Do dividend policies signal Corporate Operating Characteristics?

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Abstract

Dividend policy is one of controversial financial issues. There are various theories about dividend but in this study, the focus is on empirical test of signaling theory. This theory says that the payment of dividends provides information for investors and analysts. The aim of this study is preparing the evidence on dividend signaling about corporate operating characteristics (return, performance and earning). Therefore, linear regression models were fitted. Results showed that significantly positive correlation exists between dividend and return. Also, there was a similar relationship between dividend and earning. It means that dividend has information content about return and earning and so, signaling theory was approved about them. Nonetheless, a significant relationship was not funded between dividend and performance proxies and so, signaling theory was not approved. In addition to, there was a significantly positive relationship between dividend and size. It indicates that larger firms pay more dividends.

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1   Introduction

Dividend policy is one of controversial financial issues. Dividend is an influential factor in future investment decisions. Dividend policy is quite important in the valuation process of companies. It decreases internal resources and increases the need to external resources. In the other hand, many stockholders prefer pay dividend to retain it. As a result, it is necessary to balance between investments opportunities and stockholders prefers. Therefore, dividend policies are sensitive and important [32].

In a pioneering effort, Black [13] finds no convincing explanation of why companies pay cash dividends to their shareholders. Since that introduction of the "dividend puzzle," a voluminous amount of research offers alternative and appealing approaches to solve it. Most of them are rooted in information asymmetries between firm insiders and outsiders, and suggest that firms may indicate their future profitability by paying dividends.
This study examined this question" Do dividend policies signal Corporate Operating Characteristics?".

Signaling theory is based on the assumption that managers have more information about the Firm's future cash flows than do individuals outside the firm, and they have incentives to signal that information to investors [23]. In the other words, it suggests that managers use dividends to convey their private information. Unexpected changes in dividend policy are used to mitigate information asymmetries between managers and owners [20].

Black [13] found some substantial differences in dividend policy between developed countries and developing countries, and showed that dividend policies are different in developed capital markets and emerging capital markets. We examine signaling theory in Tehran Stock Exchange (TSE). Although, several studies have examined this theory, our study is different. Firstly, very few studies examined it in developing countries. We examine Iran, a developing country with characteristics that are different from those of developed countries and many emerging economies and developing nations like Malaysia and China [30]. Secondly, several studies examined this theory, but results are different [29]. Therefore, our study appropriately contributes to the literature.

The rest of the paper is organized as follows: Section 2 presents literature review and hypotheses development. Methodology is discussed in section 3. The results and conclusions are presented in Section 4 and 5 respectively.

2   Literature Review and Hypotheses Development

Since Miller and Modigliani [33] proposed the dividend irrelevance theorem, corporation dividend policy has been the focus of economists and produced many theories of different school. The most prevailing is signal theory [5].

This study examined signaling theory in Iran. Iran is an Islamic country

located in the Middle East, a politically troubled and unstable region of the world. Iran has a unique political and socio economic environment [7].

Tehran Stock Exchange (TSE) is an emerging and somewhat inefficient capital market [30]. Emerging markets often have less protection for shareholders and creditors. Therefore, the type and level of conflicts of interest are different from those in developed markets [16].

Iranian firms have fewer long-term liabilities because of the forbiddance of bonds [30]. Therefore, corporations are generally financed by issue of common stocks.

Dividend policy of firms in developing countries significantly differs from that of the developed countries [1]. There are conflicting evidences about dividend policy in Iran. Jahankhani and Ghorbani [27] found that dividend policy of Iranian firms follow random walk. They found that Iranian investors look at dividend as signal for future performance and cash flow. They showed that firms paying higher dividends are expected to have more future cash return and better performance. Samadzadeh [36] examined dividend policy effect on corporate value and found that dividend policy effect in TSE is unclear. Therefore, the motive to make dividend announcements to reveal private information is less clear in Iran. Moreover, he showed that Iranian investors do not look at dividend as a signal. Mehrani [31] found that there is no pattern for dividend payment in Iran and firms follow specific and simple dividend policy.

Iranian environmental characteristics make this study interesting.

2.1 Signaling Theory

This theory suggests that there is information asymmetry between managers and stockholders. Managers have internal information while stockholders have not. Managers would take costly but credible measures to transfer this information. One of these measures is dividend. Therefore, dividend policy is a signal to transfer the information relating to future profitability [4].

Fairchild [19] suggested that firms may reduce dividend and invest remained cash in profitable projects. But, investors may interpret it (reducing of dividend) as bad news. Therefore, it is necessary to explain reducing of dividend to investors. Signaling fans believe that dividend policy is the cheapest of signaling instrument. Al-Yahyaee et al. [6], Araujo et al. [8] and Frankfurter and Wood [20] obtained evidence approving this theory. Nonetheless, Bernhardt et al. [12] did not obtained significant evidence on this theory. Baker et al. [10] found results approving signaling theory. Seifert [37] examined this theory in America, Canada, France, Germany, Australia and England, but obtained evidence against to it.

Several surveys identified different factors influencing the payment of dividends. This study examined signaling theory about operating characteristics. Operating characteristics include various variables. In this study, they include three important variables: return, performance and earning.

Park [34] and Lettaua and Ludvigson [28] found a positive association between dividend and return. Lie [29] documented evidence on negative market response to dividend announcements. He suggested that it is because the market believes reducing of dividend is for earning management and not for investment. Chen et al. [15] found a weak relationship between dividend and performance. Harada and Nguyen [24] found significant relationships among dividend, performance and return. It means that dividend signal performance and return. Brav et al. [14] found that the link between dividends and earnings has weakened over time. De Angelo et al. [17] showed that dividend has information content about earning. Also, Fukuda [21] obtained similar results. However, Baker and Powell [9] found that the most important factors influencing dividend policy by corporations listed on the New York Stock Exchange (NYSE) are earning and the pattern or continuity of past dividends. Baker et al. [11] reported similar results for NASDAQ firms. Healy and Palepu [25] found that firms that initiate dividends have positive changes in earnings both before and after the dividend policy change, they find that firms that omit dividends experience 2 years of significant increase in earnings.

As a result, we hypothesize that:
H1: There is a significant relationship between dividend and corporate stock return.
H2: There is a significant relationship between dividend and corporate performance.
H3: There is a significant relationship between dividend and earning.

2.2 Control Variables

Prior researches identified several factors affect on dividend. For example, firm size is positively related to dividend policy in [18, 22, 26], and negatively related in [2]. The leverage of a firm reflects its business risk. Firms with higher leverage face higher bankruptcy probabilities [3]. Business risk is positively related in [26] and negatively related in [2, 18, 22]. These control variables introduced to isolate other contracting incentives that have been found to influence dividend policy.

3 Methodology

In this study, dependent variable is dividend and independent variables are return, performance and earning.

3.1 Dividend and Return

The following model is used to investigate the relationship between dividend and return.

Model (1) : $DIV_{it} = \alpha + \beta_1 \, RET_{it} + \beta_2 \, SIZE_{it} + \beta_3 \, LEV_{it} + \varepsilon_{it}$

where
RET :   annual retunes for year t.
DIV :   the total amount of dividend payouts for year t.
SIZE :   natural logarithm of total assets for year t.
LEV :   long-term debts to total assets for year t.
ε :   error term.

3.2 Dividend and Performance

Defining and measuring performance concept is complex. In this study, Firm performance is measured by two different variables: Return on Asset (ROA) and Market to Book Value (MTBV).
The following models are used to investigate the relationship between dividend and performance.

Model (2): $DIV_{it} = \alpha + \beta_1 \, ROA_{it} + \beta_2 \, SIZE_{it} + \beta_3 \, LEV_{it} + \varepsilon_{it}$

Model (3): $DIV_{it} = \alpha + \beta_1 \, MTBV_{it} + \beta_2 \, SIZE_{it} + \beta_3 \, LEV_{it} + \varepsilon_{it}$

where
ROA :   return on assets for year t**.**
MTBV :   market to book value of equity for year t.
Other variables defined as above.

3.3 Dividend and Earning

The following models are used to investigate the relationship between dividend and earning.

Model (4): $DIV_{ti} = \alpha + \beta_1 \, E_{ti} + \beta_2 \, SIZE_{it} + \beta_3 \, LEV_{it} + \varepsilon_{it}$

Model (5): $\Delta DIV_{ti} = \alpha + \beta_1 \, \Delta E_{ti} + \beta_2 \, SIZE_{it} + \beta_3 \, LEV_{it} + \varepsilon_{it}$

where
E :   net earning for year t.
ΔE :   changes in net earning from year t − 1 to year t.
ΔDIV :   changes in dividend from year t − 1 to year t.
Other variables defined as above.

3.4 Sample selection

The sample for this study is comprised of all firms listed in TSE excluding of financial firms. We collected financial and accounting data directly from annual reports and TSE reports on CDs and web. In this study, sample period is from 2002 to 2008. We select firms, which their fiscal year end is the end of calendar year, and exclude the firms with insufficient data. Finally, our sample consists of 427 observations.

4   Main Results

4.1 Descriptive statistics

Table 1 describes sample firms' characteristics in our sample.

Table1: Descriptive statistics

Variable	Min	Max	Mean	S.D
RET	-4.21	5.60	0.38	0.81
ROA	-0.13	0.54	0.18	0.13
MTBV	-0.20	3.35	0.25	0.24
E	-95468	6814114	184102	644299
EΔ	-442360	2889601	35911	216458
DIV	0.00	5320296	141228	469329
ΔDIV	-5289126	2907157	1004	374646
SIZE	19.94	31.59	25.23	2.19
LEV	0.00	0.41	0.08	0.07

The above table shows that sample firms averagely distributed 77% of their earnings as dividend (141228/184102). The mean long-term debt is approximately 8% of total assets. This means that Iranian firms have lower long-term liabilities. It may be interpreted from Iran being an Islamic country and firms have lower long-term liabilities because of forbiddance of bonds and interest. The mean size of the sample firms is 25.23 and their market value is about 25% of their book value. Return of assets is approximately 18%. The mean annual return is 38%.

4.2 Empirical Results

In this section, we represent the results of regression models. Table 2 shows the results of model (1) (Dividend and Return).

Table 2: Results of model (1)

Variable	Coefficient	t-student	P-Value
Constant	-1521548.26	-5.92	0.000
RET	54771.21	1.99	0.047**
SIZE	66422.62	6.50	0.000***
LEV	-455546.84	-1.46	0.145
Adj.R^2: %12	F:19.26		D.W:1.72

***, **, * denote significance at 0.001, 0.05, and 0.10 levels, respectively,
         based on t-tests (two-tail).

Durbin-Watson (1.72) indicates that there is no correlation between model error components.
Adj.R^2 shows that 12% of changes in dividends are explained by independent variables.

Results show that return is positively associated with dividend (coefficient = 54771.21, P-Value = 0.047), supporting the first hypothesis. It means that dividend has information content about return. This finding is consistent with Harada and Nguyen [24] and Lettaua and Ludvigson [28].

Moreover, size is positively associated with dividend (coefficient. = 66422.62, P-Value = 0.000). Larger firms are more likely to distribute profits in the form of dividend. It is in line with Grullon and Michaely [22] and Fama and French [18].

Table 3 shows the results of model (2) (Dividend and Performance (measuring by ROA)).

Table 3: Results of model (2)

Variable	Coefficient	t-student	P-Value
Constant	-1613576.24	-6.40	0.000
ROA	151559.63	0.90	0.396
SIZE	69904.39	6.99	0.000***
LEV	-489935.09	-1.56	0.119
Adj.R^2: %11	F:18.22		D.W:1.72

***, **, * denote significance at 0.001, 0.05, and 0.10 levels, respectively,
         based on t-tests (two-tail).

Durbin-Watson (1.72) indicates that there is no correlation between model error components.

Adj.R^2 shows that 11% of changes in dividends are explained by independent variables.

Results show that return on assets is not significantly associated with dividend, dissupporting the second hypothesis.

Moreover, size is positively associated with dividend (coefficient = 66422.62, P-Value = 0.000). Larger firms are more likely to distribute profits in the form of dividend. It is in line with [18, 22].

Table 4 shows the results of model (3) (Dividend and Performance (measuring by MTBV)).

Table 4: Results of model (3)

Variable	Coefficient	t-student	P-Value
Constant	-1621829.65	-6.41	0.000
MTBV	1597.60	0.47	0.636
SIZE	71115.57	7.17	0.000***
LEV	-532161.59	-1.72	0.087*
Adj.R^2: %11	F:18.00		D.W:1.73

***, **, * denote significance at 0.001, 0.05, and 0.10 levels, respectively, based on t-tests (two-tail).

Durbin-Watson (1.73) indicates that there is no correlation between model error components.

Adj.R^2 shows that 11% of changes in dividends are explained by independent variables.

Results show that MTBV is not significantly associated with dividend, dissupporting the first hypothesis. It means that dividend payouts do not show sensitivity to MTBV.

Nonetheless, size is positively associated with dividend (coefficient. = 66422.62, P-Value = 0.000). Larger firms are more likely to distribute profits in the form of dividend. It is in line with [18, 22]. Moreover, LEV is negatively associated with dividend (coefficient. = -532161.59, P-Value = 0.087). It means that firms with higher LEV pay fewer dividends. It is in line with [18, 22].

Table 5 shows the results of model (4) (Dividend and Earning).

Table 5: Results of model (4)

Variable	Coefficient	t-student	P-Value
Constant	-507885.36	-4.45	0.000
E	0.64	41.83	0.000***
SIZE	21376.25	4.72	0.000***
LEV	-111598.13	-0.82	0.415
Adj.R^2: %83	F:675.96		D.W:1.84

***, **, * denote significance at 0.001, 0.05, and 0.10 levels, respectively,
based on t-tests (two-tail).

Durbin-Watson (1.84) indicates that there is no correlation between model error components.

Adj.R^2 shows that 83% of changes in dividends are explained by independent variables.

Results show that earning is positively associated with dividend (coefficient. = 0.64, P-Value = 0.000), supporting the third hypothesis. It means that more profitable firms pay more dividends. It is consistent with [17].

Moreover, size is positively associated with dividend (coefficient. = 21376.25, P-Value = 0.000). Larger firms are more likely to distribute profits in the form of dividend. It is in line with [18, 22].

Table 6 shows the results of model (5) (changes in Dividend and changes in Earning).

Table 6: Results of model (5)

Variable	Coefficient	t-student	P-Value
Constant	-212929.42	-1.06	0.290
ΔE	0.65	8.09	0.000***
SIZE	7717.11	0.97	0.332
LEV	-78522.56	-0.33	0.743
Adj.R^2: %15	F:25.56		D.W:1.94

***, **, * denote significance at 0.001, 0.05, and 0.10 levels, respectively,
based on t-tests (two-tail).

Durbin-Watson (1.94) indicates that there is no correlation between model error components.
Adj.R^2 shows that 15% of changes in dividends are explained by independent variables.

Results show that changes in earning is positively associated with changes in dividend (coefficient. = 0.65, P-Value = 0.000), supporting the third hypothesis. It means that changes in dividends depend on changes in earnings. It is consistent with [17].

5   Conclusion

Dividend policy is one of controversial financial issues. There are various theories about dividend but in this study, the focus is on empirical test of signaling theory. Signaling theory is based on the assumption that managers have more information about the Firm's future conditions than do individuals outside the firm, and they have incentives to signal that information to investors. In the other words, dividend has information content and conveys important financial information.

This study examined signaling theory about operating characteristics. Operating characteristics include various variables. In this study, they include three important variables: return, performance and earning. Regressions models were fitted.

Results showed that significantly positive correlation exists between dividend and return. Also, there was a similar relationship between dividend and earning. It means that dividend has information content about return and earning and so, signaling theory was approved about them. Nonetheless, a significant relationship was not funded between dividend and performance proxies and so, signaling theory was not approved. In addition to, there was a significantly positive relationship between dividend and size. It indicates that larger firms pay more dividends.

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