



The Relationship Between Cost of equity and Earning Quality: Listed Companies in TSE

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ABSTRACT

The object of this study is to examine the influence of profit quality on wage cost of shareholders based on comparative approaches of high profit quality and low profit quality on accepted company is Tehran stock exchange. in order to achieve research targets ,we have used of 50companies information in which has been accepted in Tehran stock exchange on 8yeras duration(2002-2009)we have used of compound regression analysis on examining the relation among study variables and we have tested the influence of profit quality on earning cost of shareholders by figurative variable. Based on findings, we indicate by increasing profit quality of accepted companies in Tehran stock exchange, the shareholders' wage cost decreases. The result showed profit quality is influential on decreasing and or increasng shareholders earning cost.

Keyword:

investment cost, earning high quality, earning low quality

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INTRODUCTION

Banks undertake a considerable role for growth and development of economical systems; in such way that Of the preliminary targets of research is to prepare information about performance of business unit in which has been achieved through measuring earning and its elements. Of special interest of financial statements advantages is net evaluating of future cash flow of business unit to evaluate intended yields.(fransis2005)in order to increase forecasting ability of future cash flow, disclosed earning should have quality. General spreading of qualifies information by management decreases information asymmetry in which leads to decrease in investment cost, information risk, increasing future cash flow forecasting ability, improving company valuation and also share cashing.(Ardestani,2007)

Because information risk is from low exactness in provided information and or non ability in evaluating intended yields, we expect earning quality character have has negative influence on shareholders' cost of equity in a amount in which unclear yields of investors and interested. (fransis2003) whereas, cost of investment is based on yields' ratio of investors, is related to the amount of accepted risk. Shareholders hold on companies financial statements specially earning reported in determining yields ration. Therefore, reported earning is influential on yields evaluation of shareholders and determining the ratio of investments' expense. in this study, cost of equity relation of shareholders by earning quality has been tested by experimental approaches in companies by high quality and companies by low quality in earning in Tehran stock exchange has been tested experimentally.

2. Study problem indication:

Creating equilibrium among risk and yields is one of the most important applications of investment market. Risk and yields are of the basic concepts in financial literature in which appear in investment cost form. Investment cost have has the basic role in financing decision making and investment. Investment cost is related to intended yields in concept. In other words, investment cost is the same as the least yields ratio. When intended yields are lesser from investment cost, the value of economical unit would decrease. therefore management should try to maintain economical unit value and reach intended yields to the least level of investment cost, in this case success key is decreasing investment cost.(osmani 2012) whereas investment cost is based on intended yields ratio of investors' expectation, is related to the amount of risk accepted by them. (sofianay 2005)companies try to increase the ability of future cash flow forecasting and decrease information risk.(ardestani,2007)

The investment cost is equal mean of supplied resource cost from debt and shareholders' equity. Because financing cost ratio is not competitive in Iran and generally has been determined through banking system and by order, therefore, in this study among investment elements, only shareholders' cost of equity has been considered. Therefore, we have tried to test the relation of shareholders 'cost of equity and earning quality based on comparative approaches of accepted companies in Tehran stock exchange by high

earning and low one. The basic questions in this study include:

1. Is there any relation among shareholders' cost of equity by the character of companies by high quality in Tehran stock exchange?
2. Is there any relation among shareholders' cost of equity by companies' character by low quality in earning in Tehran stock exchange?

Theoretical principle and study back ground:

Accounting earning and its element are of important information in decision making. Investors seek their interest in earning information. Accounting earning indicates belief changes and investors behaviors. Observances shows accounting earning is a good indicator for share yields and forecasting future cash flow, but because of conservative limits and the importance in determining accounting earning, some analysts concluded economical earning is better indicator than accounting earning in forecasting future cash flow. Economical earning has been defined by Adam smith for the first time and then has been developed by Hix. He defined earning as an amount in which person consumes in a period and at last does have the same welfare as the first eras.

In order to evaluate performance and measure earning ability in accompany and interested and investors could evaluate intended yields by earning information, information quality should be in a method in which make achievable past performance evaluation and be influential on measuring earning ability and forecasting future cash flow. Therefore, in addition to importance of reported earnings for investors and on their decisions, earning quality character is one of important dimension of earning information for investors.

Earning quality is a concept in which does have different aspects. In this case, different definitions and measuring measures have been prepared in this regard in which some of the most important includes:

(Rosain, 1999) has known an earning more qualified in which has been more stable. (Richardson and et, al2001) earning quality is the fixation degree of future income performance. Defining (Benish and Vargas, 2002) of earning quality is the stability of current income in future. (Penman and Zhang, 2003) earning quality is the ability of earning in showing future income.

(Skipper and wincent, 2003) has known earning quality related to intended earning of hix. From their view, earning quality is the amount of truth in which reported incomes has been shown in hix intended earning. Based on their view, earning quality has been defined based on the relation among earning, accrual matters and cash flow and earning is qualified if be more close to earning quality and does have continuous and forecasting ability. In this case, we believe accrual matters decrease earning quality. One of measuring indicators is the ratio of cash flow from operational earning (CFO/OE) in which has been mentioned in different studies like Neveshte (penman, 2001).they interfered in this ratio, more closing earning to cash flow increases earning quality. Earning by high quality decreases investment cost because of decreasing information risk in which does have relation to decreasing shareholders' cost of equity and increasing transaction volumes. Ambiguity increase in earnings is

related to increasing shareholders cost of equity and decreasing transaction volume in stock market. When general people do not have confidence to financial reporting procedure or financial information propagated, they change investment and this avoids market development. Earning high quality encourages investors. When they confidence to companies earning quality, they invest more in stock exchange market. (Bolo, 2006)

Study background

Francis and et, al. (2003) has examined the relation among earning quality and special cost of debt and shareholders cost of equity. In this study, the relation among eight indicators of earning quality to special cost of debt and shareholders cost of equity has been examined. The result showed companies by low level of earning quality have has higher debt and general share cost in comparing to companies by high level of earning quality.

Gash and others (2004) have examined earning quality and earning reaction coefficient on increasing by earning stability and sale. The result showed , companies by earning growth along with increasing sale does have higher earning quality and earning reaction coefficient than companies by earning growth along with decreasing cost.

Chan and others(2004)have examined the relation of accrual matters(the difference among earning and cash flow)to the future yields of shares and showed companies by high level of accrual in the eras after reporting financial information, their share yields would decrease. One interpretation is companies by low level of earning quality in the eras after earning reporting would have decrease in yields, because investors understand low level of earning quality and adjust share price feasible to it.

Francis and et,al.(2005)has concluded accrual matter quality is influential on financing cost. In addition, investment cost of companies by accrual matters and low quality is more.

Chio chi (2009) has studied the influence of financial reporting clearance on performance and company value in Taiwan stock exchange. The result showed clearance of financial information disclosing would maximize company value and avoids creating moral risk among manager and owners.

Saghafi (2004) has examined the relation among earning quality and market reaction to cash flow changes. The result showed investors in Tehran stock exchange in reaction to cash flow changes, has considered companies earning quality.

Khajavi and nazemi (2005) has determined the relation among earning quality and shares yields by emphasis on accrual matters. Based on study findings, the mean share yields of companies are not affected by the amount of accrual matters and its elements.

Bolo(2006) has examined earning quality characteristics and share holders cost of equity. And also the relation among shareholders cost of equity by four earning characteristics based on accounting data including accrual matter quality, stability, forecasting ability, and leveling in Tehran stock exchange companies has been examined, too. The result indicates the only earning stability character does have negative relation to shareholders cost of equity.

Kordestani and ziaeddin majdi(2007) have examined the relation among earning quality characters and general share investment cost. In this study, the relation among five

earning quality characters has been determined including earning stability, earning forecasting, earning relation to share value, in time and conservative earning to cost of investment in general share. The result of study showed the reverse relation among quality characters of earning including stability, earning forecasting, earning relation to share values, in timing and general share investment cost approves this relation is meaningful in statistic. But there is no meaningful relation among earning conservatism and general share investment cost.

Esmael zade(2010)has considered the influence of company ruler ship on earning quality in Tehran stock exchange on2007-2008. Company ruler ship affairs in which has been studied in this research includes institutional shareholders' ownership percentage, general shareholders number of blocks, uncharged managers percentage in management boards, non existing of general management as an officer or vice president of management boards and independent audit size. Study hypothesis test by the aid of panel analysis and information of 94companies accepted in Tehran stock exchange on 2004-2008 through time series data and sectional has been done. Study result shows there is positive meaningful relation among institutional shareholders ownership percentage, general shareholders number of blocks, managers percentage uncharged in management boards, none existing of general management as an officer or vice president in the board and the size of company audit and earning quality.

John johny(2011) has studied the relation among earning and its elements to share yields by emphasis on earning quality in accepted companies in Tehran stock exchange and the relation among earning and its elements to shares yields by emphasis on earning quality on accepted companies in Tehran stock exchange. In order to examine this, the sample of 230 companies of accepted one in Tehran stock exchange has been selected for the time series of 7years from 2002-2008. The result of compound method showed earning elements does have informational content, but cash flow element of earning does have more information than accrual element. Also, the result showed companies by high quality in earning, positive yields and companies by low level of earning quality does have negative yields. Whereas companies by high level of quality in earning could achieve 17%more yields than companies by low quality in earning.

Research hypothesis

In order to achieve research targets, some hypothesis has been suggested:

First hypothesis: there is negative and meaningful relation among shareholders' cost of equity and high quality of earning.

Second hypothesis: shareholders' cost of equity in companies by low quality is more than companies by high quality.

4. Research method

This study is applicable from target view and from nature and method id of descriptive and of correlation one. Also, from gathering information, research is after events for analyzing information, we have used of descriptive statistic, inferential, regression multi-variables method. Study hypothesis has been tested based on compounded data and also the influence of earning quality on cost of equity in shareholders has been tested by figurative variable. Model

variables have been determined based on Gordon growth and Ben Hesin Bao models. Also, in order to account and process variables, we have used of 7Eviews, Excel2007 software

5.1 society, statistical sample and study duration

Statistical society of study includes all accepted companies in Tehran stock exchange. Statistical sample has been selected from 2002-2009 based on below conditions:

1. Company name on 2001/02/28 has been registered in the list of accepted companies.
2. The end of financial year is the end of isfand. Also, during research, financial year has not been changed.
3. Statistic and information related to variables and explanation notes of financial statements are in access.
4. There are no more than three months transaction stops.
5. Research has been done for non financial companies. Therefore, banks and all investment companies, leasing and financial institute has been lost from sample. Of factors in deleting companies and financial institute:

-the difference among financial risk interpretation (high lever ratio) in financial and non-financial companies, this risk is possible for financial, general and non financial companies and leads to incorrect decision making.

-there is difference in methods and accounting evaluation in financial and non financial companies in which their involvement leads to error results.

-Unclear categorization among operational activities and financing financial and non- financial companies.

5.2 study statistical model

In order to test research hypothesis, we have used of regression analysis based on statistical model. Also, the effect of earning quality has been tested on shareholders' cost of equity.

Cost of equity $j.t = \beta_0 + \beta_1 \text{EPS } j.t + \beta_2 (G1 \times \text{EPS}) j.t + \beta_3 (\text{SIZE } j.t) + \beta_4 \text{B.M } j.t + \epsilon j.t$

Cost of equity: I company's shareholder' cost of equity in t-year.

EPS: any share of J Company in the year of t

G1: earning quality indicators' determination. This indicator is one for companies by quality earning and other is zero.

Size: natural logarithm of the sum of j companies earning in the year of t

B.M: share book value ratio to the share market value of J Company in the year of t

DEBT: debt ratio to the all earnings of J Company in the t-year.

5.3 variables and the method of computation

Because measuring and investment cost accounting is the most problematic procedure of this study, but by access to required shareholders' cost of equity, Gordon model has been selected to account shareholders' cost of equity.

The method of measuring shareholders' cost of equity through Gordon growth model is (damodaran, 2002)

In this model, it has been supposed is general shares' investment cost (general share intended yields ratio), we could compute k from this relation:

$$\text{Cost of equity} = \frac{D_1}{P_0} + g$$

Relation2:

In above model:

D1: cash profit paid at the end of first year

P0: any share price at the beginning of year

G: dividend growth ratio in which have been achieved by this relation:

$$g = \left[\frac{\text{EPS}_t}{\text{EPS}_0} \right]^{\left(\frac{1}{t} \right)} - 1$$

Relatio3:

Independent variables: in this study, earning quality is an independent variable in the two levels of companies by high quality in earning and low quality earning. In a study of Ben Hesin Bao, 2004 by the topic of "leveling income, earnings quality and companies valuation" in order to determine companies by high quality in earning have used of three indicators:

1. Profits cash content (any share cash operation to the share profit) is more than the mean as a whole.
2. Any share cash flow is the sum of positive operation.
3. Any share profit is positive (any share profit is positive before unexpected matters.)

If any company does have those characters, is the one who have has qualifies income and if any company does not have any one of those conditions, does have low quality earning.

Control variable: in this study, in order to increase exactness and result confidence and controlling different indicators having influential risk on shareholders' cost of equity, we have determined three variables of company size, book ratio to market, and debt ratio as a control variables based on the past studies. Company size is substitute of information environment. In order to control opportunities collection of company investment on shareholders' cost of equity, we have used of book ratio to market value. This ratio is generally an indicator for growth opportunity. The difference among market value and book ratio could be the cause of existing unobserved assets in company. Debt ratio to asset is one of scales of measuring financial lever. Company size is equal to book value of company assets and the ratio of book accounting to market value is the ratio of book value of company share to the market value. Debt ratio to asset is achieved through dividing all debts on assets of company.

6. Descriptive statics of research variables

Table1 is the result of descriptive variables of study.

Table1. Descriptive statics of research variables

| Elong.coef | Desolate. Coefficient | elongation | desolate | variance | s.d | mean | Study variable |
|------------|-----------------------|------------|----------|------------|--------|--------|-----------------------------|
| 28.896 | 15.479 | 7.206 | 1.935- | 0.226 | 0.475 | 0.292 | Shareholders cost of equity |
| 22.903 | 11.867 | 5.575 | 1.448 | 880261.030 | 938.22 | 795.42 | Share profit |
| 7.130 | 9.111 | 1.753 | 1.123 | 0.382 | 0.618 | 5.746 | Company size |
| 20.437 | 15.547 | 5.051 | 1.926 | 0.370 | 0.608 | 0.640 | Book ratio to market value |
| 64.537 | 21.533 | 15.868 | 2.654 | 0.049 | 0.222 | 0.669 | Debt ratio |

In continue, we explain any variables:

Shareholders cost of equity: it is dependent variable and does have 381observance in which has been formed from 50 company’s observance during 8 years. The mean of variable 0.292and standard deviation is 0.475.this variable does have 0.226variance and negative desolation and positive elongation. Any share earnings: this variable does have independent role and 400observances in which has been formed by 50companies observances during 8years. The mean of variable is 795.415 and its deviation is 938.222. This variable does have 880261.030variance and positive elongation and desolation.

Company size: this variable does have the role of independent control variable, 392observances and has been formed by50 observances of company and about 8years. The mean of variable is 5.46 and standard deviation is 0.618.this variable does have 0.382variance and positive

elongation and desolation. Book ratio to market: this variable does have independent control variable, 388observances and has been formed by50companies observances and about 8years .the mean of variable is 0.640 and standard deviation is 0.608.this variable by 0.370 variance and positive elongation and desolation. Debt ratio: this variable does have the role of independent control variable, 392observances in which has been formed by 50companies in about 8years. The mean of variable is 0.669 and standard deviation is 0.222. This variable does have 0.049variance and positive elongation and desolation.

7. Test related to research model

7.1chave test

Before evaluating model, it requires examination of panel data in chavez test. According to test result and related probability in table2, We conclude this model is compounded.

| Table2:chavez test | | |
|--------------------|------------------|------------------|
| probability | Statistic amount | Statistic name |
| 0.9977 | 0.957732 | Fisher statistic |
| 0.9835 | 61.278258 | Kido statistic |

In diagram1, Bra-jarek statistic amount (3.76) and related probability (0.25) indicates hysteresis sentences normality in model1.

7-2normality of hysteresis sentences test

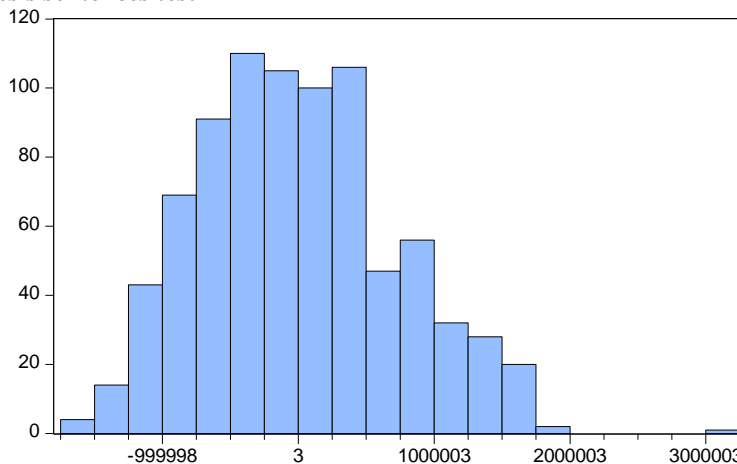


Diagram1. Normal distribution of hysteresis sentences

7-3.unit root test of dicki fuller

The test of dicki fuller unit root is the best test for stability. Dicki fuller based on zero hypothesis p=1 means time series does have unit root and are unstable and by this hypothesis in which real data production procedure is without width from origin. Stability test has been done by unit root test and the result has been shown in below table.

| Critical amount | | | situation | Statistics amount | Variable name | number |
|-----------------|-----------|-----------|------------------|-------------------|------------------------------|--------|
| 10% | 5% | 1% | | | | |
| -2.570894 | -2.869155 | -3.447866 | First difference | -2.870638 | Shareholders' cost of equity | 1 |
| -2.570588 | -2.868583 | -3.446567 | First difference | -8.944664 | Any share earning | 2 |
| -2.570588 | -2.868583 | -3.446567 | First difference | -10.31524 | Earning quality | 3 |

In above table, based on probability and statistic coefficient, we conclude cost of equity variable does not have unit root and is stable in 5%errpr level. According to probability and statistic coefficient, variable (any share earnings) does not

have unit root and is stable. In above table, based on probability and statistic coefficient, we conclude (GEPS) indicator does not have unit root and is stable.

7.4hysteresis sentences stability test

| Critical amount | | | Statistic amount |
|-----------------|-----------|-----------|------------------|
| 10% | 5% | 1% | |
| 1.616164- | 1.941623- | 2.570800- | 2.180072- |

Because the statistic amount of hysteresis sentence of dicki-fuler is lower than critical amount, therefore we conclude hysteresis sentence or pattern error is stable in all levels and is real regression.

table6: evaluating compound regression

| Meaningful level | t-test | s-deviation | coefficient | Variable name |
|------------------|-------------------------|-------------|-------------|------------------------------|
| 0.0363 | -2.105768 | 0.894245 | 1.883072 | Fixed coefficient |
| 0.0000 | 8.223361 | 7.02905 | 0.000577 | Any share earning |
| 0.0037 | -2.935662 | 6.63905 | 0.000195- | High quality share |
| 0.0326 | 2.150414 | 0.150439 | 0.323505 | Company size |
| 0.6047 | 0.518320 | 0.064704 | 0.033537 | Book-market value |
| 0.0048 | -2.848093 | 0.197221 | 0.0561705 | Due-ratio |
| 0.0044 | 2.876902 | 0.081754 | 0.235199 | The first run auto- return |
| 0.028264 | Dependent variable mean | | 0.573019 | Determination coefficient |
| 0.439343 | d-variable deviation | | 0.0471795 | Remedied d- coefficient |
| 23.65360 | Non-explained de-square | | 0.319304 | Regression measure deviation |
| 1.779610 | Dorbin-watson statistic | | 5.660908 | Fisher statistic |
| | | | 0.000000 | Meaningful level |

Based on the result of hypothesis test, fisher test and t-student, it shows there is meaningful relation among dependent variable and independence. Function is not affected by auto-correlation .Durbin Watson statistic is about 2.

9. Research hypothesis test result

9.1the first hypothesis test result

In the first hypothesis has been indicated:"there is high negative and meaningful relation among expense of shareholders and high quality of earning." according to the coefficient of earning quality in regression model of research (-0.000195) and its probability (0.0037) indicates

8. Evaluating research model

Research model based on compound regression in table 5 is:

$$COC = -1.88 + .00057 \times EPS - .00019 \times G1 + .323 \times SISE + .033$$

the first hypothesis in 95%confidence level has been approved. In other words, by increasing accepted companies in Tehran stock exchange earning quality, right expense of shareholders decreases. The result indicates earning quality is influential factor in decreasing and increasing shareholders; right expense and by changing earning quality, we could manage and control the right expense of shareholders in companies.

9-2.the result of second hypothesis

It has been indicated in the second hypothesis:"expense of shareholders in companies by lower quality of earning is more than companies by high quality in earning." when

earning quality of a company is low, earning quality indicator in regression model is zero and therefore, shareholders expense in these companies is more than companies by qualified earning. In other words, earning

Table7: reaserch hypothesis result

| Hypothesis number | Hypothesis topic | Hypothesis result |
|-------------------|---|-------------------|
| 1 | There is negative and meaningful relation among expense of shareholders and high quality of earning | approve |
| 2 | Shraholders expense in companies by unqualified earning is more than qualifies earning companies. | approve |

10. Analysis and conclusion

Companies by qualified earnings do have lower risk in attracting investor to finance. In this case, supplier of companies resource are seeking investing in companies in which does have qualified earning. In fact, entering investment and financings easier for those companies in which foes have qualifies earning, because there is extinct confidence in investors to reach their yields. In one hand, companies by low quality or without it should supply more ration than others to attract investors. In this case yields ratio increases from investors and finance resource suppliers view and investment ratio from companies and establishments view, too. The result of the two hypothesis test approves explanation of study.

11. Research suggestion

1. We suggest investor in stock exchange to invest in companies in which does have earning by high quality
2. Investor should pay attention to the influence of companies earning quality on earning cost .whereas qualified earning by lower cost of investment and low quality earning is related to higher cost of investment.
3. We suggest dividing industries to determine its effect on.
4. In this study, in order to measure profit quality, we have used of Ben hessian Bao (2004) measure. Other researchers could use another measure to evaluate earning quality.

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quality increases investor's confidence to future cash flow forecasting and by lowering investment risk, it is expected to decrease the expenses of shareholders 'investment by increasing earning quality.

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