

Investigating the Relationship between Voluntary Disclosure and Financial Performance and Earnings Management (Emphasizing the Moderating Role of the Corporate Life Cycle)

Seyyed Mohammad Hosseini

Ph.D. Candidate, Department of Accounting, University of Mazandaran, Babolsar, Iran.
(Email: smh970@gmail.com)

Esfandiyar Malekian*

*Corresponding author, Prof., Department of Accounting, University of Mazandaran, Babolsar, Iran. (Email: e.malekian@um..ac.ir)

Abstract

This study aimed to investigate the relationship between voluntary disclosure and earnings management and financial performance during the life cycle of the listed companies in Tehran Stock Exchange. The statistical population of the study included all listed companies in Tehran Stock Exchange since 2013-2018. In this study, earnings management, the financial performance of the companies (including return on equity, returns on assets, Tobin Q ratio, economic value-added, and refined economic value added) were the dependent variables, and the level of voluntary disclosure was the independent variable and the life cycle of the company was considered as the moderating variable. Also, in order to test the research hypotheses, a linear multivariate regression model using combined data was used. The results showed that earnings management and financial performance indicators have a significant relationship with voluntary disclosure over the life cycle. Accordingly, an increase in the level of voluntary disclosure increased the company's performance. Also, the results of the study indicated that the company's life cycle mediates the relationship between the level of voluntary disclosure and the company's performance.

Keywords: Voluntary disclosure, earnings management, financial performance, life cycle.

Introduction

Users of corporate financial reports need quality financial information to make purchasing, sales, performance appraisal, and other important economic decisions. In general, investors invest in an entity when they first have sufficient information about it. A strong reliance on the accounting figures, and especially profits, provides strong incentives for the managers to manipulate profits for their own benefits. This causes users to access incorrect information and make wrong decisions based on it (Khodamipour et al., 2013). Therefore, in every organization, providing voluntary information about identifying, measuring, and disclosing accounting items in the financial statements attracts investors, effectively helping to improve the financial situation and management image of the company (Iatridis and Alexakis, 2012). In this regard, voluntary disclosure of information by the companies can be seen as a key concept to protect the interests of the shareholders against the discretion of managers. Investors' better understanding of the manager in anticipating economic changes increases the value of the company.

Therefore, managers can voluntarily provide their forecast information about the future economic environment of the company and also provide forecasts of earnings management increase the value of stocks and thus increase the competitive position of the company in its related industry in the capital market. However, in addition to having business benefits, voluntary disclosure also imposes costs on the company. In this regard, the theory of voluntary disclosure states that managers will disclose the information if the benefits of disclosure outweigh its costs (Heitzman et al., 2010). Therefore, voluntary disclosure of information by the company managers can affect their performance and profitability. Another factor affecting the rate of voluntary information disclosure is the life cycle of the business unit. According to this theory, companies come into being one day like living beings and by going through various stages of growth, maturity, and progress, they will reach a state of decline and decline one day.

Utami and Inanga (2011) divided firms' life cycles into three growth, maturation, and decline stages. They concluded that maturing firms have less information asymmetry than growing and declining firms. Companies that are in the maturing stage are older than the companies in the growth stage and have been carefully analyzed by the analysts and investors and are well known in the market and therefore should have less information asymmetry, requiring less voluntary disclosure. Therefore, the purpose of this study was to answer the general question of whether voluntary disclosure affects financial performance

and earnings management and if different stages of the life cycle play a role in this effect.

1. Theoretical foundations of research

Voluntary disclosure theory states that managers will disclose information from the company they manage if the benefits of disclosure outweigh its costs. Useful and relevant information provided through discretionary disclosure improves the decision-making process of the investors and puts other users of the company's information disclosure in a better position for allocating financial resources (Kristendal and Bontis, 2007).

While the disclosure of the information is what society wants, the interaction between costs and benefits can lead to the disclosure of certain items; in such cases, the question arises as to whether disclosure should be optional or mandatory. In the literature of accounting and economics, the view has been supported that in terms of information asymmetry, the disclosure of confidential information increases economic efficiency and the extent of this efficiency and the final impact on the financial conditions significantly depends on the information content of the disclosed material, method of disclosure, and its use; Therefore, companies are expected to disclose information voluntarily and incur direct and indirect costs of disclosure in return for the received benefits (Ferguson, 2002). In other words, more voluntary disclosure will enable investors to make better judgments about the company's financial performance and to better identify the potential misuses of the resources by the corporate executives through earnings management. It can also be said that voluntary disclosure is similar to the channel through which the current and potential shareholders obtain information about the value and performance of the company and the relationship between individuals within and outside the organization (Alves et al., 2015).

Also, providing voluntary information on the identification, measurement, and disclosure of accounting items in the financial statements attracts investors and effectively helps to improve the financial situation and management image of the company (Iateridis and Alexakis, 2012). Another consequence of the voluntary disclosure is the reduction of uncertainty, which in turn reduces the need to monitor management activities and consequently reduces earnings management and increases the firm's financial performance (Gietzmann and Trombetta, 2003). Another effective factor in the relationship between voluntary disclosure and financial performance is the business unit's life cycle. The theory of the company's life cycle assumes that economic enterprises, like all living things, have a life cycle. Companies at different stages of their life

cycle (growth, maturity, and decline) have certain financial and economic manifestations and behaviors. This means that the manager's behavior in the voluntary disclosure of information, as well as the existence of corporate governance mechanisms, are influenced by the life cycle stage in which the company is.

There are two competing views in explaining the effect of the life cycle on the voluntary disclosure of information. The first view states that the companies in the growth phase tend to report lower quality information to eliminate the risk of losing their competitive advantages, and after completing their projects and entering the maturity stage, they increase the quality of their information by increasing voluntary disclosure; the opposite view called the signalling perspective, is based on the assumption that companies in the growth phase tend to show their desired future growth opportunities and performance through information disclosure, thereby increasing the quality of their information (Bush et al., 2010).

Matured companies also have the ability to maintain a longer-term presence in the market and are constantly and closely monitored by the analysts and investors, having less information asymmetry and needing less information disclosure.

Background

Wald et al. (2020) examined the effect of corporate governance on the corporate financial performance in their study. Corporate governance mechanisms of this study were board accountability index, audit committee index, disclosure and transparency index. The results showed a significant difference between India and the Persian Gulf countries in terms of financial performance and corporate governance indicators. Ilhan et al. (2019) examined the relationship between corporate governance and performance in the emerging markets. Their results showed that increasing mutual ownership has a negative relationship with accounting performance and private ownership leads to improving the performance of the companies.

Pedersen et al. (2018) examined the relationship between business innovation, sustainable performance, and increasing company value in the fashion industry. They interviewed 492 Swedish corporate executives and found that companies that are more innovative tend to disclose sustainable performance more and ultimately have higher values. According to the theory of stakeholders and resources, Haffar and Searcy expect a positive relationship between the disclosure of sustainability information and the financial

performance and value of the firms; because resource-based perspective theory states that a company has unique capabilities, and if exploited strategically, it can gain a competitive advantage that will lead to the better financial performance. In the stakeholders' theory, compliance with the stakeholders' requirements improves the financial performance and value of the company. Gorbel and Triki (2016) examined the consequences of the voluntary disclosure on the Tanzania Stock Exchange. The researchers looked at the level of profit smoothing in the companies and found that in the companies with higher voluntary disclosure rates, the rate of change that managers make to smooth profit is also reduced. Also, in companies with higher voluntary disclosure level, decreasing smoothing level increases the value of the company. Bazrafshan et al. (2016) conducted a study titled "The effect of earnings management on the level of disclosure and financial performance", showing that there is a non-linear relationship between disclosure and adjusted performance of the company.

Eugster and Wanger (2013) examined the quality of voluntary disclosure, operating performance, and stock market evaluation. Operating performance is measured by three criteria of net profit margin, earnings-to-equity ratio, and sales growth. The results showed that there is a positive relationship between operational performance criteria (as the independent variable) and voluntary disclosure. Aviar et al. (2013) examined the relationship between company characteristics and the level of voluntary disclosure of the companies in the Turkish Stock Exchange. The results showed that there is a positive relationship between firm size, audit firm size, independent board members, and corporate ownership with the level of voluntary disclosure (as the dependent variable). Also, there was no significant relationship between profitability criteria and board size with the level of voluntary disclosure. Ayatridis and Alexakis (2012) examined the motivations of the voluntary disclosure and the differences between voluntary and involuntary disclosure in the Athen Stock Exchange. Findings showed that voluntary disclosure indicates higher profits and growth of the companies and reflects the "good news" of the company. Also, according to the findings of this study, voluntary disclosure has a negative relationship with earnings management. Jiao (2011) examined the relationship between disclosure rankings and operating performance of the companies. The results showed a positive relationship between disclosure rankings (as the independent variable) with R&D performance measures, sales growth, and net profit margin. Larijani et al. (2018) studied the relationship between disclosure of internal control reports, agency costs, and earnings management. The results show that there is no significant relationship between

the disclosure of internal control reports and agency costs and between earnings management and agency costs. Mirabbasi and Khazen (2017) studied the effect of disclosure quality on the relationship between corporate governance and earnings management. Findings showed that there is no significant relationship between earnings management and disclosure quality.

Pourheidari et al. (2017) investigated the relationship between earnings quality and the cost of capital with voluntary disclosure. The results showed that there is a direct and significant relationship between high (low) profit quality and higher (lower) disclosure by the companies. Pourzamani et al. (2015) investigated the effect of company life cycle on the relationship between disclosure quality and capital structure. Findings showed that in both stages of growth and decline of the companies' life cycle, there is a significant relationship between the quality of accounting information disclosure and their capital structure; while, such a relationship is not seen in the maturity stage. Khodamipour et al. (2013) investigated the effect of disclosure quality on various types of earnings management. Findings indicated a significant and negative relationship between the quality level of disclosure and earnings management of the accruals and actual earnings. Using the logit regression model, the results also show a significant and negative relationship between overall earnings management and the quality level of disclosure.

Research hypotheses

According to the theoretical foundations and literature, the hypotheses of this research are expressed as follows:

H1: There is a significant correlation between voluntary disclosure and earnings management criteria of the company during the life cycle of the company.

H2: There is a significant correlation between voluntary disclosure and return on equity (ROE) during the life cycle of the company.

H3: There is a significant correlation between voluntary disclosure and return on assets (ROA) during the life cycle of the company.

H4: There is a significant correlation between voluntary disclosure and the Tobin Q ratio during the life cycle of the company.

H5: There is a significant correlation between voluntary disclosure and economic value added (EVA) during the life cycle of the company.

H6: There is a significant correlation between voluntary disclosure and refined economic value added (REVA) during the life cycle of the company.

Methodology

This study was cross-sectional, correlation and post-event. The analysis of the collected data was done in three stages; first, the research data were collected from Rahavard Novin Software and the official website of Tehran Stock Exchange, as well as the published financial statements of the sample companies using differentiating variables classified into the stages of growth, maturity, and decline; in the last stage, the research hypotheses were tested using statistical methods of correlation analysis and cross-sectional regression. The statistical population in the study included all listed companies in the Tehran Stock Exchange that have been the members of the Tehran Stock Exchange since 2013 or before. The following criteria were used to select the appropriate sample by the systematic random sampling method:

1. The companies were not part of the investment or financial intermediaries, holdings, banks and leasing companies.
2. The company's fiscal year ended in the last winter month.
3. Financial information of the companies in the study period was available.
4. The companies' stocks were traded continuously in Tehran Stock Exchange with no trading stop for more than 1 month.

According to the above conditions, 110 companies (770 companies - years) were selected as the statistical sample of the study.

1. Research patterns and variables

The model for testing research hypotheses was tested using the Dixon (2011) life cycle criteria based on the following regression model:

$$\left\{ \begin{array}{l} Y_{it} = \beta_0 + \beta_1 DSCORE_{it} + \beta_2 SIZE_{it} + \beta_3 LEV_{it} + \sum_{i=1}^3 \beta_9 Clc - Dum_{it} + \\ \quad \text{Industry Effects} + e_{it} \\ Y_{it} = DAC, ROA, ROE, TOBIN Q, EVA, REVA \end{array} \right. \quad (1)$$

Where, the variables of this study were divided into four groups of dependent, independent, moderator, and control variables.

2. Independent variable

Voluntary Disclosure of Information (DSCORE): For calculating the independent variable, a collection of recommended voluntary disclosure items was collected and then scored to calculate the independent variable by studying many sources, including the research conducted by the academics and professionals, reading the guidelines of various professional associations, and the opinion of the financial experts.

Table 1. Designed scoring form

| Dimensions of optional disclosure | | score rate | Indices |
|---|---------------------------|------------|---|
| information background | general information | 6 | Summary of the company's activity history, diagram of the company's organizational structure, explanation of the scope of the company's business activities, the company's position in the industry in an analytical manner, an overview of the most important events of the past year (s), statement of the major company risks |
| | company strategy | 5 | Expressing the general goals and strategies of the company and business sectors, Expressing production strategies, Expressing financial and investment strategies, Expressing marketing strategies, Organizational culture, |
| | Policies and actions | 5 | Important performance and achievements of the company, statement of legal claims and its status, time definition and determination for each goal of the company (planning to achieve goals), planned actions to achieve goals in the coming years, actions were taken during the year to achieve goals |
| Future perspective | | 6 | Future Plans for quantitative and qualitative product development, future plans in the field of technology, future plans for marketing network expansion, future research and development projects, future plans for marketing network expansion, plans for expanding product exports in the coming years, future plans for performance improvement and profitability increase |
| Corporate governance and internal processes | Company board information | 11 | List of board members and statement of their educational and professional records, list of executive directors and statement of their educational and professional records, membership of board members in the board of directors of other companies, number of shares held by board members, number of shares held by executives, Managing Director and former members of the Board of Directors, number of annual meetings of the Board of Directors and the presence of members, issues to be considered in the meetings of the Board of Directors and their approvals, salaries and benefits/remuneration of board members, salaries and benefits of CEOs, remuneration policy for CEOs and board members |
| | Internal processes | 7 | Measures are taken to eliminate valueless activities, using new management accounting techniques in production, describing production technology and comparing it with competitors, measures to improve the quality of production processes, measures to reduce costs and cost of goods, measures taken to improve and develop suppliers, providing production productivity ratios |
| innovation & growth | innovation | 3 | The main actions of the research and development unit and the laboratory unit of the company, the achievements of the |

| | | | |
|---|----------------------------------|---|---|
| | | | research and development department, the expenses of the research and development department |
| | Growth | 4 | Studies to increase factory capacity, percentage of research projects progress, ongoing development projects and percentage of work progress, the effect of project completion on performance |
| Sales and Customer Information (Marketing) | | 9 | Major customer composition, foreign market characteristics, market share (analysis at country, segment, product level), market share analysis compared to the competitors, consumer rights certification, measures taken to manage sales and identify customers and new markets, the impact of marketing activities on sales, Measures taken to increase customer satisfaction, receipt of certificates related to the sales and after-sale service |
| Human Capital | | 6 | Employees information by the employment type, education, age, background, per capita training (person-hours) (hours of training divided by labor), labor productivity, per capita of personnel costs, reward description (reward system), staff qualification policy |
| Social and environmental performance | social performance | 5 | Measures were taken for the economic development and self-sufficiency of the country, support for the university, students and elites, stating measures to combat money laundering, membership in social, cultural, religious and sports institutions, providing social costs |
| | environmental performance | 5 | Environmental costs, measures related to compliance with laws and regulations related to the environment, environmental protection plans and programs, activities to promote the culture of environmental protection, receiving awards for the environmental protection such as the Green Industry Award |
| financial information | risk analysis | 9 | Risk of exchange rate fluctuations and its analysis, business risk and its analysis, Financial risk and its analysis, Risk of changing domestic and foreign laws, Risk of change in prices of production inputs, Risk of product quality, Risk of liquidity and its analysis, Risk of interest rate and its analysis, Actions were taken to address the risks |
| | financial ratios | 7 | The current ratio, Receivables period, Debt ratio, Return on sales, Return on equity, Return on assets, Analysis of changes in financial ratios |
| | financial stocks and performance | 9 | An overview of the financial performance of subsidiaries, analysis of changes in investments, P / E ratio of stocks, statement of financing policies, actions taken regarding the duties of the previous years, the trend of stock price changes and its analysis, dividend trend of each share and its analysis, analysis of changes in capital structure, analysis of changes in liquidity status |
| The total score of information disclosure is 97 | | | |

To score the above items, first, the disclosures of the sample companies are examined in the form of annual information reports, where DSCORE is the cumulative disclosure score, d_j takes the number 1 if the j th item is disclosed

and zero if not disclosed and n is the maximum score that any company can gain.

$$DSCORE = \sum_{j=1}^n \frac{d_j}{n} \quad (2)$$

3. Dependent variables

Independent variables of this study included discretionary accruals (DAC) and financial performance variables (Return on Equity (ROE), Return on Assets (ROA), Tobin Q Index and Economic Value Added as (EVA) and refined Economic Value Added (REVA)) as follows:

Discretionary accruals (DAC): In this research, Jones Modified Model was used to measure the earnings management. This model was presented by Kothari et al. (2005). In this model, first, the total accruals (TACC) of each period was calculated as follows. To calculate the accruals of each year, net cash flow from operating activities (CFOs) was deducted from net income (NI):

$$TACC_{i,t} = NI_{i,t} - CFO_{i,t} \quad (3)$$

Then, using the Refined Jones Performance Model, the non-discretionary accruals of that period ($NDAC_{i,t}$) were estimated.

$$\frac{NDAC_{it}}{A_{i,t-1}} = a \left(\frac{1}{A_{i,t-1}} \right) + b \left(\frac{\Delta REV_{it}}{A_{i,t-1}} \right) + c \left(\frac{PPE_{it}}{A_{i,t-1}} \right) + \varepsilon_{it} \quad (4)$$

In the above model, $A_{i,t-1}$ is the sum of the first round assets, $\Delta REV_{i,t}$ is changes in income minus changes in the receivables, $PPE_{i,t}$ is property, plant and equipment, and a, b, c , are also the coefficients of the model according to the relation. To estimate the coefficients of the modified Jones model, the following model was used, estimated using the ordinary least squares method for each industry and each year:

$$\frac{TACC_{it}}{A_{i,t-1}} = a \left(\frac{1}{A_{i,t-1}} \right) + b \left(\frac{\Delta REV_{it}}{A_{i,t-1}} \right) + c \left(\frac{PPE_{it}}{A_{i,t-1}} \right) + \varepsilon_{it} \quad (5)$$

Finally, the value of discretionary accruals (DAC_{it}) is calculated from the difference between the total accruals of each year and the non-discretionary accruals estimated based on the modified Jones model as described in the following equation:

$$DAC_{it} = TACC_{it} - NDAC_{it} \quad (6)$$

Where DAC_{it} is discretionary accruals, $TACC_{it}$ is total accruals, and $NDAC_{it}$ is non-discretionary accruals.

Various criteria can be introduced to evaluate financial performance. In this study, the criteria of return on equity (ROE), return on assets (ROA), P / E ratio, economic value added (EVA), and refined economic value added (REVA) were used to measure performance estimated as follows:

Return on Equity (ROE): Net operating profit after tax divided by the total equity

Return on Assets (ROA): Net operating profit after tax divided by total assets

TOBIN Q: The market value of the company divided by the total assets

$$Q_s = \frac{COMVAL + SBOND + STDEBT}{SRC} \quad (7)$$

Where,

COMVAL: Normal stock market value at the end of the year

SBOND: Book value of the long-term debt at the end of the year

STDEBT: Book value of the short-term debt at the end of the year

SRC: The book value of the company's total assets at the end of the year

Economic Value Added (EVA): The following formula was used to calculate EVA:

$$EVA = (ROIC - WACC) \times \text{Capital Employed} \quad (8)$$

Where,

EVA: Economic Value Added

ROIC: Return on invested capital

WACC: Weighted average cost of capital

Employed capital: Employed capital

Method of calculating ROIC

To calculate ROIC, operating profit after tax is divided into the book value of the used capital (total equity + liabilities)

$$ROIC = \frac{NOPAT}{INVESTED CAPITAL} \quad (9)$$

Method of calculating WACC

The minimum rate of return that the company must obtain so that the value of the company does not change is WACC.

$$WACC_{it} = \left(\frac{MV_e}{MW_d + MV_e} \right) * R_e + \left(\frac{MW_d}{MW_d + MV_e} \right) * R_d * (1 - t) \quad (10)$$

Where,

WACC: Weighted average cost of capital

MV_e : Market value of equity

MV_b : Market value of debts

R_e : Capital cost return of equity

R_d : Debt capital cost rate:

T: The tax rate

Method of calculating REVA

REVA is the residual net profit that is obtained after deducting the opportunity cost of investors at market value from the net operating profit after tax, calculated as follows (Stewart, 2000):

$$REVA_t = NOPAT_t - (WACC * MCAPITAL_{t-1}) \quad (11)$$

Where,

REVA: Refined economic value added

NOPAT: Net operating profit after tax

WACC :Weighted average cost of capital

MCAPITAL_{t-1}: Market value of the company at the beginning of year t (end of year1-t)

Dummy variable

Company life cycle dummy (Clc-Dum): In this study, Dickinson (2011) method was used to measure the company life cycle. To separate the stages of the company's life cycle, he created patterns of positive and negative signs of the three (operating, investment and financing) categories of cash flow statements. His strategy for identifying life cycles is based on the hypothesis that companies' cash reflects their financial results (e.g. differences in profitability, growth, and risk) at different stages of their life cycle distinctively, so that each stage has a specific pattern of net cash flows. He states that the company is in the emerging stage if the cash flow from operations and investment is negative while the cash flow from financing is positive (CFO <0, CFI <0, CFF > 0); the company is in the growth stage if cash flows from operations and financing are positive while cash flows from investments are negative (CFO > 0, CFI <0, CFF > 0); the company is in the maturity stage if the cash flow from investment and operations is negative and the cash flow from operations is positive (CFO > 0, CFI <0, CFF <0); the company is in decline stage If cash flow from operations is negative, cash flow from the investment is positive and cash flow from financing is positive, negative or zero (FCFO <0), CFI > 0, CFF ≤ 0); the remaining states are classified under the decline stage 2; and since the life cycle has five stages, four dummy variables are used to operate it.

In order to test the research hypotheses for the four stages of emergence, growth, maturity and decline, a dummy variable was used such that if the company qualifies for each of the stages it equals to 1 and otherwise zero. Also, due to the inactivity of the transaction (buying and selling) or the emerging companies being non-stock in the Tehran Stock Exchange, the life cycle was defined as three stages of growth, maturity and decline and the emergence stage was omitted.

4. Control variables

Based on the previous studies, two variables of the company size and financial leverage were used as the control variables in this study.

Company Size: Company size has a significant and positive relationship with the level of disclosure. In other words, larger companies have a higher level of disclosure compared to smaller companies (Wang and Mack, 2003). The cost-effectiveness of the disclosure costs for these companies can be an explanation for their behavior.

Leverage: By increasing the number of debts, companies try to reduce the uncertainty of creditors and meet their information needs by increasing disclosure (Wallace, 1995). Therefore, a significant relationship between financial leverage and the level of voluntary disclosure of the companies can be expected. Financial leverage is obtained by dividing total debts into the company's assets.

Research Findings

1. Descriptive statistics

To review and analyze the statistics of the descriptive data, the studied variables have been calculated and shown in Table 2. It is seen that the level of voluntary disclosure varies from 12% to 51%; since its median rate is 34% and its average is 35%, the distribution is almost symmetric.

Table 2. Statistical indicators related to the research variables

| Variable | Min | Max | Median | Mean | Sd |
|--|---------|---------|---------|---------|--------|
| Level of voluntary disclosure | 0.1232 | 0.5121 | 0.3425 | 0.3521 | 0.0721 |
| Earnings management | -3.5015 | 11.2154 | -0.3251 | -0.0521 | 0.0625 |
| ROE | -0.6425 | 0.6801 | 0.5512 | 0.3213 | 0.4215 |
| ROA | -0.0752 | 0.4123 | 0.1625 | 0.2536 | 0.0492 |
| Q Tobin | 0.0512 | 1.7822 | 0.1413 | 0.2513 | 0.2452 |
| EVA | ۷,۰۲۱۴ | ۲۰,۹۰۲۳ | ۱۸,۴۶۱۲ | ۱۸,۷۰۹۰ | ۱,۶۹۹۴ |
| REVA | ۶,۹۱۰۰ | ۲۰,۷۹۰۰ | ۱۸,۳۰۴۰ | ۱۸,۶۰۳۰ | ۱,۶۹۹۱ |
| Percentage of major shareholders ownership | 0.0000 | 1.0000 | 0.7215 | 0.7123 | 0.2127 |
| Management ownership | 0.0000 | 0.9999 | 0.6215 | 0.6309 | 0.2335 |
| Company size | 9.2142 | 18.2421 | 11.9214 | 11.9821 | 1.4215 |
| Financial leverage | 0.0491 | 0.9421 | 0.6231 | 0.6192 | 0.1532 |

To test the research hypotheses, all companies were divided into three groups of growth, maturity, and decline based on the life cycle of the companies and then the research model was fitted. Also, before fitting the

research model, F-Limer diagnostic test was required to select among the common composite data models against the panel data model with the fixed effects. Their results and goodness of fit of the model to test the hypotheses are presented in Table 3.

The purpose of the first hypothesis was to examine the relationship between voluntary disclosure and corporate earnings management metrics over the life cycle of the firm. According to the results of Table (3), the significance of the whole regression was confirmed because the significance level of the Fisher's statistic was 0.000; also, according to the results of the F-Limer test, since the significance level of this test in all three stages of growth (0.000), maturity, (0.000), and decline (0.000) was less than 5%, the intercepts' homogeneity was rejected and it was necessary to use the panel data method in estimating the model. According to the results of Hausman test, since the significance level of this test in all three stages (growth (0.004), maturity (0.008) and decline (0.000)) was less than 5%, in estimating the model, the fixed effects method was used. According to the value of T statistic and its probability (growth, (0.000), maturity, (0.000) and decline, (0.000) at 5% error level, there was a significant relationship between voluntary disclosure and earnings management throughout the life cycle. Also, the Durbin-Watson value in all three stages of growth (1.887), maturity (2.247), and decline (2.134) was 1.5 to 2.5, respectively, indicating the absence of autocorrelation error in the model. Comparing obtained determination coefficients for three stages of growth (23%), maturity (28%), and decline (25%) indicated that voluntary disclosure capacity is greater in the maturity stage than in the growth and decline phases, and companies are more inclined to voluntarily disclose information at this stage.

Table 3. Results of the voluntary disclosure hypothesis test and the company's earnings management criteria over the life cycle

| Variables | Growth | | | Maturity | | | Recession | | |
|----------------------|--------------|--------------|--------------------|--------------|--------------|--------------------|--------------|--------------|--------------------|
| | coefficients | t statistics | Significance level | coefficients | t statistics | Significance level | coefficients | t statistics | Significance level |
| Voluntary disclosure | -0.053 | -9.706 | 0.000 | -0.063 | -11.647 | 0.000 | -0.048 | -8.735 | 0.000 |
| company size | -0.072 | -7.200 | 0.000 | -0.086 | -8.640 | 0.000 | -0.065 | -6.480 | 0.000 |
| Financial leverage | 0.017 | 3.952 | 0.000 | 0.020 | 4.743 | 0.000 | 0.015 | 3.557 | 0.000 |

| | | | | | | | | | |
|------------------------------------|--------|--------|--------|--------|--------|-------|--------|--------|-------|
| Industry 1 | 0.015 | 1.581 | 0.114 | 0.018 | 1.897 | 0.137 | 0.014 | 1.423 | 0.103 |
| Industry 2 | 0.023 | 1.973 | 0.049 | 0.028 | 2.368 | 0.059 | 0.021 | 1.776 | 0.044 |
| Industry 3 | -0.008 | -0.804 | 0.422 | -0.010 | -0.964 | 0.506 | -0.008 | -0.723 | 0.380 |
| Industry 4 | 0.006 | 0.599 | 0.549 | 0.007 | 0.719 | 0.659 | 0.005 | 0.539 | 0.494 |
| Industry 5 | 0.015 | 1.521 | 0.129 | 0.018 | 1.825 | 0.154 | 0.013 | 1.369 | 0.116 |
| Fixed value | -0.023 | -0.984 | 0.125 | -0.028 | -1.181 | 0.150 | -0.021 | -0.886 | 0.113 |
| Determination coefficient | 0.235 | | 0.282 | | 0.254 | | | | |
| Modified determination coefficient | 0.224 | | 0.268 | | 0.241 | | | | |
| Durbin- Watson | 1.887 | | 2.264 | | 2.038 | | | | |
| Fisher F statistics | 32.202 | | 38.642 | | 34.778 | | | | |
| Significance level | 0.000 | | 0.000 | | 0.000 | | | | |
| Limer F statistics | 1.872 | | 2.247 | | 2.134 | | | | |
| Significance level | 0.000 | | 0.000 | | 0.000 | | | | |
| Hausman test | 17.215 | | 20.658 | | 19.626 | | | | |
| Significance level | 0.004 | | 0.008 | | 0.000 | | | | |

Source: Research findings

The purpose of the H2 was to examine the relationship between voluntary disclosure and ROE over the life cycle of the company. According to the results of Table (4), the significance of the whole regression was confirmed because the significance level of the Fisher's F statistic was 0.000; also according to the results of F-Limer test, since the significance level of this test in all three stages (growth, 0.000, maturity, 0.000 and decline, 0.000) was less than 5%, the intercepts' homogeneity was rejected and it was necessary to use the panel data method in estimating the model. According to the results of Hausman test, since the significance level of this test in all three stages (growth, 0.000, maturity, 0.000 and decline, 0.000) was less than 5%, the fixed effects method was used in estimating the model. According to the calculated t statistic and its probability (growth, 0.049, maturity, 0.000 and decline, 0.170) at 5% error level, the significant correlation between the ratio of non-executive board members and voluntary disclosure was confirmed only in the maturation stage. Also, at the error level of 5%, the ratio of non-executive board members to voluntary disclosure in the growth and decline stages was not confirmed. In addition, the Watson-Durbin value in all three stages was between 1.5 and 2.5

in the growth (1.842), maturity (2.025) and decline (1.983) stages, respectively, indicating the absence of autocorrelation error in the model. For the three stages of growth (18%), maturity (20%), and decline (22%), it was found that the ability of voluntary disclosure in the stage of maturity is higher than the growth and decline stages, and companies at this stage are more willing to disclose information voluntarily.

Table 4. Results of testing the relationship between voluntary disclosure and ROA

| Variables | Growth | | | maturity | | | Recession | | |
|------------------------------------|--------------|--------------|--------------------|--------------|--------------|--------------------|--------------|--------------|--------------------|
| | coefficients | t statistics | Significance level | coefficients | t statistics | Significance level | coefficients | t statistics | Significance level |
| Voluntary disclosure | 0.368 | 6.507 | 0.022 | 0.441 | 7.808 | 0.015 | 0.364 | 6.441 | 0.000 |
| Company size | -1.201 | -12.523 | 0.000 | -1.442 | -15.028 | 0.000 | -1.189 | -12.398 | 0.000 |
| Financial leverage | -0.060 | -1.518 | 0.248 | -0.073 | -1.821 | 0.297 | -0.060 | -1.503 | 0.245 |
| industry 1 | 0.165 | 1.787 | 0.164 | 0.198 | 2.145 | 0.197 | 0.163 | 1.769 | 0.162 |
| Industry 2 | 0.092 | 0.845 | 0.578 | 0.110 | 1.014 | 0.693 | 0.091 | 0.837 | 0.572 |
| Industry 3 | 0.042 | 0.418 | 0.873 | 0.050 | 0.502 | 1.047 | 0.041 | 0.414 | 0.864 |
| Industry 4 | 0.127 | 1.337 | 0.319 | 0.152 | 1.604 | 0.382 | 0.125 | 1.324 | 0.315 |
| Industry 5 | 0.218 | 2.340 | 0.050 | 0.262 | 2.808 | 0.060 | 0.216 | 2.316 | 0.049 |
| Fixed value | 1.552 | 7.073 | 0.000 | 1.863 | 8.487 | 0.000 | 1.537 | 7.002 | 0.000 |
| Determination coefficient | 0.208 | | | 0.250 | | | 0.242 | | |
| Modified determination coefficient | 0.195 | | | 0.235 | | | 0.228 | | |
| Durbin- Watson | 2.022 | | | 2.264 | | | 2.196 | | |
| Fisher F statistics | 25.028 | | | 28.031 | | | 27.190 | | |
| Significance level | 0.000 | | | 0.000 | | | 0.000 | | |
| Limer F statistics | 2.022 | | | 2.426 | | | 2.305 | | |
| Significance level | 0.000 | | | 0.000 | | | 0.000 | | |
| Hausman test | 19.235 | | | 23.082 | | | 21.928 | | |
| Significance level | 0.000 | | | 0.004 | | | 0.001 | | |

Source: Research findings

The purpose of H3 was to investigate the relationship between voluntary disclosure and ROA over the life cycle of the company. According to the results of Table (5), the significance of the whole regression was confirmed because the significance level of the Fisher F was 0.000. According to the results of F-Limer test, since the significance level of this test in all three stages (growth, 0.002, maturity, 0.005, and decline, 0.000) was less than 5%, the intercepts homogeneity was rejected; so, it was necessary to use the panel data method in estimating the model. According to the results of Hausman test, since the significance level of this test in all three stages (growth, 0.000, maturity, 0.004, and decline, 0.001) was less than 5%, in estimating the model, the fixed effects method was used. According to the estimated value of t statistic and its probability (growth, 0.022, maturity, 0.015 and decline, 0.000) at the level of 5% error, a significant relationship between voluntary disclosure and ROE was confirmed at the growth stage. Also, Durbin-Watson value in all three stages of growth (2.022), maturity (2.264) and decline (2.305) were between 1.5 and 2.5, respectively, indicating the absence of autocorrelation error in the model.

Comparing the coefficients obtained for the three growth (21%), maturity (25%) and decline (24%) stages, it was found that the explanatory power of the voluntary disclosure in the maturity stage is higher than the growth and decline stages and companies at this stage are more inclined to the voluntary disclosure of information.

Table 5. Results of testing the relationship between voluntary disclosure and ROA

| Variables | Growth | | | Maturity | | | Recession | | |
|----------------------|------------------|---------------------|---------------------------|----------------------|---------------------|---------------------------|------------------|---------------------|-------------------------------|
| | coef ficients | t statisti cs | Signific ance level | coeff icient s | t statisti cs | Signifi cance level | coef ficients | t stati stics | Signif icanc e level |
| Voluntary disclosure | 0.368 | 6.507 | 0.022 | 0.441 | 7.808 | 0.015 | 0.364 | 6.441 | 0.000 |
| Company size | -1.201 | -12.523 | 0.000 | -1.442 | -15.028 | 0.000 | -1.189 | -12.398 | 0.000 |
| Financial leverage | 0.060 | -1.518 | 0.248 | 0.073 | -1.821 | 0.297 | 0.060 | 1.503 | 0.245 |
| Industry 1 | 0.165 | 1.787 | 0.164 | 0.198 | 2.145 | 0.197 | 0.163 | 1.769 | 0.162 |
| Industry 2 | 0.092 | 0.845 | 0.578 | 0.110 | 1.014 | 0.693 | 0.091 | 0.837 | 0.572 |
| Industry 3 | 0.042 | 0.418 | 0.873 | 0.050 | 0.502 | 1.047 | 0.041 | 0.414 | 0.864 |
| Industry 4 | 0.127 | 1.337 | 0.319 | 0.152 | 1.604 | 0.382 | 0.125 | 1.324 | 0.315 |

| | | | | | | | | | |
|------------------------------------|-----------|-------|--------|-------|-------|--------|-----------|-----------|-------|
| Industry 5 | 0.21 8 | 2.340 | 0.050 | 0.262 | 2.808 | 0.060 | 0.21 6 | 2.31 6 | 0.049 |
| Fixed value | 1.55 2 | 7.073 | 0.000 | 1.863 | 8.487 | 0.000 | 1.53 7 | 7.00 2 | 0.000 |
| Determination coefficient | 0.208 | | 0.250 | | | 0.242 | | | |
| Modified determination coefficient | 0.195 | | 0.235 | | | 0.228 | | | |
| Durbin- Watson | 2.022 | | 2.264 | | | 2.196 | | | |
| Fisher F statistics | 25.028 | | 28.031 | | | 27.190 | | | |
| Significance level | 0.000 | | 0.000 | | | 0.000 | | | |
| Limer F statistics | 2.022 | | 2.426 | | | 2.305 | | | |
| Significance level | 0.000 | | 0.000 | | | 0.000 | | | |
| Hausman test | 19.235 | | 23.082 | | | 21.928 | | | |
| Significance level | 0.000 | | 0.004 | | | 0.001 | | | |

Source: Research findings

The purpose of H4 was to investigate the relationship between voluntary disclosure and the Tobin Q ratio during the life cycle of the company. According to the results of Table (6), the significance of the whole regression was confirmed because the significance level of Fisher F in all three stages (growth, 0.002, maturity, 0.000, and decline, 0.001) was confirmed; also, according to the results of the F-Limer test, since the significance level of this test in all three stages (growth, 0.003, maturity, 0.015, and decline, 0.003) was less than 5%, the intercepts' homogeneity was rejected and it was necessary to use the panel data method in estimating the model. According to the results of Hausman test, since the significance level of this test in all three stages (growth, 0.000, maturity, 0.000 and decline, 0.000) was less than 5%, fixed effects method was used in estimating the model. According to the value of t statistic and its probability (growth, 0.000, maturity, 0.000, and decline, 0.000) at the level of 5% error, a significant relationship between voluntary disclosure and Q-Tobin ratio throughout the life cycle was approved. The sign of the independent variable, i.e. voluntary disclosure was also positive, indicating that regardless of the type of industry, voluntary disclosure had a direct effect on the company's financial performance (Q-Tobin ratio) in all three stages of growth, maturity and decline. Also, Durbin-Watson value in all three stages of the growth (1.825), maturity (2.022) and decline (1.851), respectively, was between 1.5 and 2.5, indicating the absence of autocorrelation error in the model. For the three stages of growth (25%), maturity (22%) and decline (21%), it was found that the explanatory power of the rate of voluntary disclosure in the growth phase was higher than the maturity and decline stages and the companies at this stage were more willing to disclose information voluntarily.

Table 6. Results of testing the relationship between voluntary disclosure and Tobin Q ratio

| Variables | Growth | | | Maturity | | | Decline | | |
|------------------------------------|--------------|--------------|-----------|--------------|--------------|-----------|--------------|--------------|-----------|
| | Coefficients | t statistics | Sig level | Coefficients | t statistics | Sig level | Coefficients | t statistics | Sig level |
| Voluntary disclosure | 0.368 | 6.507 | 0.000 | 0.441 | 7.808 | 0.000 | 0.364 | 6.441 | 0.000 |
| Company size | -1.201 | -12.523 | 0.000 | -1.442 | -15.028 | 0.000 | -1.189 | -12.398 | 0.000 |
| Financial leverage | -0.060 | -1.518 | 0.248 | -0.073 | -1.821 | 0.297 | -0.060 | -1.503 | 0.245 |
| Industry 1 | 0.165 | 1.787 | 0.164 | 0.198 | 2.145 | 0.197 | 0.163 | 1.769 | 0.162 |
| Industry 2 | 0.092 | 0.845 | 0.578 | 0.110 | 1.014 | 0.693 | 0.091 | 0.837 | 0.572 |
| Industry 3 | 0.042 | 0.418 | 0.873 | 0.050 | 0.502 | 1.047 | 0.041 | 0.414 | 0.864 |
| Industry 4 | 0.127 | 1.337 | 0.319 | 0.152 | 1.604 | 0.382 | 0.125 | 1.324 | 0.315 |
| Industry 5 | 0.218 | 2.340 | 0.050 | 0.262 | 2.808 | 0.060 | 0.216 | 2.316 | 0.049 |
| Fixed value | 1.552 | 7.073 | 0.000 | 1.863 | 8.487 | 0.000 | 1.537 | 7.002 | 0.000 |
| Determination coefficient | 0.251 | | | 0.222 | | | 0.215 | | |
| Modified determination coefficient | 0.241 | | | 0.213 | | | 0.207 | | |
| Durbin- watson | 1.825 | | | 2.022 | | | 1.851 | | |
| Fisher F statistics | 22.124 | | | 25.235 | | | 20.126 | | |
| Significance level | 0.002 | | | 0.000 | | | 0.001 | | |
| Limer F statistics | 2.136 | | | 2.532 | | | 1.898 | | |
| Significance level | 0.003 | | | 0.015 | | | 0.003 | | |
| Hausman test | 18.232 | | | 21.235 | | | 19.265 | | |
| Significance level | 0.000 | | | 0.000 | | | 0.000 | | |

Source: Research findings

H5 aimed to examine the relationship between voluntary disclosure and EVA of the companies during their life cycles. According to the results of Table (7), the significance of the whole regression was confirmed because the significance level of Fisher F in the life cycle (growth, 0.002), (maturity,

0.008) and (decline, 0.000) was confirmed; also, according to the test results of Limer F, since the significance level of this test in all three stages (growth, 0.001), (maturity, 0.007) and (decline, 0.000) was less than 5%, the intercepts homogeneity was rejected and panel data method was used to estimate the model. According to the results of Hausman test, since the value of the significance level of this test in all three stages (growth (0.002), maturity, (0.000) and decline, (0.005)) was less than 5%, in estimating the model, the fixed effects method was used.

According to the value of t statistic and its probability (growth (0.002), maturity, (0.000) and decline, (0.000)) at the level of 5% error, the existence of a relationship between voluntary disclosure and economic value added was validated throughout the life cycle. Also, the independent variable (voluntary disclosure) coefficient's sign is positive, which means that regardless of industry, voluntary disclosure at all three stages of growth, maturity and decline is related to the company's financial performance. In addition, the Durbin-Watson value in all three stages was between 1.5 and 2.5 in the growth (1.825), maturity (2.022) and decline (1.851) stages, respectively, indicating the absence of autocorrelation error in the model. Comparing determination coefficient for three stages of growth (23%), maturity (24%) and decline (19%), it was found that the explanatory power of voluntary disclosure in the stage of maturity is higher than the stages of growth and decline; so, the companies in this stage are more inclined to the voluntary disclosure of information.

Table 7. Test results of the relationship between voluntary disclosure and EVA

| Variables | Growth | | | Maturity | | | Decline | | |
|----------------------|--------------|--------------|-----------|--------------|--------------|-----------|--------------|--------------|-----------|
| | coefficients | t statistics | sig level | coefficients | t statistics | sig level | coefficients | t statistics | sig level |
| voluntary disclosure | -0.342 | -7.978 | 0.000 | -0.410 | -9.574 | 0.000 | -0.308 | -7.180 | 0.000 |
| company size | -1.119 | 11.663 | 0.000 | -1.343 | 13.995 | 0.000 | -1.007 | -10.496 | 0.000 |
| Financial leverage | -0.097 | -2.473 | 0.014 | -0.116 | -2.968 | 0.016 | -0.087 | -2.226 | 0.012 |
| Industry 1 | 0.185 | 2.072 | 0.039 | 0.223 | 2.486 | 0.046 | 0.167 | 1.865 | 0.035 |
| Industry 2 | 0.055 | 0.522 | 0.602 | 0.066 | 0.626 | 0.722 | 0.050 | 0.470 | 0.542 |
| Industry 3 | 0.079 | 0.815 | 0.415 | 0.095 | 0.978 | 0.498 | 0.071 | 0.733 | 0.374 |

| | | | | | | | | | |
|------------------------------------|--------|-------|--------|-------|-------|--------|-------|-------|-------|
| Industry 4 | 0.094 | 1.018 | 0.309 | 0.113 | 1.222 | 0.371 | 0.084 | 0.916 | 0.278 |
| Industry 5 | 0.171 | 1.885 | 0.050 | 0.205 | 2.262 | 0.060 | 0.154 | 1.696 | 0.045 |
| fixed value | 1.806 | 7.838 | 0.000 | 2.167 | 9.405 | 0.000 | 1.625 | 7.054 | 0.000 |
| determination coefficient | 0.231 | | 0.243 | | | 0.193 | | | |
| modified determination coefficient | 21.983 | | 23.038 | | | 18.288 | | | |
| Durbin-Watson | 1.852 | | 1.952 | | | 1.852 | | | |
| Fisher F | 23.215 | | 22.128 | | | 21.215 | | | |
| sig level | 0.002 | | 0.008 | | | 0.000 | | | |
| Limer F statistics | 1.720 | | 2.064 | | | 1.805 | | | |
| sig level | 0.001 | | 0.007 | | | 0.000 | | | |
| Hausman test | 17.215 | | 19.232 | | | 18.214 | | | |
| sig level | 0.002 | | 0.000 | | | 0.005 | | | |

Source: Research findings

The purpose of H6 was to investigate the relationship between voluntary disclosure and refined economic value added (REVA) over the life cycle of the company. According to the results of Table 8, the significance of the whole regression was confirmed because the significance level of Fisher F in all three stages (growth, 0.005, maturity, 0.007, and decline, 0.002) was supported; also, according to the results of F-Limer test, since the significance level of this test in all three stages (growth, 0.005, maturity, 0.017, and decline, 0.011) was less than 5%, the intercepts' homogeneity was rejected; then, the panel data method was used in estimating the model. According to the results of Hausman test, since the significance level of this test in all three stages (growth, 0.011, maturity, 0.032, and decline, 0.015) was less than 5%, the fixed effects method was used in estimating the model. According to the estimated t value and its related probabilities (growth, 0.000, maturity, 0.000, and decline, 0.000) at the level of 5% error, the relationship between voluntary disclosure and refined added economic value (REVA) was validated throughout the life cycle. Also, the sign of the independent variable coefficient, i.e. voluntary disclosure was positive, meaning that regardless of the industry, voluntary disclosure at all three stages of growth, maturity and decline was correlated with financial performance.

In addition, Durbin- Watson value in all three stages was between 1.5 and 2.5 in the stages of growth (1.863), maturity (1.722), and decline (1.912), respectively, indicating the absence of autocorrelation error in the model. For the three stages of growth (20%), maturity (26%), and decline (19%), it was found that the explanatory power of voluntary disclosure in the maturity stage

was higher than the growth and decline stages, and the companies in this stage were more inclined to voluntary disclosure information.

Table 8. Test results for the relationship between voluntary disclosure and refined economic value added (REVA)

| Variables | Growth | | | Maturity | | | Decline | | |
|------------------------------------|--------------|--------------|-----------|--------------|--------------|-----------|--------------|--------------|-----------|
| | Coefficients | t statistics | Sig level | coefficients | t statistics | sig level | Coefficients | t statistics | sig level |
| Voluntary disclosure | 0.052 | 3.272 | 0.001 | 0.062 | 3.926 | 0.001 | 0.047 | 2.945 | 0.001 |
| Company size | -0.528 | -18.272 | 0.000 | -0.634 | -21.927 | 0.000 | -0.476 | -16.445 | 0.000 |
| Financial leverage | 0.113 | 7.967 | 0.000 | 0.135 | 9.560 | 0.000 | 0.102 | 7.170 | 0.000 |
| Industry 1 | -0.041 | -0.892 | 0.173 | -0.049 | -1.070 | 0.207 | -0.037 | -0.803 | 0.155 |
| Industry 2 | 0.021 | 0.394 | 0.494 | 0.026 | 0.473 | 0.592 | 0.019 | 0.355 | 0.444 |
| Industry 3 | -0.077 | -1.745 | 0.023 | -0.092 | -2.093 | 0.027 | -0.069 | -1.570 | 0.021 |
| Industry 4 | 0.028 | 0.593 | 0.554 | 0.033 | 0.711 | 0.664 | 0.025 | 0.533 | 0.498 |
| Industry 5 | -0.040 | -0.874 | 0.183 | -0.048 | -1.048 | 0.219 | -0.036 | -0.786 | 0.164 |
| Fixed value | -0.187 | -2.394 | 0.017 | -0.224 | -2.873 | 0.020 | -0.168 | -2.155 | 0.015 |
| Determination coefficient | 0.203 | | | 0.261 | | | 0.193 | | |
| Modified determination coefficient | 0.197 | | | 0.253 | | | 0.187 | | |
| Durbin- Watson value | 1.863 | | | 1.722 | | | 1.912 | | |
| Fisher F | 26.951 | | | 26.142 | | | 25.358 | | |
| Sig level | 0.005 | | | 0.007 | | | 0.002 | | |
| Limer f | 0.005 | | | 0.017 | | | 0.011 | | |
| Sig level | 1.920 | | | 2.304 | | | 1.805 | | |
| Hausman test | 21.215 | | | 18.251 | | | 22.325 | | |

| | | | |
|-----------|-------|-------|-------|
| Sig level | 0.011 | 0.032 | 0.015 |
|-----------|-------|-------|-------|

Source: Research findings

Discussion and conclusion

In Iran, the level of information disclosure is mainly dependent on the mandatory disclosure in the Iranian accounting standards and research on the level of discretionary disclosure is still in its infancy. Voluntary disclosure is encouraged in many companies listed on the reputable global stock exchanges with various dimensions such as financial information, non-financial information, prospective information, etc. In this study, the relationship between voluntary disclosure, financial performance, and earnings management was examined during the life cycle of the companies. The findings of the hypotheses tests indicated a significant relationship between the level of voluntary disclosure and earnings management. In other words, the managers of the companies whose owners require them to disclose information to apply control mechanisms in the company made reported information in the financial statements with higher reliability; then, their potential investors who use these financial reports can better predict the cash flows, earnings and future financial situation of the company and make more informed economic decisions.

Therefore, the investors looking for the shares of the companies in which they manage earnings are less likely to go to the companies that disclose more of their financial information. However, the results of this study show that increasing the disclosure of the strategic and non-financial information does not help reduce earnings management and this can also be considered by the stock market participants. Also in this study, the relationship between sustainability information disclosure and financial performance and value of companies was investigated. The results of the relationship between voluntary disclosure and financial performance showed that voluntary disclosure of information according to the theoretical foundations and prevailing theories in this field, has a significant and direct relationship with the criteria of financial performance and value of companies; therefore, the research hypotheses were strongly supported. This statement indicates that improving the voluntary disclosure of information also improves the financial performance and value of the companies; so that the more the companies follow the principles of the voluntary disclosure, the better they will perform. The results of the present study are consistent with the results of the studies of Pederson et al. (2018) and Huffer and Sears (2017). The results of the present research hypotheses consist

with the view that the companies in the growth stage tend to report information with lower quality for eliminating the risk of losing their competitive advantage and after completing the growth stage and entering the maturity stage, their information quality increases. But it disagrees with the opposite view, called signaling view that the companies in the growth stage tend to show their desired future growth opportunities and performance through their quality information, thereby increasing the quality of their information.

According to the obtained information during this study, the following topics are suggested for future research in line with the subject of this research:

- A) Considering that in the present study only several financial performance variables were considered, it is suggested that this issue is taken into account by considering other characteristics of financial performance, financial information, etc.
- B) Other measurement criteria can be used to measure the level of voluntary disclosure and earnings management.
- C) The effect of voluntary disclosure can be examined on conservatism over the life cycle.
- D) The effect of voluntary disclosure on the management of working capital should be studied over the life cycle.
- E) The effect of voluntary disclosure on the corporate governance practices over the life cycle can be examined as well.

References

Alves, H. S., Canadas, N., & Rodrigues, A. M. (2015). Voluntary disclosure, information asymmetry and the perception of governance quality: An analysis using a structural equation model. *Tekhne*, 13(1), 66-79.

Amoozesh, N., Moeinfar, Z., & Mousavi, Z. (2013). Evaluation of the relationship between disclosure quality and corporate governance quality in Tehran Stock Exchange, *Universal Journal of Marketing and Business Research*, 2(1), 16-22.

Bazrafshan, E., Kandelousi, A. S., & Hooy, C. W. (2016). The impact of earnings management on the extent of disclosure and true financial performance: Evidence from listed firms in Hong Kong. *The British Accounting Review*, 48 (2), 206-219.

Bolo, Q., & Ebrahimi Meymand, M. (2011). Relationship between management structure and quality of disclosure in the Tehran Stock Exchange. *Journal of Financial Accounting*, 3 (12), 50-69 (in Persian).

Bushee, B.J., Core, J.E., Guay, W., & Hamm, S.J. (2010). The role of the business press as an information intermediary. *Journal of Accounting Research*. 48 (1), 1-19.

Dickinson, V. (2011). Cash flow patterns as a proxy for the firm life cycle. *The Accounting Review*. 86 (6): 1969-1994.

Didar, Hamzeh; Mansourfar, Gh., & Zare, E. (2017). Investigating the effect of corporate governance quality on the quality of disclosure with emphasis on the moderating role of product market competition in the listed companies in the Tehran Stock Exchange, *Financial Accounting Research*, 9 (31), 11-97 (in Persian).

Eugster, F., & Wanger, A. F. (2013). Voluntary Disclosure Quality, Operating Performance, and Stock Market Valuations, http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1879804.

Ferguson, M. J., Lam, K. C., & Lee, G. M. (2002). Voluntary disclosure by state-owned enterprises listed on the stock exchange of Hong Kong. *Journal of International Financial Management and Accounting*, 13(2), 125-152.

Ghorbel, H. & Triki, F. (2016). The Consequences of Voluntary Information Disclosure on Firm Value: Case of Tunisian listed firms. *Research Journal of Finance and Accounting*, 7 (6), 153-163.

Gietsmann, M. & Trombetta, M. (2003). Disclosure interactions: accounting policy choice and voluntary disclosure effects on the cost of rising outside capital. *Accounting & Business Research*, 33(3), 187-205.

Haffar, M., & Searcy, C.(2017). Classification of trade-offs encountered in the practice of corporate sustainability. *Journal of business ethics*, 140(3), 495-522.

Heitzman, S., Wasley, C. & Zimmerman., J.(2010). The joint effect of materiality thresholds and voluntary disclosure incentives on firms disclosure decisions. *Journal of Accounting and Economics*, 49(1), 109-132.

Ho, P., & Taylor, G. (2013). Corporate governance and different types of voluntary disclosure. *Pacific Accounting Review*, 25 (1), 4-29.

Iatridis, G., & Alexakis, P. (2012). Evidence of voluntary accounting disclosures in the Athens Stock Market. *Review of Accounting and Finance*, 11 (1), 73 - 92.

Ilhan Ciftcia, I., Tatoglub, Ekrem., Woodc, G., Demirbagc, M., & Zaim, S. (2019). Corporate governance and firm performance in emerging markets: Evidence *Journal of International Business Review*, 28, 90–103.

Jiao, Y. (2011). Corporate disclosure, market valuation, and firm performance, *Financial Management*, 40(3), 647-676.

Khodamipour, A., Khorshidi, A., & Shirzad, A.(2013). The effect of disclosure quality on various types of earnings management. *Accounting and Auditing Reviews*, 4 (20), 21-38 (in Persian).

Kothari, S.P., Leone, A.J. & Wasley, C.E. (2005). Performance matched discretionary accruals measures. *Journal of Accounting and Economics*, 39(1): 163–197.

Larijani, A., and Rahmani, A. (2018). Relationship between disclosure of internal control reports, agency costs and earnings management. *Journal of Management Accounting and Auditing Knowledge*, 7 (25), 29-40 (in Persian).

Lokman, N., Cotter, J., & Mula, J. (2012). Corporate governance quality, incentive factors and voluntary corporate governance disclosures in annual reports of Malaysian publicly listed companies, *Corporate Ownership and Control*, 10(1), 329-352.

Mirabbasi, S.J., & Khazen, A. (2017). The effect of disclosure quality on the relationship between corporate governance and earnings management in the listed companies of the Tehran Stock Exchange. *Modaber Management Research Institute*, 1 (4), 1-28 (in Persian).

Parsian, H., Kazemi, H., & Rezazadeh, J.(2018). Identifying the components of voluntary disclosure between the corporate governance system and information asymmetry in operating companies in the Tehran Stock Exchange. *Journal of Financial Economics*, 12 (43), 107-132 (in Persian).

Pedersen, E. R. G., Gwozdz, W., & Hvass, K. K. (2018). Exploring the relationship between business model innovation, corporate sustainability, and organisational values within the fashion industry. *Journal of Business Ethics*, 149(2), 267-284.

Pourheidari, O., Yusufzadeh, Y., & Azami, Z. (2017). Investigating the relationship between profit quality and cost of capital with voluntary disclosure. *Journal of Financial Accounting Knowledge*, 4 (12), 1-20 (in Persian).

Pourzamani, Z., Jamshidi, Sh. (2015). Investigating the effect of company life cycle on the relationship between disclosure quality and capital structure. *Accounting and Management Knowledge*, 4 (13), 55-66 (in Persian).

Utami, S. R., & Inanga, E. L. (2012). The Relationship between Capital Structure and the Life, *International Research Journal of Finance and Economics Cycle of Firms in the Manufacturing Sector of Indonesia*, 8(1), 69-91.

Uyar, A., Kilic, M., & Bayyurt, N. (2013). Association between firm characteristics and corporate voluntary disclosure: Evidence from Turkish listed companies. <http://www.redalyc.org/articulo.oa?id=54929516007>.

Waleed, M., Al-ahdala, M., & Alsamhib, M, I. (2020). The impact of corporate governance on the financial performance of Indian and GCC listed firms: An empirical investigation. *Journal of Research in International Business and Finance*. 51 (1), 1-13.

Wallace, R. S. O., & Naser, K. (1995). Firm-specific determinants of the comprehensiveness of mandatory disclosures in the corporate annual reports of firms listed on the stock exchange of Hong Kong. *Journal of Accounting and Public Policy*, 14(1), 311-368.

Wang, L. L., & Mak, Y. T. (2003). Corporate governance and voluntary disclosure. *Journal of Accounting and Public Policy*, 22 (4), 325-45.

Bibliographic information of this paper for citing:

Hosseini, Seyyed Mohammad & Malekian, Esfandiyar (2020). Investigating the Relationship between Voluntary Disclosure and Financial Performance and Earnings Management (Emphasizing the Moderating Role of the Corporate Life Cycle). *Iranian Journal of Finance*, 4(3), 122-148.
