Advances in mathematical finance & applications, 3 (1), (2018), 53-67

Published by IA University of Arak, Iran
Homepage: www.amfa.iau-arak.ac.ir

Impacts of Cash Dividend Components on Earning Persistence and Return on Stock

Ali Najfi Moghaddam, Dorna Aslani*

Department of Financial Management, Tehran South Branch, Islamic Azad University, Tehran, Iran

ARTICLE INFO

Article history:
Received 25 June 2017
Accepted 2 December 2017

Keywords:
Accruals component of earning,
Cash component of earning,
Earning persistence,
Tehran Stock Exchange (TSE).

ABSTRACT

The aim of this study is to evaluate the impact of cash dividend components on corporates earnings persistence and return on stock. The population of study consists of 109 companies listed in Tehran Stock Exchange from 2011 to 2016. Data was analyzed using regression model. According to results, the cash component of earnings is more persistent than accruals and it can be used to predict future earnings. Therefore, it is suggested that cash dividend component to predict future earnings. In addition, managers should pay attention to the cash component of earnings in their decisions made on the amount of optimal cash fund because this component can positively affect future earnings. Moreover, the cash flow component of earnings cannot be used to predict future return on stock. Therefore, investors are recommended not to rely on the cash component of earnings in their investments, This is because even if corporates have considerable cash funds, their shares will not necessarily be a suitable option for investment and they should take other factors into account.

1 Introduction

Accounting knowledge-based capital market is generally concentrated on accruals, the evaluation of their relative persistence, their impact on the performance of share price in future and the fact that whether they can be used as a base for forming risk factor. Elson is one of the effective studies on this field. He found that the accruals component of earnings exhibits different persistence than cash flow component as it is more dependent on the one hand and investors fail to understand the different impacts of accruals on future profitability on the other hand. Some authors decomposed accruals to discretionary and non-discretionary sub-components and suggested that the lower persistence of accruals, after controlling sales growth, is originated from earnings manipulation. Some authors developed the experimental measurement of accruals quality and showed that it has a positive relation with earnings persistence. Fairfield, they stated that findings are actually a sub-set of a more comprehensive growth effect that can be stated by *decreased final return to new investment* ratio or conservatism

* Corresponding author. Tel.: *+989122393151*
E-mail address*: dorna.aslani@gmail.com*

accounting. They studied the persistence of accruals together with the different roles of book tax. He found that companies with considerable difference in their book tax have lower earnings even after controlling the effect of the special items of persistence.

This study provides an insight into the persistence and pricing of the components of cash dividend in Iran. They argue that accounting figures may exhibit different impacts in different markets. Therefore, it is impossible to derive a definite conclusion through evaluating only one market (the U.S. market). This implies that in a world where the free space of institutional conditions changes, countries may have different, and important, understandings of accounting figures. To do this, we avoided the problem of information spy, which has been defined before in the literatures. The main aim of this study is to examine the persistence, pricing and economic importance of cash components in corporates listed in TSE from 2011 to 2015.

In economic theories, a company is valued based on the current value of its future cash flows where earning can be replaced with cash flows. Earning forecast is of high importance so that one of the most important objectives of financial reporting is to assist creditors and investors to forecast future cash flows. Iranian Accounting Standards Committee states in the theoretical section of financial reporting that: "in order the users of financial statements make economic decisions, they need to assess the studied business unit in order to generate cash fund and to assure that it is certainly generated. The assessment of the ability of generating cash fund is facilitated through concentrating on financial status, financial performance and the cash flows of business units, and utilizing them in forecasting expected cash flows and measuring financial flexibility".

Investing on the shares of corporates demands the prediction of the price of shares before its realization. In this way, investors make their investments on shares with the maximum possible return in order to increase their profit. Financial statements serve as the most important information source for investors and creditors' decisions. Rationally, any decision maker makes investment to earn and to increase profit. Therefore, earning is an essential element affecting the decisions of the users of financial statements. Earning reports, the performance of a corporate during a fiscal period. On the other hand, earning per share (EPS) serves as a base for the majority of decisions, evaluation models and share pricing. Some believe that investors give more value to corporates with constant and persistent earnings. Earning persistence means the repeatability of current earning. Since the main aim of business units is to earn and to make cash flows, financial analyzers and investors do not consider accounting earning value as the only determinant index in the process of determining future cash flows. Rather, the persistence and repeatability of the reported earnings are of high importance for them. They pay more attention to the ingredients of earning than the final figure of it.

Persistent earnings are a part of available earnings, which are durable, and continue their durability in future. They believe that earning persistence is associated with earning quality. They argue that the extent of changes in the current components of earning which are transferred to future values shows the quality of earning. All reported accounting earnings are not permanent. Some components, especially some long-term and current accruals, such as renovation of structures, management discretions, identification of earnings originated from stock holding and changes in accounting rules and methods, have only a short-term or one-time effect on earnings. Therefore, earnings with severely transient components may have limited effects on valuation. The shift from concentrating on accruals to concentrating on cash flow was first occurred in 2008. The cash component of earnings is divided into

non-dividend cash flows (such as changes in holding cash funds), cash flows associated with debt supply activities and cash flows associated with financing activities.

2 Background

Khani and Sadeghi [8] studied the relation between the earnings quality and earnings persistence of TSE-listed corporates. They calculated earnings quality based on the investments made on the capital assets of labor. According to their results, there is a significant relation between earnings quality and earnings persistence in both prospective and retrospective approaches. They used financial ratio and time series regression to calculate investment-based earning quality in retrospective and prospective approaches, respectively. Nikoomaram and Solte [20] studied the relation of the indices of earnings quality (accruals quality, earnings persistence, earnings predictability) with the dimensions of the corporate governance of TSE-listed corporates (ability and sufficiency). They used return on equity as the criterion for measuring corporate governance because corporates with better performance in past times have generally less agent costs. They concluded that corporates with sufficient corporate governance have higher earnings quality than corporates with insufficient corporate governance, regardless of the fact that whether corporate governance power is taken into account. They studied the effect of conservatism on earnings persistence. They collected required data form the financial statements of 155 corporates listed in TSE from 1998 to 2007. They analyzed data and concluded that there is a significant relation between accounting conservatism and earnings quality. Taiefe and Kordestani [17] studied and explained market reaction to the changes of cash dividend and unexpected earnings as well as the relation between earnings quality and market reaction to the changes of cash dividend and unexpected earnings. They assessed earnings quality via persistence, predictability and the relation between earnings and operational cash flows indices using regression models. They controlled information environment, the set of investment opportunities, the quality of treating with the receivers of cash dividend and the operational risk of companies and found that:

1- According to earnings predictability-based earnings quality, the relation of operational cash flow and earnings as well as the relation of operational cash flow and the components of earnings quality with market reaction to earnings increase is not significant.
2- According to earnings persistence-based earnings quality, unlike predictions, markets show a positive reaction to the increased cash dividend of firms.
3- According to earnings persistence-based earnings quality, the relation of earnings predictability, and the relation of operational cash flow with earning components and the relationship of earning quality with market reaction to decreased cash dividend are not significant
4- According to earning quality based on the relationship of operational cash flow with earning, the reaction of market to decreased cash earnings is positive and agrees with predictions.
5- According to earning persistence-oriented earning quality, earning predictability, the relationship of operational cash flow and earning and the relationship of operational cash flow and the components of earning with reaction of market to unexpected earning change are not significant

Saghafi and Bloo [16] studied the relation of shareholders' equity with four accounting data-based earning features i.e., accruals quality, persistence, predictability and smoothness, in companies listed in TSE from 2000 to 2005: The main impetus of that study was recent studies on the relation of equity costs with different dimensions of earnings quality and evaluating the extent to which investors take

earnings quality into account. According to the results derived from the examination of the relation between equity costs and earnings features (individual examinations), only earnings persistence has a negative relation with equity cost. In addition, the investigation of adjusted differential coefficient of determination, originated from the addition of the variables to the base model, indicates that among others, earnings persistence has the maximum impact on equity cost. The results of the examination of the relation between equity cost and earnings feature (cumulative examinations) indicates that there is a significant relationship between equity cost, persistence and smoothness while their relation with two other features is not significant [16]. In a study titled "investment opportunities and market reaction to decisions on capital expenditures", they stated that there are evidences indicating the relation between free cash flow and increased share price in the presence of growth opportunities. They showed the relation of the positive price of shares and the increased cash dividend of firms with less investment opportunities. This relation is measured by Tobin's Q ratio. In addition, they showed in a study that cash dividend, limited funds or funds invested in securities increase corporate value by affecting free cash funds. In addition, they confirmed that the main and effective shareholders could decrease free cash flow-induced capital cost and, in turn, increase corporate value. Some of authors studied the relation between free cash flow and annual yield in growth opportunity and earnings persistence conditions in Australia Stock Exchange from 1992 to 2005. According to his results, positive cash flows create value and this increased value is higher in corporates with higher growth opportunities and earnings persistence than those with lower ones. They studied the credit of the theorem of the information content of cash dividend and signaling theory. He concluded that cash dividend provides information about future earnings. The relation between future and current earnings is stronger incorporates paying EPS compared with those not paying it and it becomes very stronger incorporates distributing higher cash dividend. It should be noted that signaling theory is no longer justifiable, as managers have captured conservatism and uniform dividend distribution strategies, and due to technological advances and broader reporting. His study states that the reported earnings of corporates paying EPS will be more persistent in future and consequently they will have higher earnings quality. They added an explanation to the literature of this subject, which is completely separated from above mentioned theories. They studied the relation between the payment of cash dividend and some indices of earnings quality. They concluded that the payment of cash dividend can serve as a valid signal of earnings quality and there is a direct relation between them. They discussed that corporates, ceteris paribus, will pay a higher portion of their income. This portion will be proportional to that accounting amount that they believe it is sufficient. To achieve this target, they define earnings quality as a situation where earnings are not manipulated by accounting discretion. They argue that if cash dividend is paid in a period where the main stream of current EPS is highly influenced by accounting discretion, it will not reflect current performance (predictable performance) and managers will face, in future, dangerous dimensions associated with stopping the payment of cash dividend. This, in turn, will result in the seriously negative reaction to the share value of the corporates in the market. Therefore, mangers will bear the risk of paying considerable cash dividend only in the lack of active earning management. Some others evaluated the relation of the intelligibility of annual reports and corporate performance with earnings persistence. He used Fogg index, which is used in computational linguistics, to measure the intelligibility of annual reports. His results indicated that the annual reports of corporates with low earnings are less intelligible and corporates with more intelligible annual reports have earnings that are more persistent. They evaluated the relation of seven features of earnings i.e. accruals quality, persistence, predictability, smoothness, relativeness, being timely and conservatism, with shareholders' equity costs. In the study, the first four features i.e. accruals quality, persistence, pre-

dictability and smoothness, were named as accounting data-based features and the latter three features, i.e. relativeness, being timely and conservatism, were named as market data-based features. According to their results, there is a negative relation between each earnings feature, except predictability and conservatism, and equity costs. This means that as features become more idealistic, equity costs decrease. In contrast, the cumulative relation of accounting databased features is stronger than market databased ones. The study of examined the persistence of the accruals and cash components of earnings. They showed that cash funds, which are paid to shareholders, are more persistent so that as the persistence component of earnings become higher, share price increases.

In 1996 Melon conducted a study titled "does share price completely reflect the information of the accruals and cash components about future earnings?" He evaluated the information content of the cash and accruals components of accounting earnings. He divided current earnings into cash and accruals parts to show the relation. He examined the following hypotheses:

1- The earnings persistence associated with current period performance decreases as the contribution of accruals increases and increases as the contribution of cash flows increases
2- It is impossible to reflect the more persistent part of earnings in cash component and to reflect the non-persistent part of it in accruals component based on stock price influencing expected earnings level
3- The formulation of long-term strategies i.e. reporting low level accruals, and short-term strategies i.e. reporting high level accruals for corporate shares result in abnormal return

Tehrani's result [3] indicates a strong inverse relation between the accruals and cash components of earning. To examine his first hypothesis, he concluded that the persistence of current earning decreases as accruals component increases and increases as cash component increases. He believes that this decrease occurs due to the objective feature of accruals. The main objective of this study is to evaluate the effect of cash dividend components on earnings persistence and return on stock of TSE-listed corporate. The subsidiary objective of this study is to determine the effect of decomposing cash flows into earnings persistence and return on stock of TSE-listed corporate in order to assist shareholders to make optimal decisions.

3 Statistical Model and Hypotheses

Main hypotheses of this research are as follows.

Main hypothesis 1: the cash flow component of earnings is more persistent than accruals
Main hypothesis 2: any increase in the persistence of cash flow component increases the distribution of earnings between shareholders
Main hypothesis 3: expected earnings, which are latent in share price, cannot reflect the cash flow component of earnings

This study uses a model for analysis purposes as follows. This model was extracted from the statistical models of Richardson et al. (2005: 22):

Model for main hypothesis 1:

$$NI_{t+1}=\rho_0+\rho_1 NI_t +(\rho_2\_\rho_1) FCFt+v_t$$

Hypothesis 1 is confirmed when $\rho_2 - \rho_1$ is positive

Model for main hypothesis 2:

$$NI_{t+1}= \gamma_0 + \gamma_1 NI_t + \gamma_2 \Delta CASH_t + \gamma_3 DIST\text{-}D_t + \gamma_4 DIST\text{-}E_t + \nu_{t+1}$$

Hypothesis 2 is confirmed when $\gamma_4 > 0, \gamma_4 > \gamma_2, \gamma_4 > \gamma_3$

Model for main hypothesis 3:

$$RET_{t+1}= \gamma_0 + \gamma_1 NI_t + \gamma_2 \Delta CASH_t + \gamma_3 DIST\text{-}D_t + \gamma_4 DIST\text{-}E_t + \nu_{t+1}$$

$$ARET_{t+1}= \gamma_0 + \gamma_1 NI_t + \gamma_2 \Delta CASH_t + \gamma_3 DIST\text{-}D_t + \gamma_4 DIST\text{-}E_t + \nu_{t+1}$$

Hypothesis 3 is confirmed when $\gamma_2 > 0$

The components of the above model are:

RET: Raw return of the next year

NI_{t+1}: Net income of period t+1

NI_t: Net income of period t

$\Delta CASH$: Changes in cash fund

DIST-D: Distribution of DPS between creditors

DIST-E: Distribution of EPS between shareholders

ARET: Abnormal return

4 The Methodology of the Study

This is a correlation study because it assesses the relation of variables to confirm the relations in current situation based on historical data. Therefore, it can be categorized as a casual-comparative study where the researcher evaluates causes and effects, i.e. the dependent and independent variables after occurrence. In such studies, there is a statistical relation between variables and the aim is to study this relation. In addition, variables cannot be manipulated. This is a correlation study, which is based on regression equations. Regression analysis is a statistical approach to evaluating and modeling relations between variables. The analyzer first assumes a relation between two variables.

In fact, he/she assumes that there is a linear relation between two variables. Then, he/she collects qualitative data from the considered two variables and draws them as points on a two dimensional graph. This study selected a number of TSE-listed corporate, collected their data from 2011 to 2015, and analyzed the relation between variables using the aforementioned method. Therefore, it is an applied study in terms of objective.

4.1 Population of Study

The audited and classified data of TSE-listed corporates were used to examine the hypotheses of study. This population was selected because TSE provides almost comprehensive data about the status as well as the economic-financial performance trends of corporates. It can be argued that it is the only

source providing access to the financial data of corporates to examine study models. Systematic elimination sampling method was used to select sample size.

Table 1: Selection and extraction of samples

Number of corporates listed in TSE from 2011 to 2015	452
Number of corporates with a fiscal year ending to March	314
Number of corporates listed in TSE before 2011	207
Not part of the banks and financial institutions are holding and investing shirts	151
Number of corporates whose shares have been exchanged during the study period at least once a quarter	94
Number of corporates whose data was collected (final sample)	80

Because of applying the conditions and considerations in systematic deletion sampling, 80 companies were selected from the statistical population for the tests.

4.2 Analysis Tools

This study used desk method to collect data. Desk method uses those studies published in reputable journals, which are collected from scientific websites. In addition, it used scientific journals, indices, thesis and relevant books. This study collected data using Codal website and Rahavar Novin software. Excel processed data and required variables were extracted for statistical examination and were analyzed by Eviews.

4.2.1 Inferential Analysis

In order to analyze the information, first it is necessary to compute the descriptive statistics of the data under investigation. Table 2 shows the central indices and the distribution of variables in the research.

Table 2: Descriptive analysis of variables

	RET	NI	DISTE	DISTD	CASH	ARET
Mean	0.376219	366594.4	176597.6	167711.2	307293.0	-2.39E-08
Median	0.080000	54547.50	18565.50	15016.00	43225.50	-0.294856
Maximum	8.590000	15760512	8220273.	11266349	24566244	8.168133
Minimum	-0.740000	-4692222.	0.000000	0.000000	-24893942	-1.242279
Std. Dev.	0.952851	1399969.	640421.4	819050.1	1845548.	0.973600
Skewness	4.099136	6.244151	7.295963	9.347691	2.431783	4.003408
Kurtosis	27.30764	55.73710	67.46266	103.1498	88.75087	26.10092
Number of valid observations	960	960	940	910	960	880

The descriptive analysis of the research variables is presented in the table above. Free cash flow is deducted from the cash flow from investing, and some companies' negative cash is negative, which suggests that in some company's investment is more than cash flow. The descriptive statistics of the return variable show that the average returns of the sample companies are 40% and the minimum value is 0.74 and the maximum value is 8.59. Net income is negative in some cases, which indicates that some of the sample companies have lost their financial performance.

4.2.2 Measuring the Normality of Variables

Before estimating the regression model, first, the condition for the normalization of the residual variable must be tested, using the Jarck-Letter statistic for this. The assumption of zero and the opposite assumption is as follows. In the case of abnormal panel models, they will be void, as shown in the table below.

Table 3: Jarck statistics - to test the normal variables of the model

	ARET	DISTD	DISTE	CASH	NI	RET
Jarka's statistics	21917.92	393555.9	171094.1	295074.6	117486.4	26322.92
Significance	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000

4.2.3 Validity of model

One of the presuppositions for fitting the regression model is the lack of a coherence between independent variables. There is a probable existence of a time syntax that correlates strongly between independent observations. Therefore, correlation between observations is considered before fitting the regression model.

The results of the test indicate that there is a significant relationship between net cash flow and free cash flow, between free cash flow and cash flow and unusual stock returns, between free cash flow and shareholder interest, between free cash flow and interest paid to the creditors because the significance of the test is less than 0.05 and the assumption zero is the non-significant assumption of the relationship between the variables at the confidence level 95% is rejected.

4.3 Maneuverability of Variables

The first step in determining the reliability of a variable is to look at its timeline graph. However, the irreplaceability of some variables is not explicitly defined on their graphs. Therefore, statistical tests are used for this purpose.

Based on the test, if the significance of the test is less than 0.05, then the assumption of the zero root of the unit root and the non-inactivity is rejected, otherwise the assumption is accepted and the need for the variables to remain. The results obtained from the test for measuring the reliability of the variables are shown in Table 5.

Table 4: Correlation of the studied variables

		Abnormal return on stock	Distribution of DPS between creditors	Distribution of EPS between shareholders	Free cash flow	Net income	Return on stock
Abnormal return on stock	Coefficient of correlation	1.000					
	Significance	------					
Distribution of DPS between creditors	Coefficient of correlation	-0.016	1.000				
	Significance	0.658	------				
Distribution of EPS between shareholders	Coefficient of correlation	-0.018	0.136	1.000			
	Significance	0.608	0.000				
Free cash flow	Coefficient of correlation	-0.011	0.416	0.460	1.000		
	Significance	0.759	0.000	0.000	-----		
Net income	Coefficient of correlation	-0.023	0.102	0.773	0.551	1.0	
	Significance	0.516	0.004	0.0	0.0	----	
Return on stock	Coefficient of correlation	0.993	-0.016	-0.017	-0.013	-0.023	1.0
	Significance	0.000	0.659	0.638	0.715	0.516	------

Table 5: Maneuver test results for variance estimation

	Method	Levin, Lin & Chu t*	Im, Pesaran and Shin W-stat	ADF - Fisher Chi-square	PP - Fisher Chi-square
RET	Test statistic	-16.291	-9.964	371.937	697.91
	Significance	0.0	0.0	0.0	0.0
NI	Test statistic	-8.347	-5.841	290.114	607.712
	Significance	0.0	0.0	0.0	0.0
Cash	Test statistic	-4.1887	-8.626	374.534	919.89
	Significance	0.00	0.0137	0.011	0.00
DISTE	Test statistic	-19.4250	-8.40233	342.013	730.335
	Significance	0.0000	0.0000	0.0000	0.0000
DISTD	Test statistic	-4.59707	-3.33092	246.361	452.563
	Significance	0.0000	0.0004	0.0000	0.0000
ARET	Test statistic	-18.9698	-8.14076	341.263	567.552
	Significance	0.0000	0.0000	0.0000	0.0000

4.4 Determine the Type of Model

The first step in estimating the data panel is to determine the constraints imposed on the econometric model. For this purpose, the F test is used. If the F value calculated from F is greater than the specified degree of freedom, the zero hypothesis of the test is based on the homogeneity of the sections and widths of the same origin and therefore considers the effects of the accepted group and the width of the various sources in the estimation. As a result, the panel can be used for estimation, but if the zero hypothesis is accepted, it means that the slopes are uniform for different sections, and the ability to combine the data and use the model of the combined data is confirmed. Statistics are included. The calculation results for this model are presented below.

Table 6: F Lemer Test

Model	Test	Test statistic	Degrees of freedom	Significance	Model type
$NI_{t+1} = \gamma_0 + \gamma_1 NI_t + \gamma_2 FCF_t + \nu_{t+1}$	F	1.520667	(10,867)	0.1269	Cash
	Chi-square	15.300889	10	0.1215	
$NI_{t+1} = \gamma_0 + \gamma_1 NI_t + \gamma_2 Dist\_D_t + \nu_{t+1}$	F	1.235510	(10,817)	0.2641	Cash
	Chi-square	12.457735	10	0.2556	
$NI_{t+1} = \gamma_0 + \gamma_1 NI_t + \gamma_2 Dist\_E_t + \nu_{t+1}$	F	1.544698	(10,847)	0.1188	Cash
	Chi-square	15.542764	10	0.1135	
$RET_{t+1} = \gamma_0 + \gamma_1 NI_t + \gamma_2 FCF_t + \nu_{t+1}$	F	6.943334	(10,867)	0.0000	Panel
	Chi-square	67.794640	10	0.0000	
$ARET_{t+1} = \gamma_0 + \gamma_1 NI_t + \gamma_2 FCF_t + \nu_{t+1}$	F	7.539416	(10,867)	0.0000	Panel

After the Lermer test, if the hypothesis is rejected, then we can use the Hausman test to make a comparison between the static and random effects methods for the explanatory power of the dependent variable. If the meaning is less than 0.05, the assumption is zero and the model is fitted with observations with constant effect, otherwise the model is fitted with random effect. The results of the test are shown below.

Table 7: Hausman test

Model	Test statistic	Degrees of freedom	Significance	Model type
$RET_{t+1} = \gamma_0 + \gamma_1 NI_t + \gamma_2 FCF_t + \nu_{t+1}$	0.438707	2	0.8030	Random effect
$ARET_{t+1} = \gamma_0 + \gamma_1 NI_t + \gamma_2 FCF_t + \nu_{t+1}$	0.331379	2	0.8473	Random effect

Results of the first hypothesis test: The profit cash component is more profitable than earnings liability component.

The first hypothesis is as follows:

H_0: The cash flow statement does not have more sustained earnings than accrued earnings factor.

H_1: The cash flow statement of earnings is more stable than that of accruals.

The results of the statistical analysis for the test patterns of the first hypothesis of the research are presented.

Table 8: Statistical analysis of the regression models of the first hypothesis test

Variable	Coefficient of regression	The standard deviation	Test statistic	Significance
NI	0.884884	0.022732	38.92707	0.0000
CASH	0.004827	0.018843	0.256149	0.7979
Constant factor	61551.44	26151.99	2.353604	0.0188
The coefficient of determination	0.733984		Fisher statistics	1209.898
Adjusted coefficient of determination	0.733378		Significance	0.000000
Durbin-Watson	1.734600			

The results of the statistical analysis show that the coefficient of determination of the model is 0.73, and this model has been able to explain 73% of the variations of the dependent variable through the changes of the independent variable. The Durbin-Watson is between 1.5 and 2, so there is no correlation between the regression model errors. The significance level of the F statistic is less than the test error level ($\alpha = 0.05$), and therefore the H_0 assumption is rejected and the estimated models are statistically significant and the relationships between the variables of the research are linear. The amount of regression coefficient to examine the effect of net profit on future earnings equals 0.88, the standard deviation is 0.022, the test statistic is 38.92 and the significance is 0, which indicates a positive and significant effect of net profit on future net profit. The amount of regression coefficient to examine the effect of free cash flow on future earnings is 0.004, the standard deviation is 0.01, the test statistic is 0.256 and the significance is equal to 0.79, which implies no positive and significant effect of free cash flow on future net profit.

Based on the results of the first hypothesis test, there was no convincing evidence to reject the H_0 hypothesis in other words, at 95% confidence level, it cannot be claimed that the cash flow statement has a higher profitability than earnings accruals. As a result, the first hypothesis of the research is rejected at this level of confidence.

The results of the second hypothesis: The higher sustainability of the cash component of the profit, mainly due to the distribution of cash to shareholders.

The second hypothesis is as follows:

H_0: Greater sustainability of cash flow is mainly due to the distribution of cash to shareholders.

H_1: The higher sustainability of the cash component of profit is due to the distribution of cash to shareholders.

The results of statistical analysis for the test models of the second hypothesis of the research are presented.

Table 9: Statistical analysis of the regression models of the second hypothesis test

Variable	Coefficient of regression	The standard deviation	Test statistic	Significance	Variable	Coefficient of regression	The standard deviation	Test statistic	Significance
NI	0.8642	0.0189	45.784	0.0000	NI	0.8226	0.01888	45.784	0.00
DISTD	-0.026469	0.0319	-0.8290	0.4073	DISTE	0.1871	0.03193	-0.8290	0.4073
Constant factor	61713.46	27094.6	2.2778	0.0230	Constant factor	54357.47	27094.6	2.2777	0.0230
The coefficient of determination	0.71948		Fisher statistics	1060.514	The coefficient of determination	0.7365	Fisher statistics		1060.514
Adjusted coefficient of determination	0.718795		Significance	0.00	Adjusted coefficient of determination	0.73545	Significance		0.00
Durbin-Watson	1.752404				Durbin-Watson	1.70068			

The results of the statistical analysis show that the coefficient of determination of the first model is 0.72. This model can explain 72% of the changes of the dependent variable through the changes of the independent variable. The coefficient of determination of the second pattern is 0.44, and this pattern has been able to explain 74% of the variations of the dependent variable through the changes of the independent variable. The Durbin-Watson is between 1.5 to 2, so there is no correlation between the regression model errors. The significance level of the F statistic is less than the error test level (α = 0.05), and therefore the H_0 assumption is rejected and the estimated models are statistically significant and the relationships between the variables of the research are linear. The amount of the regression coefficient to examine the effect of dividend payments on future earnings is 0.187, the standard deviation is 0.067, the test statistic is 2.75, and the significance is 0.00, indicating a significant effect of the dividend on future earnings. The magnitude of the regression coefficient to examine the effect of financial benefits on future earnings is -0.026, the standard deviation is 0.031, the test statistic is -0.829,

and the significance is 0.41, which implies no significant effect on the financial benefit There is a future net gain.

Based on the results of the second hypothesis test, at 95% confidence level, it can be claimed that the increase in the sustainability of the cash flow of the earnings occurs because of increasing the distribution accuracy of the shareholders. As a result, the second hypothesis of the research is accepted at this level of confidence.

Table 10: Statistical analysis of the regression models of the third hypothesis test

The dependent variable	RET				ARET				
Variable	Coefficient of regression	The standard deviation	Test statistic	Significance	Variable	Coefficient of regression	The standard deviation	Test statistic	Significance
NI	-2.71E-08	2.88E-08	-0.942	0.3461	NI	-2.86E-08	2.85E-08	0.316	-1.002
Cash	3.26E-09	2.39E-08	0.1361	0.8917	Cash	2.46E-09	2.37E-08	0.917	0.1037
Constant factor	0.4047	0.092	4.393	0000	Constant factor	0.01	0.057	0.920	0.100
The coefficient of determination	0.0013	Fisher statistics		0.591	The coefficient of determination	0.00159		Fisher statistics	0.7001
Adjusted coefficient of determination	-0.0009	Significance		0.55	Adjusted coefficient of determination	-0.00068		Significance	0.4967
Durbin-Watson	2.45336				Durbin-Watson	2.24268			

Test results of hypothesis 3: Expected earnings in stock prices cannot reflect the accuracy of the cash flow statement.

The third hypothesis is as follows:
H_0: The expected return on equity does not fully reflect the relative stability of the cash component of profit.
H_1: Expected earnings in stock prices do not fully reflect the relative stability of the cash component of profit.
The results of statistical analysis for the models of the third hypothesis of the research are presented.
The results indicate that the first model, in which the dependent variable is the return on equity, is not significant, and the second model, in which the dependent variable is the abnormal stock return, is not significant. Therefore, it can be concluded that the expected return on stock prices cannot reflect the accuracy of the cash flow statement, and the hypothesis is considered acceptable.

5 Conclusion and Suggestions

Main hypothesis 1: The cash flow component of earnings is more persistent than accruals.

Since the results of the review of this hypothesis indicate that, a cash member does not have more sustained earnings than an accrued member does and cannot be used to predict future earnings.

The second main hypothesis: Higher sustainability of profit cash component is mainly due to the distribution of cash to shareholders.

Since the results of this hypothesis show that the distribution of cash between shareholders affects net income, it is suggested that this indicator be used to forecast earnings.

The third main hypothesis: The cash flow statement cannot reflect expected earnings in stock prices.

The results show that a member of the cash flow of profits cannot be used to predict future returns in the future, and therefore it is suggested to investors that they should not focus on a cash profit member when investing.

References

[1] Esmaeili. Sh., *The relationship between earning quality and return on stock*, Stock Exchange Quaternarly, 2005, **12**(13), P. 27-56.

[2] Poorzamani Z., Jahanshad A., Kashani M., *Earnings persistence in TSE-listed corporates insisting on the reliability of accruals*, management studies quarterly, Management of Islamic Azad University, Research Science department, 2012.

[3] Tehrani R., Zakeri H., *Evaluation of the relationship between earning quality and cash dividend in TSE-listed corporates*, Stock Exchange quarterly, 2009, **2**(5), P.39-55

[4] Jazaieri M., *The relationship between share valuation using free cash flow, remaining income, income growth and market price method*, M.S. thesis if financial management, Allame Tabatabaee University, Accounting and Management Department, 2009

[5] Jahankhani A., *Financial management, publications of the organization for the study and formulation of humanities*, 2005.

[6] Haghighat H., Shahi A., *Evaluatio of the reactio of investors of TSE to the persistence dimensions of accruals*, Accounting Finance Research, 2010, **2**(3), P.31-48

[7] Khadem M., Shahreze A*., Evaluatino of the relationship between dividend distribution policies and variations of share price of TSE-listed corporates*, M.S. thesis of accounting, Tarbiat Modarred University, Faculty of Humanities, 2001.

[8] Khani A., Sadeghi M., *The effect of return, persistence and abnormalities of accruals on the period earnings of TSE-listed corporates*, Accounting Experimental Studies, **2**(8), P.147-166

[9] Dastgir M., Hoseinzade A., Khodadadi V., Vaez. S. A., *Earning quality incorporates with financial distress*, Accounting Financial Studies, 2011, **4**(1), P.146-155.

[10] Zolfaghari. A., *Growth opportunities, earning persistence and assessment of free cash flow*, M.S thesis of accounting, Rafsanjani Valiasr University, Faculty of Economy and Management, 2013.

[11] Rahimian N., Jafari M., *Measures and structures of the quality of earning*, Accountant, 2006, **174**, P.234-270.

[12] Shabahang R., *Accounting theory*, Tehran, professional research center for accounting and auditing, 2002, **2**, P.564-589.

[13] Zariffard R., Jahankhani A., *Identification and analysis of factors associated with the assessment of the quality of earning of Iranian economic enterprises*, PhD thesis, Tehran University, 1999.

[14] Alavi Tabari S. H., Khalife Soltan S. A., Shahbandian N., *Quality of auditing and earning prediction*, accounting research, 2009, **3**, P.22-35

[15] Ferdowsi A., *The evaluation of the relationship of sustainable growth of earning with high quality income of earning and earning response coefficient (ERC)*, M.S. thesis of accounting, Bahonar University, Kerman, Faculty of Economy and Management, 2012.

[16] Sagahfi A., Bloo Gh., *shareholders' equity costs and earning feature*, accounting research, 2009, **2**, P.4-28

[17] Kordestani Gh., Taiefe S., *The qualitative features of earning and the capital costs of common stock,* financial research, Management Department of Tehran University, Spring and Summer, 2013.

[18] Mahmoodi A., The evaluation of the effect of earning persistence, earning growth and firm size on the relationship of earning and operational cash flow with the return on stock of TSE-listed corporates, M.S. thesis of accounting, Chamran University, Ahvaz, Faculty of Economy and Social Sciences, 2009.

[19] Modarres A., Abbaszade M., *The analytical evaluation of the effect of predictability of accruals and cash flow components on predicted earning quality*, Knowledge and Development (scientific-research), 2008, **24**(15), P.780-795.

[20] Nikoomaram H., Pazooki P., *Management reward and earning persistence*, Management Accounting Quarterly (scientific-research), 2015, **24**(8), P. 347-355.