

# Studying the relationship between information asymmetry and policy of Dividing profit in companies of chemical, pharmaceutical, and nutritive industries accepted in Tehran Stock exchange

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**ABSTRACT:** Considering that the role of accounting data in financial markets is a basis for allocating capital, thus the consequences and effective factors on the Quality of accounting are always interested by investors, managers, legislators and compilers of accounting standards. The recent research has investigated the relationship between information asymmetry and policy of dividing profit in companies of chemical, pharmaceutical and nutritive industry. Independent variables, the ability of commitment items, the amount of discretionary commitment items and earnings quality have been considered as characteristics of data asymmetry. Dependent variable is also the politics of dividing profit. Variable of company size and financial lever have been considered as control variable. The method of gathering information is library and documentaries. The method of analyzing data has been performed correlation and multi- regression test. The result show that there is significant and direct relationship between company size, earnings quality and ability of accrual items in prediction of operating cash flows with politics of dividing profit. Also, there is reverse and significant relationship between financial lever and discretionary accrual items with policy of dividing profit. Generally, the less data asymmetry in financial statements, the less dividing profit in managers.

**Keywords:** Data asymmetry, policy of dividing profit, the ability of commitment items, earnings quality.

## INTRODUCTION

In accounting theory, asymmetry issue has importance, because asymmetry markets are threaten resulted from the issue of data asymmetry and this is because of inter- organization. Even if price reflects all available data in market, there is this probability that person in organization has more data than persons outside organization that can use this merit and obtain more benefit (Kardtabar & Rasaeiun, 2010).

One of the most important factors in correct decision- making is to have suitable data and related to the subject and if it provides and processes correctly, it will have the negative effects for decision- maker. On the other hand, how to access data is important? If the needed data is distributed between people asymmetrically, it can cause different results about the single subject. Thus, one of the basic financial statement that managers use for awareness of company performance is advantage and non- advantage statement (Mashayekh & Esmaeili, 2006)

### **Statement of problem**

Politics of sharing profit is one of the primary sections of financial provision in companies that is analyzed using complex financial models and is one of problems that many financial experts face it. For this reason, many materials haven't been expressed about the effect of dividing profit on rich of shareholders and other causes related to company performance.

It is believed that declaration of shared profit is as one desired predictor of future financial performance of companies.

The evidence indicates that analyzing the amount of dividing profit and its changes can present useful information about financial performance and its ability to create cash flow for investors (Kordtabary & Resaeian, 2010).

Financial researchers like Miller and Rock (1985) and John & Williams (1985) and other researchers showed that modifications of divided profit causes the future changes in cash flow. Many researchers also tried to determine market reaction about the changes in divided profit (Akhig, 1996). Dividing profit shows distribution of profit between shareholders of one company that is approved in annual general assembly and paid to shareholders.

The decision related to profit distribution is one of four important financial decisions. Three other important decisions include decisions of capital management in cash flow, investment and financial provisions. Ros & Vesterfeld & Jof (2002) know important the decisions of sharing profit because they determine the amount of payment cash to investors and also the funds that is for investment in company. In addition, dividing profit provides information for surrounding interested people.

The results of Fong, Zakaria & Tan result (2007) showed that the performed investments by company determine profitability and dividing cash profit in future and also dividing profit effects on capital cost. To take these decisions related to each other, the purpose is to maximize the wealth of shareholders. Shareholders of companies expect to receive profit on investment. The ability of banks is dependent on financial performance to pay share profit to their shareholders. Lasher (2000) believes that the decrease in dividing profit is regarded as a bad news for investors. Many studies have performed in this district but they use data of non-financial institutions (Mashayekh & Esmaeili, 2006).

Managers, financial analyzers and investors have more attention to the reported data of financial statements of companies. Managers use increasing trend. Because their reward depends on profit of companies.

Financial analyzers involved processing and interpreting information and correct understanding of profit quality is one basic section of this procedure. Disseminating good news about the profit of company's effects considerably on share cost and it is rare to decrease the sensitive of market to evaluating performance on profit. Also, the concentration of market on net profit causes lack of attention to other indices of evaluating performance. While we must pay attention to this topic. Has the reported net profit been the final result of accounting process of managers or not? (Copeland & Galloway, 2008).

Information in stock is the worthiest finance, the information is available justly clears market. In financial markets, transaction parties haven't sufficient information about this situation (data isn't sufficient) to do close decision-making, we call asymmetric information, this ignorance in information. In financial system, this lack of information creates problem pre and post-transaction and the problem that occurs before transaction is «adverse selection» because of information asymmetry that follows dangers and the problem is created after transaction in asymmetric information is 'moral dangers'. Asymmetric information increase investment and investors subject to unsuitable choice and moral dangers. The information that is effective on stock, they are related directly or indirectly to the problem of companies.

They had internal root and if they reveal, the situation of capital market changes and doesn't move to equitable distribution and causes wrong decision-making of investors (moral investment). Thus, at the most world stocks, transaction have been forbidden and attempts performed that can create equitable distribution of information in society level, especially shareholders (Glosten & Milgrom, 2012).

The research tries to examine the relationship between information asymmetry and politics of dividing profit in companies of accepted chemical, pharmaceutical and nutritive industry in Tehran stock exchange

### **Research background**

Baba (2013) studied the effect of increasing shareholders outside of company on politics of dividing profit. The result showed that the more increase in possession of shareholders outside of company by higher probability (lower) decreases (increases) sharing profit.

Chen (2012) performed research entitled the relationship between performance and dividing cash profit in the accepted companies in China stock during 2006- 2012, and hypotheses has been designed to perform the main purpose:

First hypothesis: There is significant relationship between operational cash flow and dividing cash profit.

Second hypothesis: There is significant relationship between operational profit and the amount of dividing cash profit.

Third hypothesis: There is significant relationship between operational cash flow, operational profit and amount of dividing cash profit.

Fourth hypothesis: There is significant relationship between profit of each share (Ees) and cash profit (Dps). Correlation method by multi-linear regression analysis for testing hypotheses.

The population has been 295 companies (all industries) that according to above restrictions, 100 companies were selected randomly as the studied companies.

**After testing research hypotheses, the below results were obtained:**

The first hypothesis: The relationship between change of dividing cash profit and changes of operational cash flow is significant in confidence level 95 percent, or the first hypothesis is accepted about whole studied companies. Test of the second hypothesis: The relationship between changes ... Dividing cash profit and changes of operational profit is significant in confidence level 95 percent or in the other words, the second hypothesis is accepted about all studied companies.

The third hypothesis: The relationship between changes of dividing cash profit and changes of operational profit and operational cash flow is significant in confidence level 95 percent's, the third hypothesis is accepted about all studied companies.

Fourth hypothesis: the relationship is significant between changes of each share in confidence level 95 percent, in the other words the fourth hypothesis is accepted about all studied companies.

In summary, according to the present result, we can say that the amount of divided profit is a function of profit amount of each share, operational profit and operational cash flow.

Miton (2012) studied dividing profit and performance of companies in the emerging markets. The result showed that the companies who have strong performance, the payment of their divided profit is lower. In addition, the companies who have weak performance, the payment of divided profit is higher.

Habibi (2012) studied the relationship between concentration of ownership, company performance and politics of dividing profit in the accepted companies in Tehran stock exchange: The statistical sample of research includes 93 companies during 2005- 2011 ownership concentration has been measured using ownership percent of shareholders more than 5 percent, performance using criteria of return ratio in assets, return ratio of shareholders wage income growth, sale return, and policy of dividing profit using ratio of divided profit (divided profit of each share/ profit of each share). The results show that there is significant and positive relationship between ownership concentration and salary return of shareholders. Therefore, the more and salary return of company owners increases. Also, the results accept the positive and significant relationship between politics of dividing profit and sale return of company, it shows good and positive relationship between sail performance of company and ratio o divided profit, improving sale performance can be followed with increasing divided profit. There wasn't relationship between ownership concentration and policy of dividing profit.

Mashayekh & Abdollahi (2011), studied the relationship between ownership concentration company performance and politics of dividing profit in the accepted companies in Tehran stock exchange. In this research, 64 companies studied during 2001- 2009 selective approach for testing hypotheses in using the merger of sectional and temporal data. In this research, minimum merged squares regression method (panel data) is used.

Ownership concentration was measured using ownership percent of shareholders higher than 5 percent, performance using three criteria ROA, ROE and Q and policy of dividing profit using divided profit ratio (Dps/ Eps). The result showed that in confidence level 95% there is significant relationship between ownership concentration and two criteria of performance namely ROE and Q, It means the more ownership concentration, the more control on managers will be. There is also significant relationship between performance criteria ROA and Q and ratio of dividing profit, improving can increasing divided profit .

There was significant relationship between ownership concentration and ratio of divided profit. Ameri (2007) understood that there isn't monotonous trend in the policy of dividing profit of companies. The results showed that there is significant correlation between ratio of dividing profit and quality of profit.

1. Research hypotheses

H<sub>1</sub>: There is relationship between ability of commitment items in prediction of operational cash flow with politics of dividing profit

H<sub>2</sub>: There is relationship between profit quality and politics of dividing profit.

Local dominion is companies of chemical, pharmaceutical and nutritive industry accepted in Tehran stock exchange and chronological dominion is during 2008- 2012 this research, systematic deletion is used to select statistical sample. To select statistical society, companies that had the below features selected as the statistical sample and other deleted.

- A) They are productive- selective companies B) To be active to select active companies, it be accepted before 2008 in Tehran stock exchange and the transactions of these companies be active during 2008- 2012 and delay duration mustn't be more than three months D) for possibility of comparison and prevention of in harmony, financial year is 29 Esfand and mustn't change financial year in 2007- 2012 E) financial statements and explanatory notes are available.

The method to collect data is documentaries method. The data is provided by using needed information of financial statements and reports of board to general assembly of sample companies and soft ware's. After collecting data, using Excel software, calculation and classification of data are performed for hypothesis test. Then for hypothesis test, EVIVES software is used.

## MATERIALS AND METHODS

This research is descriptive- correlation- and applied, because it is performed using these result in capital market.

### **Research pattern**

In this research, measurement criteria of information asymmetry including profit quality, discretionary accrual items and the ability of accrual items in prediction of operational cash flow are as independent variables and policy of dividing profit is as dependent variable and company size and lever are as control variables.

### **Earning quality**

Profit fingers have been applied by selection of managers and accountants between accepted accounting principles and personal judgments of managers about the applied procedures to register accounting information. Sometimes, the management of economical enterprise enjoys accounting selection to manipulate profits and mislead users. In addition, managers may manipulate the element of profit to show better the status of economical enterprise and minimize profit quality, because the people who rely on the profit to makes decision, may mistake and financial analyzer can't predict correctly profitability of enterprise in future.

In this research, to calculate profit quality, Lewis & model (2003) model is used

$$QE_{leuz} = Sq(CED) / Sq(Net\ income)\Delta$$

$$QE_{it} = QE_{it} - QE_{it-1} \Delta$$

Where:

Sq (CED)= standard deviation of operating cash flows

Sq (Net income)= standard deviation of operating profit

$\Delta QE_{it}$  = changes in profit quality using Lewis model

$QE_{it}$  = profit quality using Lewis model of current year

$QE_{it-1}$  = earning quality using Lewis model of year ago

I = company i

T = year t

### **The ability of accruals in forecasting operating cash flows**

To test the ability of accruals to predict operating cash flows, we can use multiple linear regression that where independent variable (accruals) and dependent variable (operating cash flows) relate to each others as follows: (Khoamipour & poor Ahmad, 2010).

$$CFO_{t+1} = B_0 + B_1 ACR_t + B_2 ACR_{t-1} + \dots + e_i$$

$CFO_{t+1}$  = operating cash flow in year t+1

$ACR_t$  = operating accruals in year t

$ACR_{t-1}$  = operating accruals in year t-1

$B_1$ ,  $B_2$  and  $B_0$  are model coefficients and error  $e_i$

In order to standardize numbers and facilitate the calculations, two side of equation are divided by beginning assets:

$$(CFO_{t+1} / A_t) = B_0 + B_1 (ACR_t / A_{t-1}) + B_2 (ACR_{t-1} / A_{t-2}) + \dots + e_i$$

Operating accruals are calculated as follows:

Where

ACR = operating accruals

EARN = operating profit

CFO = operating cash flow

DEP = Depreciation

R<sup>2</sup> is determination coefficient as an indicator of the ability of accruals to forecast operating cash flow.

**Discretionary accruals**

According don't have direct cash consequences and the most important tool of opportunist manipulation is profit and is obtained from the difference between operating profit and cash from the operational activities. Accruals are divided in to two categories: voluntary and involuntary which discretionary accruals are as proxy of earnings management.

Discretionary accruals are items that management can control and is calculated using the modified jones model.

Discretionary accruals include accruals of difference between operating net income and net operating cash flow is obtained from operating

$$ACCR = EARN - CFO$$

Involuntary accruals are obtain using modified jones pattern

$$ACCR_{it} = \alpha_0 + \alpha_1 (\Delta REV_{it} - \Delta REC_{it}) + \alpha_2 PPE_{it} + E_{it}$$

And discretionary accruals are obtained from difference of all accruals.

**The policy of dividing profit**

Dividing profit is one of the most important subjects in financial management: because the divided profit indicates cash payments of companies and is considered as one of the most important choices. Managers must how much of divided profit in invest in company. Despite divided profit payment enjoys directly shareholders, it effects on the ability of company in profit accumulation to use growth opportunities (Baker & Pavel, 2005, 402)

In this research, the ratio of divided cash profit on profit of each share is used to measure divided profit variable

$$DVID = \frac{Des}{Ees}$$

**Company size**

There are the various criteria to measure "company size" variable include: Total amount of assets, sale amount, total number of employers.

In this study, the logarithm of total assets has been used to measure variable company size

**Financial leverage**

These ratios determine and evaluate the relationship of used financial sources of commercial unit debts or salary of shareholders and study the manner of their combination.

In this research, to measure financial leverage, the division of book value of long- term debts on all assets is used ( sinuei, Neisi, 2003).

**RESULTS AND DISCUSSION**

**Descriptive findings of research variable**

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Descriptive statistics of research variables including: discretionary accruals (AC), earnings quality (EQ), the policy of dividing profit (D), the ability of accruals is given in table (1) to predict operating cash flow (ACR), company size and financial leverage (FL).

Table1. Descriptive analysis of variables

Variable	No	Minimum	Maximum	Mean	Standard deviation	Variance	Skewness
AC	205	.083	1.84	.365	.14209	.020	-.041
EQ	205	-2.93	4.74	.776	.159593	.025	.468
D	205	-.23328	1.220	.14789	.15818	.025	.655
ACR	205	-.5078	.9374	.02983	.08683	.008	.354
SIZE	205	.13	4.99	2.021	.15366	.024	.109
FL	205	-.053	1.811	.875	.28858	.083	.615

In this chapter, first descriptive statistic is studied. Given that the combination of time series and cross-sectional data are used to test research hypotheses, we use the observations of the year company based on merged data, 205 (41 companies).

According to the descriptive statistics, the distribution index of these variables is low in various companies. The highest standard deviation relates of financial leverage and the lowest standard deviation relates to the ability of accruals to predict operating cash flows. According to the amount of cholgi and skew ness of each variable and its companies with normal distribution, it seems that all research variables have been normally distributed, because when the absolute variable related to cholgi and skew ness is high, we can conclude that it has considerable difference with normal distribution, high skew ness indicates fingers towards negative or positive values and skew ness relates to shortness and length of graph in distribution of variables. Normality test of variable to study the normality of variables, Kolmogorov- smirnov test has been used.

Table 2. Normality test of variables

Variable	Kolmogorov- smirnov z	Significant level
Discretionary accruals	1.031	.238
The ability of accruals to predict operating cash flow	1.712	.691
Policy of dividing profit	1.450	.299
Accrual quality	1.741	.642
Company size	1.777	.582
Financial leverage	1.235	.094

As it is observed, as significant level is higher than %5 in all variables, therefore, research variables have normal distribution.

**correlation test**

Therefore is used, the obtained results shown in table (3).

Table 3. Pearson correlation test of research variables

Variable	Discretionary accruals	The policy of dividing profit	Quality of accruals	of Company size	Financial leverage
Discretionary accruals	1	.853	.432**	.520**	.452*
The ability of accruals to predict operational cash flow	.853	1	.407**	.196-	.308
The policy of dividing profit	-.294**	.385**	.180**	.083*	-.157**
Quality of accruals	.432**	.407**	1	.068	.371-
Company size	.520**	.196-	.068	1	.311
Financial leverage	.452*	.308	.371-	.311	1

\*\*Significant at 1% error level

\*significant at %5 error level

According to the above table, the correlation of variables is shown by significant at 1% error level and 5% error level

The results show that the value of this statistic is significant for each models and the reported significant level in above table (p- value < 05)

Rejects Ho in confidence level 95 percent for each one models and uses the method of fixed effects

**H1 test:**

H<sub>1</sub> test studies the relationship between the ability of accruals in prediction of operating cash flows with policy of dividing profit

Table 4. The obtained results from multi- variable regression between the ability of accruals and policy of dividing profit

Variable type	Symbol	Variable name	Coefficient	T statistic	Significant level
Dependent variable	$\gamma$	Policy of dividing profit	---	---	---
Constant	$\alpha$	Alpha	1.295	1.173	0.000
Independent variable	$X_i$	The ability of accruals	0.201-	-1.341	0.000
		Financial leverage		0.177-	2.202-
Control variables					
		Company size		0.241*	1.733
		Watson- camera		1.94	---
R		Correlation coefficient		17.61	---
R Square		Determination coefficient		0.702	---
Adjusted R Square		Adjusted R square		0.492	---

\*significant level is equal to %5

As we see, variables of the ability of accrual, company size and financial leverage (p- value < 5%) have significant relationship with the policy of dividing profit. The coefficient of variables shows that the relationship of company size with dividing profit is more than the variable. Variable of financial leverage has reverse relationship with the policy of dividing profit and the ability of accruals has direct relationship with the policy of dividing profit to predict operating cash flows. According to value of F statistics, Regression pattern is significant and according to determination coefficient, these variables explain 74 percent of policy change of dividing profit. Because Dorbin Watson statistics is between 1.5 to 2.5 we can conclude that there isn't auto correlation between variables.

**H<sub>2</sub> test:**

H<sub>2</sub> test studies the relationship between discretionary accruals with the policy of dividing profit

Table 5. The obtain result from multi- variable regression between discretionary accruals and the policy of dividing profit

Variable type	Symbol	Variable name	Coefficient	T statistic	Significant level
Dependent variable	$\gamma$	The Policy of dividing profit	---	---	---
Constant	$\alpha$	Alpha	1.295	1.173	0.000
Independent variable	$X_1$	discretionary accruals	-0.201*	-1/341	0.000
Control variables		Financial leverage	0.177-	-0.177*	-2/202
		Company size	0.241*	0.241*	1.733
		Dorbin Watson	1.94	1.941	---
		Statistic F	17.61	17.610	---
R		Correlation coefficient	0.702	0.702	---
R Square		Determination coefficient	0.492	0.492	---
Adjusted R Square		Adjusted Determination coefficient	0.491	0.491	---

\*Significant level is equal %5

As we see, the variables of discretionary accruals, company size and financial leverage have significant relationship with the policy of dividing profit. The coefficient of variables shows that the relationship of firm size with the policy dividing profit is more than other studied variables. The variable of firm size has direct relationship with the policy of dividing profit and discretionary accruals and financial leverage have reverse relationship with the policy of dividing profit. According to F statistics, fitted regression model is significant and according to coefficient determination, these variables explain 49.2 percent of change dividing profit. Because Dorbin Watson statistics is between 1.5 to 2.5. Then we can conclude that there isn't auto- correlation problem between variable.

**H<sub>3</sub> test :**

Third hypothesis test studies the relationship between earning quality with the policy of dividing profit.

Table 6. The obtained results from multi variant regression between earning quality and policy of dividing profit

Variable type	Symbol	Variable name	Coefficient	T statistic	Significant level
Dependent variable	$\gamma$	The Policy of dividing profit	---	---	---
Constant	$\alpha$	Alpha	1.261	1.294	0.000
Independent variable	$X_1$	discretionary accruals	0.771*	4/157	0.000
Control variables		Financial leverage	-0.363*	-4/112	0/011
		Company size	0.522*	2.621	0/001
		Dorbin Watson	1.739	---	---
		Statistic F	7.963	---	0/000
R		Correlation coefficient	0.814	---	---
R Square		Determination coefficient	0.662	---	---
Adjusted R Square		Adjusted Determination coefficient	0.660	---	---

\*significant level is equal to %5

As the fingers show variables of earning quality, firm size and financial leverage have significant relationship with the policy of dividing profit. Coefficient of variable show that the relationship of firm size the policy of dividing profit is more than other studied variables. Variables of company size and earning quality have direct relationship with the policy of dividing profit and financial leverage has reverse relationship with the policy of dividing profit. According to F statistics, fitted regression model is significant and according to coefficient of determination, these variables explain 66.2 percent of change in politics of dividing profit. As Dorbin Watson statistics is between 1.5 to 2.5, then we can conclude that there isn't auto correlation problem between variables.

### **Discussions and conclusions.**

1. During research years, there is direct and significant relationship between the ability of accruals in prediction of operating cash flows with the policy of dividing profit of chemical, nutritive, and pharmaceutical companies in Tehran stock Exchange during 2009 to 2012? In the other words, the more ability of accruals in prediction of operating cash flows, The more dividing profit between shareholders. Considering that there is direct relationship between the ability of accruals in prediction of operating cash flows and the policy of dividing profit, we can conclude that for investors, the quality of accruals is the relationship of company profit with cash flows. Therefore, the high accruals increases this relationship and investor risk and accumulated profit and increases dividing profit by company
2. During investigation year, there is significant and reverse relationship between discretionary accruals with politics of dividing profit in companies of nutritive, pharmaceutical industries in Tehran stock Exchange during 2008- 2012, in the other words, the more discretionary accruals in financial statements, the less dividing profit between shareholders will be. Considering that there is direct relationship between discretionary accruals with the policy of dividing profit we can conclude that discretionary accruals change with management decisions of commercial unit namely, it is affected by selective procedures, therefore this can increase non- systematic risk related to incorrect information in financial decisions and companies divide profit with more cautions.
3. There is significant and direct relationship between earning quality with policy of dividing profit in the accepted chemical, pharmaceutical, nutritive companies during 2008- 2012, in the other words, the more earning quality in financial statements, companies will attempt to divide profit between shareholders.
4. Considering that there is reverse relationship between financial leverage with the policy of dividing profit, we can conclude that the more increase in long- term debts, the more bankruptcy risk will be. This increases non-systematic risk and for this purpose, companies tend to precautionary deposits and accumulated profit more and distribute less profit. The results of this research coordinate with skinner (2003), Jahankhani & Qhorbani (2005) & Ameri (2007).

### **Suggestions**

According to the evidence and the results obtained from hypotheses test, suggestions for organization of Tehran stock exchange, the management of companies, shareholders, debtors, banks and credit institutions, students and researcher are as follow:

1. According to the results of first hypothesis, as the ability of accruals has direct and significant relationship in prediction of operating cash flows, it is suggested that shareholders must pay attention to it. If managers want to increase dividing profit, they increase the ability of accruals to predict operating cash flow.
2. According to the results of second hypothesis, as discretionary accruals have reverse and significant relationship with the policy of dividing profit, it is suggested shareholders and people who want to enter capital market and the issue of dividing profit is important for them, they must pay attention to this important issue that companies who have high discretionary accruals, less attempt to share profit and the managers decreases accruals, if they want to increase dividing profit between shareholders.
3. According to the third hypothesis test, as earnings quality has significant and direct relationship with policy of dividing profit: it is suggested shareholders who want to enter capital market and the issue of dividing profit is important issue for them. They must pay attention that companies which have high earning quality, more attempt to divide profit and managers increase profit quality, if they want to divide profit. It is recommended to stock organization to attempt for more supervision on accounting manner and managers assigned accounting of companies to accounting institutions to elevate profit quality in companies.

### **Suggestion for future researches**

1. Studying the effect of huge economical variables, inflation, oil cost and exchange ratio on the relationship of information asymmetry and politics of dividing profit
2. Studying the effect of industry type on the relationships between information asymmetry and the politics of dividing profit
3. Studying the relations of information asymmetry and systematic risk
4. Studying the relationship between information asymmetry and future profitability.

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