

Relationship between Enterprise Growth and Pricing of Discretionary Accruals in Small and Medium-Sized Enterprises

Mostafa Maleki

Department of Accounting,
Rasht Branch, Islamic Azad University,
Rasht, Iran

Sina Kheradyar

Department of Accounting,
Rasht Branch, Islamic Azad University,
Rasht, Iran

Mansour Molaeipour

Department of Accounting,
Rasht Branch, Islamic Azad University,
Rasht, Iran

Abstract

Since the positive discretionary accruals in enterprises with high growth are priced to a greater extent and pricing of positive discretionary accruals depend to enterprises information environment, the aim of this study is to investigate the relationship between enterprises growth and pricing of discretionary accruals in small and medium-sized enterprises. In this study the multivariate regression and EGLS panel method are used. The sample of study consists of 123 enterprises from 2011 to 2014. Results show that in small and medium-sized enterprises with low and high growth there is a direct and meaningful relationship between sensitivity of stock returns and discretionary accruals and also in small and medium-sized enterprises with low and high growth stock returns sensitivity to non-discretionary accruals is not significant. As a result, it seems that sensitivity of stock returns to discretionary accruals is more than non-discretionary accruals.

Keywords: Discretionary Accruals, Non-discretionary Accruals, Enterprise Growth

Introduction

One of the financial statements which are very important in assessing the management's stewardship task is income statement. This financial statement reflects the performance of business unit and includes the efficiency of resources managed by business unit manager (Ahmadpour et al, 2010). Since the business unit manager is responsible for preparing financial statements, he may smooth income (earnings management) for various reasons. Earnings management is a conscious attempt to show that enterprise profit is normal in order to achieve the desired level (Khajavi et al, 2014). Jones and Sharma (2001) provided a comprehensive definition of earnings management. They believe that earnings management (earnings manipulation) occurs when managers use judgment in financial reporting and transactions structure to mislead some stakeholders (such as shareholders, creditors, employees, government, investors, ...) about economic performance of enterprise with influencing the outcomes of contract which is dependent on accounting figures, in order to change their financial reporting. One way to manipulate earnings is change of accruals, discretionary accruals and change of research and development costs (Berger and Hann, 2007). Accruals cause a

difference between profit and cash flow. As a result, assuming that cash flows are not manipulated, the only way to manipulate earnings is to increase or decrease the discretionary accruals. Because accrual anomaly exists in Iran capital market, this research focuses on discretionary accruals as an indicator of earnings manipulation (earnings management). Accruals divided into two components of discretionary and non-discretionary (Hosseini et al, 2010). While non-discretionary accruals are limited due to the regulations, organizations and other external factors, management can comment on discretionary accruals. Therefore, discretionary sector is used as an indicator for detecting earnings management in business units in accounting studies (Chang, et al, 2007).

Shobita (2013) states that accruals and benefit have a predictive power of future cash flows and also the predictive power of profit is more accruals. Moreover, Noravesh and Mashayekhi (2009) stated that a reduction in accruals quality decreases the earnings quality and this result is in line with Dechow (1994), Sloan (1996) and Dechow and Dychav (2002) (Mashayekhi et al, 2005). According to the mentioned points, the main purpose of this paper is to investigate the effect of enterprise growth on discretionary accruals. We show in our studies that positive discretionary accruals in enterprises with high growth are priced higher. We also show that the pricing of positive discretionary accruals depends on the information environment of enterprises. In this study we investigate the conditions of enterprise growth over the pricing of discretionary accruals. Since the small and medium-sized enterprises face more financial constraints, in this study the effect of enterprises growth in the pricing of discretionary accruals in these kinds of enterprises will be discussed. In this study from accepted enterprises in Security and Exchange Commission, enterprises that their total assets are in the first quarter were considered as small-sized and enterprises that their total assets are in the second and third quarters were considered as medium-sized. Then samples were selected among them. (Core, 2001).

There have been many studies on this issue which are presented blow:

Lee (2013), using panel data of South Korean enterprises, found the relationship between growth and profit. He used regressions of static panel data and dynamic panel data and finished this study by the use of fixed effects methods and generalized torque approach as well as non-linear regressions, least absolute deviation regression and multiple regressions. The results showed that profit has a negative impact on growth, but growth has a positive impact on profit.

Jang and Park (2011) investigated the relationship between growth and profit of enterprises that renewed the presentation of their financial statements. They used

dynamic panel of generalized torque approach. The results of this study showed that foreseen profit has a positive impact on the current growth, but previous growth has an inverse relationship with current profit.

Fedik et al., (2011) in a study investigated stability hypothesis and tested it. According to this hypothesis, accrual anomaly based on incorrect pricing is a result of investors focus on earnings regardless of the Reversible nature of accruals and incorrect pricing of the market is corrected with the returning of accruals in future. The results show that there is a negative relationship between accruals and future stock returns and a return of discretionary accruals in future will remove this negative relationship.

Accruals solve mismatch and available timing problems in cash items. However, in many cases these items are manipulated by manager (Barghei et al, 2009). Need to virtual assumptions and choices to identify these items can cause measurement errors in them, so these items are less stable than cash items. It is expected in larger enterprises that there are more information about them as well as enterprises that have a higher percentage of institutional shareholders, be more attention to differences between cash and accrual items and pricing mechanism of accruals be more accurate (Chambers, 2005). Much research has been done in the field of non-discretionary and discretionary accruals. It seems that this issue is ignored from the perspective of internal investigators and no research had been done in this field. Thus, in this paper, it is tried to investigate the relationship between enterprise growth and pricing of discretionary accruals in small and medium-sized enterprises.

Research Methods

Accruals show the difference between accounting profit of enterprise (profit that is calculated based on accrual accounting) and its cash flow. A part of accruals is created in the normal process of enterprise activity (non-discretionary accruals) and the other part (discretionary accruals) is made by conscious manipulation of management or imposing personal views. Because these items are affected by estimates and manipulations, some users of financial statements may be suspicious of accruals quality. One of the factors that affect the quality of accruals is institutional investors. Institutional investors are people and institutions that buy and sell large amounts of securities. Because they invest a large amount of their fortune in enterprises, accruals quality is important for them and it is expected to encourage the enterprise management to report quality profit (Fedyk et al, 2011).

The main purpose of this study is to investigate the relationship between enterprises growth and pricing of discretionary accruals in small and medium-sized enterprises.

Hypothesis 1: In small and medium-sized enterprises with

low growth, the sensitivity of stock returns to discretionary accruals is more than enterprises with high growth.

Hypothesis 2: In small and medium-sized enterprises with low growth, the sensitivity of stock returns to non-discretionary accruals is more than enterprises with high growth.

Hypothesis 3: In small and medium-sized enterprises with low growth, the sensitivity of stock returns to positive discretionary accruals is more than enterprises with high growth.

Hypothesis 4: In small and medium-sized enterprises with low growth, the sensitivity of stock returns to positive non-discretionary accruals is more than enterprises with high growth.

The aim of the present study is functional and in terms of collecting information, it is descriptive and in terms of analysis of information is correlational.

All Security and Exchange Commission enterprises in Tehran from 1389 to 1393 constitute the research population. According to the above, the population of the study includes 212 enterprises. In this study a systematic elimination method (screening technique) is used for sample selection. To test the hypotheses of the present study regression model is used and collected data are analyzed by the use of software Eviews and hypotheses are tested.

Analysis

The first and second hypotheses test

To test the first and second hypotheses of the study, model No. (1) is estimated once in small and medium-sized enterprises with low growth and another time in small and medium-sized enterprises with high growth and then according to the DAC and NDAC independent variables coefficient, the first and second research hypotheses will be approved or rejected.

Model (1):

$$R = \alpha_0 + \alpha_1 \text{GROW} + \alpha_2 \text{OCF} + \alpha_3 \text{NDAC} + \alpha_4 \text{DAC} + \text{MB} + \text{SIZE} + \varepsilon$$

Research model (1) estimation in small and medium-sized enterprises with low growth

In this model to determine whether using panel data in model estimation would be effective or not, F-Limer test was used. The results of these tests are shown in Table 9-4.

Chow test results table for research model (1) in small and medium-sized enterprises with low growth

Kind of test	Test statistic	Size of test statistic	Degrees of freedom	P-Value	Result
F-Limer test	F	0.55	(61,24)	0.99	poold

According to the test results and its P-Value (0.9964), hypothesis H0 is accepted at 95% confidence level and it is possible to use panel data method. According to the obtained

results of F-Limer tests, the above model is estimated using panel data that its results are as below table:

Table of estimation results for research model (1) in small and medium-sized enterprises with low growth

$R = \alpha_0 + \alpha_1 \text{GROW} + \alpha_2 \text{OCF} + \alpha_3 \text{NDAC} + \alpha_4 \text{DAC} + \text{MB} + \text{SIZE} + \varepsilon$				
Variable	Coefficient	t-statistic	P-Value	VIF
GROW	0.14	3.70	0.0003	1.18
OCF	6.50	2.53	0.01	1.77
DAC	1.56	3.73	0.0002	3.06
NDAC	-0.83	-2.26	0.02	3.48
MB	-0.04	-7.06	0.00	1.13
SIZE	-0.18	-3.55	0.0004	1.57
C	2.94	3.95	0.0001	-
Model adjusted coefficient of determination 0.18				
Model f-statistic (P-Value)	13.02(0.00)	Jarque-Bera statistic (P-Value)	1.33 (0.51)	
		Durbin-Watson statistic	2.20	

In investigating the significance of the model according to the size of probability of F-statistic which is smaller than 0.05 (0.00) with 95% confidence level, the significance of the model is confirmed. The coefficient of model

determination also indicates that 0.18% of the changes in stock returns are explained by the independent and control variables entered in model. Moreover, size of Durbin-Watson statistic is a number between 1.5 and 2.5 (2.20). So

there is not a correlation between study variables. In investigating the collinearity of variables, the results of VIF index statistics for all variables are less than 10, so it is confirmed that there is no collinearity between variables of the model.

In reviewing the statistical assumptions of the model, the results of Jarque-Bera test show that remains of research model estimation in 95% confidence level have normal

distribution. Therefore, the probability of this test is greater than 0.05.

Research model (1) estimation in small and medium-sized enterprises with high growth

In this model to determine whether using panel data in model estimation would be effective or not, F-Limer test is used. The results of these tests are in the table.

Chow test results table for research model (1) in small and medium-sized enterprises with high growth

Kind of test	Test statistic	Size of test statistic	Degrees of freedom	P-Value	Result
F-Limer test	F	0.72	(60,23)	0.92	pool

According to the results of test and its P-Value (0.92), hypothesis H0 at 95% confidence level is accepted and it is possible to use panel data method.

Table (1) estimation results for research model (1) in small and medium-sized enterprises with high growth

$R = \alpha_0 + \alpha_1 \text{GROW} + \alpha_2 \text{OCF} + \alpha_3 \text{NDAC} + \alpha_4 \text{DAC} + \text{MB} + \text{SIZE} + \epsilon$				
Variable	Coefficient	t-statistic	P-Value	VIF
GROW	0.34	6.94	0.00	1.01
OCF	1.39	0.67	0.50	3.36
DAC	0.85	3.35	0.00	1.65
NDAC	0.10	0.45	0.64	2.91
MB	0.002	0.80	0.41	1.05
SIZE	-0.07	-1.96	0.04	1.29
C	1.04	2.27	0.02	-
Model adjusted coefficient of determination 0.19				
Model f-statistic (P-Value)	12.94(0.00)	Jarque-Bera statistic (P-Value)	5.59 0.06	
		Durbin-Watson statistic	2.26	

To determine the significance of the model according to the size of F-statistic probability that is smaller than 0.05 (0.00) with 95% confidence level, the significance of the model is confirmed. The model determination coefficient also shows that 0.19 percent of the changes in dependent variable are explained by the independent variables entered in model. In connection with the independence test of remains, size of

Durbin-Watson statistic is between 1.5 and 2.5 (2.26),so there is not a correlation between model variables. Also, in reviewing the variables collinearity, the results of VIF index statistics for all variables are less than 10, so the absence of collinearity between variables of research model is approved.

Table (2) optimal results for research model (1) in small and medium-sized enterprises with high growth

$R = \alpha_0 + \alpha_1 \text{GROW} + \alpha_2 \text{NDAC} + \alpha_3 \text{DAC} + \alpha_4 \text{SIZE} + \epsilon$				
Variable	Coefficient	t-statistic	P-Value	VIF
GROW	0.35	7.03	0.00	1.06
DAC	0.80	3.27	0.001	3.21
NDAC	-0.02	-0.18	0.85	3.04
SIZE	-0.05	-2.04	0.04	1.08
C	0.92	2.33	0.02	-
Model adjusted coefficient of determination 0.20				
Model f-statistic (P-Value)	19.20(0.00)	Durbin-Watson statistic	2.45	

In studying the statistical assumptions of the model, the Jarque-Bera test results show that research model estimation remains in 95% confidence level have a normal distribution, hence the probability of this test is greater than 0.05.

The third and fourth hypotheses test

To test the second hypothesis of the study, model No. (2) is estimated once in small and medium-sized enterprises with low growth and once in small and medium-sized enterprises with high growth and then according to the variables coefficient of DACM and NDACM, the hypothesis will be approved or rejected.

Model (2):

$$R = \alpha_0 + \alpha_1GROW + \alpha_2OCF + \alpha_3NDACM + \alpha_4DACM + MB + SIZE + \epsilon$$

Research model (2) estimation in small and medium-sized enterprises with low growth

To determine whether using panel data to estimate above model will be efficient or not, the F-Limer test is used. F-Limer test results are presented in the table.

Chow test results table for research model (2) in small and medium-sized enterprises with low growth

Kind of test	Test statistic	Size of test statistic	Degrees of freedom	P-Value	Result
F-Limer test	F	0.57	(61,24)	0.99	poold

Based on the test results and its P-Value (0.9946), the hypothesis H0 has been confirmed at 95% confidence level and it is possible to use panel data. So Hausman test is not

needed. The model estimation results for small and medium-sized enterprises with low growth are as blow table:

Table (3) estimation results for research model (2) in small and medium-sized enterprises with low growth

$R = \alpha_0 + \alpha_1GROW + \alpha_2OCF + \alpha_3NDACM + \alpha_4DACM + MB + SIZE + \epsilon$				
Variable	Coefficient	t-statistic	P-Value	VIF
OCF	1.27	2.94	0.003	1.60
GROW	0.02	0.51	0.60	1.14
DACM	0.42	4.17	0.00	1.08
NDACM	-0.24	-0.31	0.75	1.03
MB	0.03	2.06	0.03	1.14
SIZE	-0.16	-2.97	0.003	1.58
C	1.95	1.97	0.04	-
Model adjusted coefficient of determination 0.18				
Model f-statistic (P-Value)	5.44 (0.00)	Jarque-Bera statistic (P-Value)	1.54 (0.46)	
		Durbin-Watson statistic	2.05	

In examining the significance of the model based on the size of F-statistic probability which is smaller than 0.05 (0.00) with 95% confidence level, the model significance is

confirmed. The coefficient of determination also shows that 0.18% of the changes in dependent variable are explained by the independent variables entered in model.

Table (4) optimal results for research model (2) in small and medium-sized enterprises with low growth

$R = \alpha_0 + \alpha_1OCF + \alpha_2NDACM + \alpha_3DACM + \alpha_4MB + \alpha_5SIZE + \epsilon$				
Variable	Coefficient	t-statistic	P-Value	VIF
OCF	1.26	2.92	0.003	1.60
DACM	0.42	4.25	0.00	1.07
NDACM	-0.25	-0.34	0.73	1.03
MB	0.03	2.41	0.01	1.01
SIZE	-0.16	-2.95	0.003	1.57
C	1.94	1.97	0.04	-
Model adjusted coefficient of determination 0.19				
Model f-statistic (P-Value)	6.49 (0.00)	Jarque-Bera statistic (P-Value)	1.54 (0.46)	
		Durbin-Watson statistic	2.05	

In reviewing the statistical assumptions of the model, results of Jarque-Bera test show that the remains of the estimation model in 95% confidence level have a normal distribution so that the probability of this test is greater than 0.05 (0.15).

low growth are presented in Appendix 9.

Research model (2) estimation and the best fitting of the above model in small and medium-sized enterprises with

Research model (2) estimation in small and medium-sized enterprises with high growth

In this model F-Limer test is used to determine whether using panel data in model estimation would be effective or not. The results of these tests are shown in Table 17-4.

Chow test estimation results table for research model (2) in small and medium-sized enterprises with high growth

Kind of test	Test statistic	Size of test statistic	Degrees of freedom	P-Value	Result
F-Limer test	F	0.77	(60,23)	0.87	poold

According to the test results and its P-Value (0.99), hypothesis H0 is confirmed at 95% confidence level and panel data can be used. Therefore, Hausman test is not

needed. The results of model estimation in small and medium-sized enterprises with low growth are as table:

Table (5) estimation results for research model (2) in small and medium-sized enterprises with high growth

Variable	Coefficient	t-statistic	P-Value	VIF
GROW	0.36	7.01	0.00	1.006
OCF	-2.45	-0.19	0.84	1.77
DACM	0.07	2.11	0.03	1.19
NDACM	-0.03	-0.38	0.69	1.35
MB	0.001	0.58	0.56	1.05
SIZE	-0.05	-1.63	0.10	1.21
C	0.84	1.90	0.05	–
Model adjusted coefficient of determination 0.15				
Model f-statistic (P-Value)	10.41 (0.00)	Jarque-Bera statistic (P-Value)	2.19 0.33	
		Durbin-Watson statistic	2.07	

In determining the significance of the model based on the size of probability for F-statistic that is smaller than 0.05 (0.000) with 95% confidence level, significance of the model is confirmed. The model coefficient of determination

also shows that 0.15 percent of the changes in the dependent variable are explained by the independent variables entered in model.

Table (6) optimal results for research model (2) in small and medium-sized enterprises with high growth

Variable	Coefficient	t-statistic	P-Value	VIF
GROW	0.79	6.19	0.00	1.006
DACM	-0.15	-0.82	0.40	1.01
NDACM	0.12	1.49	0.13	1.008
C	-0.06	-0.34	0.73	–
Model adjusted coefficient of determination 0.11				
Model f-statistic (P-Value)	14.18(0.00)			
Durbin-Watson statistic	2.42			

In reviewing the model statistical assumptions, results of Jarque-Bera test show that the estimation model remains in 95% confidence level have a normal distribution so that the probability of this test is smaller than 0.05 (0.33).

Discussion and Conclusion

The aim of this study is to investigate the relationship between enterprises growth and pricing of discretionary accruals in small and medium-sized enterprises.

In small and medium-sized enterprises with low growth, sensitivity of stock returns to discretionary accruals is more than enterprises with high growth.

In summing up the above results and comparing obtained results it is observed that the absolute value of the variable coefficient of discretionary accruals for small and medium-sized enterprises with low growth is greater than small and medium-sized enterprises with high growth. So we can say sensitivity of stock returns to discretionary accruals in small and medium-sized enterprises with low growth is more than in small and medium-sized enterprises with high growth. Therefore, the first hypothesis is confirmed at the 95% confidence level.

In small and medium-sized enterprises with low growth,

sensitivity of stock returns to non-discretionary accruals is more than enterprises with high growth.

In summing up the above results and comparing the obtained results it is observed that in small and medium-sized enterprises with low growth, sensitivity of stock returns to non-discretionary accruals is significant but in small and medium-sized enterprises with high growth, sensitivity of stock returns to non-discretionary accruals is insignificant. Therefore, the second hypothesis is approved in 95% confidence level.

In small and medium-sized enterprises with low growth, sensitivity of stock returns to positive discretionary accruals is more than enterprises with high growth.

In summing up the above results and comparing obtained results, it is observed that the absolute value of the variable coefficient, positive discretionary accruals, for small and medium-sized enterprises with low growth is greater than in small and medium-sized enterprises with high growth. So we can say sensitivity of stock returns to positive discretionary accruals in small and medium-sized enterprises with low growth is more than in small and medium-sized enterprises with high growth. Therefore, the third hypothesis of the study is approved in 95% confidence

level.

In small and medium-sized enterprises with low growth, sensitivity of stock returns to positive non-discretionary accruals is more than enterprises with high growth.

In summing up the above results and comparing the observed results it is observed that in small and medium-sized enterprises with low growth and in small and medium-sized enterprises with high growth the sensitivity of stock returns to non-discretionary accruals was not significant. Therefore, the fourth hypothesis is not accepted.

Suggestions

- 1 Because investors to make decisions regarding their profit figure, as well as the fact that no Symmetry and cost of high-growth companies representing more recommended of discretionary accruals in order to the signal is given more attention.
- 2 Positive aspects earnings management in high-growth companies to be more interesting.
- 3 It is recommended that investors respond more accurately to changes in accruals of financial analysts in investment decisions are taken.
- 4 Next to capital market participants is suggested that in addition to the analysis of financial statements, pay attention to environmental issues.

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