower than 0/05, the overall model is confirmed with confidence interval of 95%. The coefficient of determination in models also indicate that the first model 58/67%, the second model 23/60%, the third model 82/29% and the fourth model 190/29 percent to account for changes in adjusted discretionary accruals. Also in examining of the validity of the model and the assumptions of the classical regression the results of **Jarque-Bera** indicate the estimated residual in

four models have normal distribution in 95%. So that the probability (P-VALUE) for all four models is greater than 0/05. Also in examining the homogeneity of variance using **Breusch-Pagan**, the probability (P-VALUE) in the first model is greater than 0/05 and the homogeneity of residual variance is approved. But the probability (P-VALUE) in **Breusch-Pagan** is less than 0/05 in models II, III and IV and indicates a lack of consistency of these three models in the residual variance. In this study we address this problem by using the generalized least squares method and weighting coefficients are given to the model in estimation by statistical software. Moreover, considering that the Durbin-Watson statistic are between 1/5 and 2/5 in all four models, therefore, the lack of correlation between the residuals are accepted as one of the basic assumptions of regression in all four models.

The results of the first research hypotheses testing

The purpose of testing first hypothesis is showing the status of discretionary accruals in order to the profitable firm when the firm is before applying earnings management and the statistical hypothesis defined as follows:

H0: When the firm has losses before applying earnings management, Possibility of using the discretionary accruals to show positive changes in profitability don't increases.

H1: When the firm has losses before applying earnings management, Possibility of using the discretionary accruals to show positive changes in profitability increases.

VARIABLE	Coefficient	Statistics	The value of Statistics	Significance level	results
CLUSTER_1	1/6935	T	84/205	0.0000	accept

As you see, there is direct relationship between the losses before applying earnings management and adjusted discretionary accruals. So the effect of having losses on earning management in active firms in capital markets has been verified as a major driver of earnings management.

The results of the second research hypotheses testing

The purpose of testing the second **hypothesis** in this study was to showing the status of discretionary accruals for profitable showing when that company profits in current year is lower than the previous year's profit and the statistical hypothesis defined as follows:

H0: When the company's earnings in the current year are lower than the previous year, Possibility of using the discretionary accruals to show positive changes in profitability don't increases.

H1: When the company's earnings in the current year are lower than the previous year, Possibility of using the discretionary accruals to show positive changes in profitability increases.

H2: When the company's earnings in the current year are lower than the previous year, Possibility of using the discretionary accruals to show positive changes in profitability increases.

VARIABLE	Coefficient	Statistics	The value of Statistics	Significance level	results
$\Delta\text{CLUSTER_1}$	1/3054	T	44/164	0.0000	accept

There is direct relationship between lower earnings before management from the previous earning and adjusted discretionary accruals. Therefore, lower profit in current year compared to the year before the company can be the second major reason for earnings management in the capital markets of Iran.

Interpretation of the results of the second hypothesis

Based on the results presented in figure 4-9, the variable $\text{CLUSTER_1}\Delta$ represents that the current earning is lower than previous earning before applying earnings management (the first model). In this connection, the probability (P-VALUE) for $\text{CLUSTER_1}\Delta$ Variable in t-statistic is less than 0.05. Therefore, we can say with 95% confidence level there is a significant association between low earning before earning and previous earning and adjusted discretionary accruals. Also, according to coefficient of variable for $\text{CLUSTER_1}\Delta$ (positive, 1/3045), we can say there is positive relationship between low earning before applying earning management and adjusted discretionary accruals. Thus it can be concluded that when the current earning is lower than previous earning, the possibility to use discretionary accruals to show positive changes in profitability increases. Consequently, the second hypothesis is confirmed in the 95% confidence level. More in this study we examine the issue in three levels. In second level we consider the status that the current earning is lower than previous earning before applying earning management (the second model). In this connection, the probability (P-VALUE) for $\text{CLUSTER_2}\Delta$ Variable in t-statistic is less than 0/05 (0000/0) and the coefficient is positive. So we can say in the 95% confidence level when before earnings management the current earning is lower than the previous earning and after earning management current earning is greater than previous earning the possibility of using discretionary accruals increases. In the third and fourth levels (models III and IV) the changes of earning before and after applying earning management has been studied in a smaller range. In the other words, in this level we try to examine the possibility of using discretionary accruals when the changes of earning before and after earning management are low. According to the probability value (P-VALUE) of t-statistics related to both variables ($\Delta\text{CLUSTER_4}$ & $\text{CLUSTER_3}\Delta$) are greater than 0/05, So we can say that small changes of earning before and after applying earnings management does not significantly affect the possibility of using discretionary accruals and the possibility of using discretionary

accruals in order to profitable firm is more seen when the rate of earning changes before and after applying earnings management is high.

Recommendations for future research

- It is recommended in future research positive and negative effects of earning management on the investment markets will be investigated.
- It is recommended the place of high concentration on earnings in explain of abnormal accruals will be evaluated.
- It is suggested that in future research topics about earning chain are examined.
- The research could be conducted by emphasize on certain industry and other characteristics of companies.
- It is recommended the applying of earnings management through the changes of classification in income statement including cost items and financial cost will be evaluated.

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