Effect Earnings Durability on Explaining the Future Revenue

[1]Hamid Reza Ranjbar Jamalabadi (corresponding author)

Department of Accounting, Yazd Shahid Sadoughi University of Medical Sciences ,Yazd, Iran.
Department of accounting , Science and Research Branch, Islamic Azad University, Yazd, Iran.

Abstract: In this study, net income is decomposed into current operating accruals, non-current operating accruals and cash items. The distributed earnings also involve the funds paid to two groups, including the shareholders and the creditors. Using filtering technique, 120 listed firms on the Tehran Stock Exchange over the years from 2007 to 2012 have been selected as the sample. To analyze the data, univariate and multivariate regression based on panel data and seemingly unrelated regression (SUR) have been used. The findings reveal that the net income and the distributed earnings significantly impact the future profitability. Furthermore, it was found that the components of the net income are directly associated with the future profitability. The findings also confirm the higher persistency of the distributed income in comparison with the aggregated net income in relation to the cash paid to the shareholders.

Introduction

Accounting is today considered as an information system and accounting figure is one of the most important items obtained from the information system. Accounting earnings is a very significant number of the financial statements and is a measure for evaluating the profitability, free cash flows and managerial performance. This number might be also used in making economic decisions considered by the users of the financial statements, investors and managers. Accounting earnings are measured by the accrual system; that is the reason for measuring the net income by accounting measures and estimations. Because of the very essential significance of the earnings, there is a chance to manipulate earnings. Satisfying the managerial needs is one of the essential incentives of the managers to manipulate the earnings.

Earnings persistence is defined as the continuity and durability of the current earnings. Earnings persistence is affected by the magnitude of the accruals. The higher persistent earnings are accompanied by more ability to maintain the current earnings and higher earnings quality (Lipe, 1990). The relevancy of the accounting profit to the prediction goals depend on the persistence level and its components. Accounting profit, considered as the most significant information source for evaluating the future profitability, is classified into two categories of accrual and cash components. There is a difference between accounting profit and cash flows from operations, which is resulted from the accruals. In contrast to the cash items, the accruals are subjective and more subject to misstatements and errors in evaluating the accrual component of the profit. Using reported earnings and cash and accrual components,

the firms seek to anticipate the future profitability. The present study aims to examine whether earnings persistence and its components are different in explaining the future profitability.

1.   Theoretical Background
1.1.   Earnings Persistence

The businesses aim to earn profit and cash flows and to achieve this goal, they should finance the needed resources. The managerial efficiency is reflected in using the existing sources and the earnings persistence reveals this efficiency. The higher profits earned by the operating assets indicate the more persistent earnings and more ability to maintain the current earnings (Safayian Rizi and Sadeghi, 2009).

1.2.   Role of the Accruals in Earnings Persistence

The findings documented by Sloan (1996) reported that less reliable accruals lead to lower earnings persistence. Sloan also found that if the investors concentrate on the earnings, then they confront with problems associated with identifying the cash and accrual components. This will finally lead to accruals anomaly. Zach (2005) argues that the low persistent accruals relate to various events such as acquisition and merging.

2.   Research Background

Sloan (1996) examined whether the stock price will reflect the information in the accruals and cash flows in the future. He showed that the accrual components of the earnings are lower persistent that the cash components and this is because of the higher subjectivity and judgment in estimating the accruals.

Dechow and Dichev (2002) investigated the role of accruals in better measurement of the firm performance over a period from 1987 to 1999. Their results showed that by increasing the estimation error of the accruals, the quality of the accruals and the earnings reduces. Furthermore, the results documented a positive association between accruals and earnings persistence. That is, lower accrual firms have lower persistent earnings.

In a study about the accrual components of earnings and growth, Fairfield et al (2003) found that the lower persistence of the accrual components of the earnings is an indicator of the negative relationship between future profitability and growth of net operating assets.

Richardson et al (2005) examined the relationship between accrual reliability, earnings persistence and stock prices over a period from 1962 to 2001. Their results confirmed the relationship between accruals reliability and earnings persistence.

Chan (2006) tested the relationship between accruals and future stock returns over a period from 1971 to 1995. It was found that the high accrual firms confront with lower stock returns after the reporting period. As a result, the firms with low earnings quality have lower stock returns after the reporting period.

Dechow et al (2008) examined the persistence and pricing of the cash components from 1950 to 2003. They classified the cash components of the earnings into the maintained cash, paid cash to the shareholders and paid cash to the creditors. They concluded that the paid cash to the shareholders is more persistent and has a significant relationship with the stock prices.

Hao et al (2009) investigated the effect of operating cycle in the differential persistency of the accruals and cash flows and also examined the market reactions to the different components of earnings. The market productivity test indicated that mispricing of accruals occurs for the firms with longer operating cycles and showed that the investors are more concentrated on the earnings. However, the accrual persistence among the firms with different earnings qualities were ignored.

Center et al (2013) investigated whether abnormal specific items exist in an environment in which the separation of accruals is mandated. Their findings reported that none of the components were mispriced except for the cash component of the earnings. The evidences represented that the mandatory disclosure of the non-accruals gives the investor the ability to price the earnings components so that it is consistent with the real levels of earnings persistence. It was also found that the mandatory disclosure is better than the discretionary one.

3.   Methodology

This is an applied study using descriptive and correlation methods for analyzing the data collected from library studies. The theoretical information such as the literature review and research background are collected from different sources, including books, journals and expert web sites of accounting. To test the normality of the variables, Kolmogorov-Smirnov test has been used and the finding indicated the normality of the data distribution at 0.05 level of significance. Using central tendency and dispersion indexes, the sample is described and the inferential statistic is employed to analyze the data related to the hypotheses. The inferential statistics of this study include univariate regression, multivariate regression based on panel data and seemingly unrelated regression (SUR). To examine the goodness of fit of the regression models and the linear relationship between the variables, F statistic and its probability is used. When the probability of F statistic is lower than 0.05, the linear relationship is confirmed. In addition, to investigate the relationship between the independent and the dependent variables, t statistic and its probability are used. When the probability of the t statistic is lower than 0.05, the relationship between the dependent and the independent variables is confirmed.

4.   Hypotheses Development

Earnings persistence and its components in terms of explaining the future profitability have been considered in developing the research hypotheses. The net income includes current operating accruals, non-current operating accruals and cash items. The following hypotheses are developed:

The first hypothesis: Net income can explain the future profitability.

The second hypothesis: There is a significant difference between the power of the earnings components in explaining the future profitability.

5.   Calculating the Variables

Net income is the independent variable of the study and includes the current operating accruals, non-current operating accruals, accumulated cash, paid cash to the creditors and paid cash to the shareholders. The future profitability is the dependent variable; while, firm size is the control variable. To eliminate the effect of firm size, the independent variables are divided by the average assets.

6.   Population and Sample

The population of this study is composed of all firms listed on the Tehran Stock Exchange. The samples are selected by using filtering technique. The sample components should have the following criteria:

1. The sample firms should not be classified as investment or financial intermediaries.

2. The end of the fiscal year should be consistent with the calendar year.

3. The sample firms should be profitable.

4. The financial information of the sample firms should be available.

Based on the above criteria, 114 listed firms (684 firm-year observations) are selected as the sample.

7.   Findings
7.1.   Testing the first hypothesis

The first hypothesis is developed as follows:

H0= Net income does not explain the future profitability.

H1: Net income explains the future profitability.

Table 1. A summary of the calculation of the variables

Dependent Variable
Future profitability (NI_{t+1})
Net income after tax in year t +1
Independent variable
▪   Net income (N_t) ▪   Net income after tax= revenues - expenses
▪   Current operating accruals ($CACC_t$) ▪   CACC= **)**Δcurrent assets- cash and cash equivalent) - **)** current debts – short-term debts) $CACC = \Delta (CA - C) - \Delta (CL - STD)$
▪   Non-current operating accruals ($NCACC_t$) (current debts- long-term debts–total debts)Δ - (current assets – total assets) **Δ=NCACC** $NCACC = \Delta (TA - CA) - \Delta (TL - CL - LTD)$
▪   Total accrual ($TACC_t$) $TACC = CACC + NCACC$
▪   Accumulated cash (ΔC_t) (Cash and cash equivalent) Δ = **Accumulated cash**
▪   Retained earnings: **Accumulated cash+ non-current operating accruals+ Current operating accruals = Retained Earnings** $C\Delta RE = CACC + NCACC +$
▪   Cash paid to the creditors (DIST – D $_t$): (Short-term debts + long-term debts) Δ - = (DIST – D $_t$): $DIST–D = - (STD + LTD)$
▪   Cash paid to the shareholders: DIST – E $_t$): (Total debts– total assets) Δ- Net earnings= (owner's equity)Δ- Net earnigns= **Cash paid to shareholders** $DIST–E = NI - \Delta TE = NI - \Delta(TA - TL)$
▪   Distributed earnings (DIST $_t$): Cash paid to the creditors + cash paid to the shareholders = **Distributed earnings** $DIST = DIST-E + DIST-D$
Control variables
▪   Average assets (Average Assets $_t$) ▪   Average assets= (beginning assets + ending assets) /2

Table 2. Results of the second hypothesis

$NI_{t+1} = \alpha_0 + \alpha_1 NI_t + u_t$				
Variable	**Coefficient**	**Standard error**	**T statistics**	**Prob**
Constant	0.137584	0.003769	36.50473	*0.000
Net income	0.143542	0.015271	9.399535	*0.000
F statistics	72.3300	Adjusted R^2		0.153803

*Significant at 99 percent
** significant at 95 percent

Based on F statistics and its probability, it is concluded that the regression equation is significant at the 95 percent level of significance.

Adjusted R^2 of the model describes a percentage of changes in the dependent variable which has resulted from the changes in the independent variable. Based on the table above, the adjusted R^2 of the model is 0.15; therefore, 15 percent of the changes in the dependent variable are explained by the independent variable.

The first assumption concerns whether the coefficient of N is non-zero. In the model related to the future profitability, the t statistics is 9.3995 and the probability is 0.000 which is lower than 0.05; therefore, H0 is rejected. That is, the net income is significant in predicting the future profitability.

Based on table 2, the following model is provided for the future profitability:

$NI_{t+1} = 0.137584 + 0.143542\ NI_t + u_t$

The positive coefficient shows that the dependent variable (NI_{t+1}) is directly associated with the independent variable (N). The coefficient of N in the above equation indicates that 100 units of increases in the net income result in 14 units of increases in the future profitability.

7.2.   Testing the second hypothesis

The second hypothesis is developed as follows:

H0: There is no significant difference between the power of the earnings components in explaining the future profitability.

H1: There is a significant difference between the power of the earnings components in explaining the future profitability.

In the above hypothesis, it is assumed that the net income is decomposed into current operating accruals, non-current operating accruals and free cash flows. The relationship of any of the elements with the future profitability has been also examined.

Table 3. Results of the third hypothesis

$NI_{t+1} = \alpha_0 + \alpha_1 CACC_t + \alpha_2 NCACC_t + \alpha_3 FCF_t + u_t$				
Variable	**Coefficient**	**Std. deviation**	**t statistics**	**Prob**
Constant	0.122120	0.003178	38.42095	*0.000
CACC	0.008491	0.015488	0.548246	**0.0536
NCACC	0.008539	0.015581	0.547991	**0.0837
Free cash flows	0.180006	0.009260	19.43911	*0.000
F	112.3500	Adj. R^2		0.400101
$\alpha_1 = \alpha_2$	2.013500 0.99070			
$\alpha_1 = \alpha_3$	79.342410 0.000			
$\alpha_2 = \alpha_3$	78.8800 0.000			

Based on the F statistic and its probability, it is concluded that the regression model is significant at the 95 percent level. As shown in table 3, the adjusted R^2 of the model is 0.40 and it represents that 40 percent of the changes in the dependent variable is explained by the model.

Using the Wald statistic, the equality of α_1 and α_2 has been tested. Based on the significance level of 0.099, it is found that $\alpha_1 = \alpha_2$ is not rejected at 5 percent of significance. It is finally concluded that the current operating accruals and non-current operating accruals have similar powers to explain the future profitability.

The significance level of 0.000 in hypothesis $_1\alpha = _3\alpha$ is rejected at 5 percent of significance. It is concluded that there is a significant difference between the ability of the components of net income to explain the future profitability. Because $0.180006 = |_3\alpha| > 0.008491 = |_1\alpha|$, it is concluded that the ability of the free cash flows is higher than the current operating accruals.

Using the Wald statistics, the equality of $_2\alpha$ and $_3\alpha$ has been used. Based on the significance level of 0.000, the equality of $_3\alpha$ and $_2\alpha$ is rejected at 5 percent of significance. It is concluded that the components of net income have different explanatory variables. Because $0.180006 = |_3\alpha| > 0.008539 = |_2\alpha|$, it is found that the free cash flows are better than non-current operating accruals in terms of explaining the future profitability.

8.   Conclusion

The present study aims to examine the persistency of the net income and its components in explaining the future profitability of the firms. Net income has been decomposed into current operating accruals, non-current operating accruals and cash items. The first hypothesis examined the ability of the net income in explaining the future profitability. The results of this hypothesis showed that the net income plays a role in predicting the future profitability. The findings of this study are consistent with findings of Sloan (1996) who argued that the persistency of the accruals reduces in effect of subjectivity. The high accruals negatively impact the earnings persistence. The results of the hypothesis revealed that the ability of the current operating accruals and non-current operating accruals have the same abilities in predicting the future profitability.

9.   Research based Suggestions

Based on the findings of the study, the following suggestions are provided:

1. The findings revealed that decomposing net income into its components increases the ability of the net income in explaining the future profitability. As a result, the investors, analysts and other users of the financial statements are suggested to decompose the net income in order to increase its effectiveness the valuation models.

2. Another finding of the study showed that the cash component of the net income is more persistent that the accrual component. The users of the financial statements are suggested to pay more attention to their cash components in their decision making, because this component of the income is of higher quality and there is a little probability to manipulate the number.

10.   Future Directions

1. This study has been conducted for all industries. It is suggested to separate different industries and compare the results with the other findings.

2. By separating the components into discretionary and non-discretionary accruals, the persistency of the accruals and their impacts on the future profitability of different industries might be compared in terms of different industries.

Reference

1. Saghafy, A. and G. Kurdistani, (2004), examining and explaining the relationship between earnings quality and market reaction to cash dividend changes, review of accounting and auditing, Year XI, No. 37, 51-72.
2. Haghighat, Hamid and Ali Akbar Iranshahi, (2010), Study of the Tehran Stock Exchange as investors reacted to the sustainability aspects of accruals, Journal of Accounting and Finance, Year II, No. III, pp. 31-48.
3. Dmury, Dariush, Aref Manesh Khalil Z. Abbasi Muslu, (2011), examined the relationship between income smoothing, earnings quality and firm value in companies listed in Tehran Stock Exchange, the Financial Accounting Research Journal, Year III, No. I, pp. 39-54.
4. Rezazadeh, J., M. Rahim, M. and Mahmoud Nassiri, (2011), the role of temporary accounting distortions in steady decline accruals, Journal of Accounting, Second Year, No. 4, pp. 49-64.
5. Safaeian Rezi, M. and M. Sadeghi, (2009), evaluation of investment decisions as it relates to the sustainability of profits companies listed in Tehran Stock Exchange, First Year, Issue 3, 69-87.
6. Nuravesh I. Nazmi Amin Mehdi Heydari, (2006), The quality of accruals and earnings, with emphasis on the role of Brarvd error accruals, review of accounting and auditing, No. 33, 135-160.
7. Niko Maram, H. and Zadaleh Fathi (2011), the impact of accounting standards on financial reporting quality with an emphasis on sustainability benefit Iran in Tehran Stock Exchange, Journal of Management Accounting, Fourth Year, No. VIII, 31-45.
8. Chan, K., Chan, L., Jegadeesh, N. and Lakonishok, J. (2006). "Earnings quality and stock returns", Journal of Business, Vol. 79, pp. 1041-1082.
9. Dechow, P., Richardson, S. and Sloan, R. (2008), ''The persistence and pricing of the cashcomponent of earnings'', Journal of Accounting Research, Vol. 46, pp. 537-66.

10. Dechow, P. and Dichev, I. (2002), ''The quality of accruals and earnings: the role of accrual estimation errors'', The Accounting Review, Vol. 77, pp. 35-59.

11. Fairfield, P., Whisenant, J. and Yohn, T. (2003), ''Accrued earnings and growth: implications for future profitability and market mispricing'', The Accounting Review, Vol. 78, pp. 353-71.

12. Hao, Q., (2009)."Accruals' persistence, accruals mispricing and operating cycle: evidence from the US", International Journal of Accounting and Information Management, Vol. 17 Iss: 2, pp.198 – 207.

13. Lipe, R.,(1990), ''The Relation Between Stock Returns and Accounting Earnings Given Alternative Formation, Accounting Review. No, 65,pp 49-71.

14. Ng, H. (2005), "Distress risk information in accruals". University of Pennsylvaniaworking paper.

15. Papanastasopoulos, G., Thomakos, D. and Wang, T.(2008), "The Implications of Retained and Distributed Earnings for Future Profitability and Market Mispricing''.www. SSRN.com.

16. Richardson, S., Sloan, R., Soliman, M. and Tuna, I. (2005), ''Accrual reliability, earnings persistence and stock prices'', Journal of Accounting and Economics, Vol. 39, pp. 437-85.

17. Sloan, R. (1996), ''Do stock prices fully reflect information in accruals and cash flows about future earnings?'', The Accounting Review, Vol. 71, pp. 289-315.

18. Venter,E., Cahan, S., Emanuel, D. (2013), "Mandatory Earnings Disaggregation and the Persistence and Pricing of Earnings Components", The International Journal of Accounting, Vol 48, Iss: 1, PP. 26-53.

19. Zach, Z. (2005), "Inside the accrual anomaly", Washington University workingpaper.

8/26/2015