Impact of Financial Leverage on Dividend Policy at Tehran Stock Exchange: A Case Study in Food Industry

Mohammad Houmani Farahani[1*], Maryam Ghara Jhafari [2]
College of Agriculture, Department of Agricultural Economics, Maku branch,
Islamic Azad University
*Email: m.h.farahani2011@gmail.com
College of Agriculture, Department of Agricultural Economics, University of Allame - Khoy

Abstract

This paper examines the relationship between dividend policy and financial leverage of 33 food companies listed in Tehran Stock Exchange with 242 data ,during the period 2003 to 2010. Dividend policy, vastly followed by the companies ,was tested by applying the extend model of Linter (1956) with the debt ratio of the firm ,the current year's dividend yield as its independent variables and change in earnings as a dummy variable. At first ,the descriptive statistics for our entire variables were calculated and then correlation matrix was calculated to identify the preliminary relationship among all the variables, followed by regression analysis on panel data to examine the significance and magnitude through fixed and random effects model. Theoretical assertion were justified through random effect model that the level of corporate debt (leverage) and widely practiced dividend policy, significantly, affect the dividend policy of the Iranian firms. The factors affecting dividend policy included sources and uses of funds set, why and how to select a particular source, according to requirements of the outside environment and also dominant phenomena within the company. In such circumstances, this current research has tried to focus on financial performance of companies listed in Tehran Stock Exchange to examine effects. This research aimed to explore the impact of financial leverage, dividend policy in food industry companies listed in Tehran Stock Exchange Market. For this purpose, Independent variables in debt ratio, Stock returns and changes in Food group income from Stock are collected. Dividend per share is considered as only variable dividend policy that accounts for behavior of corporate managers in corporate financial decision. Food industry companies have positive effect on variables in dividend yield and changes income, but debt ratio has no meaningful relationship on dividend per share. It has only positive relationship, if the rate of debt ratio is less than dividend yield. When rate of debt ratio is more than dividend yield, it has negative relationship.

Keywords: Dividend Policy, Leverage, Earnings, Dividend Yield, Corporate Debt, Tehran Stock Exchange

Introduction

Most stock assessment models are based on earnings per share (Pourheydari & et al, 2005). Companies listed on the stock must try to attract new investors and increase the wealth of current share-holders. Balance of retained earnings and interest payment are ideal ways to enhance a company's stock value (Soyode, 1975; Oyejide,1976). The importance of this issue is critical for corporate executives to use information gained through the process of corporate governance and market assessment of their performance (Rayli & et al ,2010). Therefore, that part of the power managers and company is focused on an issue which is referred to as dividend policy.

The company's dividend policy has an important role in the company's stock value. Different theories about dividend policy are presented that each has focused on specific cases and taken into consideration. For example, 'a bird in hand theory' and 'sweetmeat slap theory of credit

to cash' say that share-holders prefer capital gains rather than high dividend, because they feel that the capital gains and tax will depend on various factors, and it is better to receive their benefits at the end of fiscal year. That policy is consisted rich information and has a special place among some of stake holders. Because this information is not only a clear picture of the current situation, but it is possible to provide assessment of the future of company's offer, (Jhankhany and Gorbanian , 2006). But the most important reasons for rather than dividend policy are for adapting a policy of dividend stemming from company's dividend policy. Thiess subject can guide economic decisions for different groups of investors who are particularly interested. Because determined reasons and factors obtained from stemming not only help to explain behavior of companies, but also its tool for predicting the future path in this field.

In company's financial securing, investment and payment of dividends are to be counted management decisions. These decisions must be performed accurately and planed, because they influence stock value directly (Asif, 2011). Financial leverage influence the policy of distributing dividends, because they are effective in changing Company's dividends. Also, terms that lenders exercise on dividend, are effective on distributing dividends. We use long – term debt to total assets ratio as a representative of leverage. Companies with higher financial leverage pay less interest.

Statement of the problem

In dividend policy, there are much research in finance Accounting. For that stock dividend is expressed as cash payments of companies , and there is the one of important choices and decisions facing managers. Manager must make a decision that what share of corporate profits is divided and retained earnings are invested at rate of return.

According to Jensen (1986) , conflict matter among share-holders and managers is how we use internal funds. The current theories cannot justify distribution of dividend and its non-distribution in companies.

During the economic boom, Firms have increase cash reserves and managers should make decisions strategically whether they distribute cash between share-holders or spend it in companies (HarFord & et al, 2008).

In due of direct relationship with capital structure, Dividends have a basic place and position in Finance Companies. Most companies pay the definite ratio as dividend and some of them do pay targeted ratio as dividend. But, many finance managers believe that there is strong and direct relationship between dividend and investment and Financial decisions.

Marginal profit estimate tax liabilities as function of profit rate expansion and collect total income tax liability. That marginal profit and Final profit to some extent of fixed amount are constant, and then start to decline. At this reduction paint, if financial leverage increases, then Net present value can decrease and have the negative trend.

For financing the operations, investments and dividend payment decisions are major corporate decisions, requiring precise accuracy as they directly affect the stock value. The fact is that if larger dividends are paid, the less amounts will be available to be retained for the entity to pay out the debt and to be applied as the working capital is accepted by many. Also, the empower share-holders believe that dividend payment has no impact on financial leverage in stock and companies.

Although much scientific research and high academic have been performed in this case, but it has been taken into less consideration to affect the debt ratio and stock returns on dividend policy in Iranian stock. This study has considered the effect of financial leverage on dividend policy in food companies listed in Tehran Stock Exchange , in order to determine the effect of debt ratio and Stock returns on earnings per share dividend and express analytical model between financial leverage and dividend policy.

Significance of the study

Cash Flow is very important to assess the company's liquidity situation. Cash dividends per share as sources of liquidity has specific importance for Holding. Furthermore, cash dividends per share involves special message. According to this sense, companies only increase their cash dividends if they would expect to increase future profits , otherwise increased cash dividends must decrease to its initial level. Therefore, increasing cash dividends has a message to market based on improving company's revenue.

Dividend policy issues are discussed from the perspective of financial liabilities and financial risk. Although financial leverage is important factor in determining financial risk and it has effect on dividends , then the one of original application in financial leverage is intensification of the percentage change in earnings per share. It means that answering this question why small changes has taken place in profit figure before interest and taxes caused in change of intensification earnings per share. The second effect financial leverage is explained by errors that occur to forecast earnings per share. The company forecasts figure for profit before interest and taxes and it is based on determining earnings per share and computing degree of financial leverage. In this case , in order to calculate the forecast error of earnings per share , degree of financial leverage must be multiplied by the percentage change belonging to profit before interest and taxes. Thirdly , financial leverage intensifies financial risk. Financial leverage is used to calculate financial risk financial risk , because deviation or diversion of profit learning's per share can be calculated by using financial leverage in exchange for a percentage change in profit before interest and taxes.

Whatever degree of financial leverage is larger , degree of financial risk become more. because if degree of financial leverage is larger , it may negatively decrease profit before interest and taxes.

The current strategy is effective to capital costs and payment of corporate profits. The selection of sort financing influences on financial structure such as circulation of new equity and bond or bond. In the optimization of corporate dividend policy decisions , it is very important to understand the various sources of financial and cost that have various financing sources and foremost , in order to make decision about maximizing corporate value and shareholder's equity , the effects of costs on dividend are very important. Basically, the impact of financial leverage , dividend policy based on the companies listed in Tehran Stock Exchange is important.

Models of debt and capital investment functioning as decision variables, developed by Alti (2006), were employed by Titman and Wessels (1988); Rajan and Zingales (1995) by adding market to book ratio, lagged leverage, size of the firm, the physical assets and R&D expenses. The behavior, that firms with high stock prices, issue the additional stock was also observed by Dittmar and Thakor (2007) and this behavior was adopted by the managers when they were in agreement with shareholders about the future payments. Similar control variables are also applied by those, previously defined by Rajan and Zingales (1995) and Titman and Wessels (1988) and Naeem and Nasr (2007), which includes the sales, asset tangibility, higher returns and unique product.

A small number of studies focus on international samples to test capital structure models. Rajan and Zingales (1995) and Booth et al. (2001) present two visible exceptions. Rajan and Zingales (1995) find similar levels of leverage across the countries including members of G7 club, highlighting the idea that countries with bank-oriented economies are more leveraged than those in the market-oriented ones. However, they recognized that this distinction is constructive in analyzing the various sources of financing. They find that aggregate leverage is roughly identical across these countries.

In one of the theories, Michael et al. (1995) presented that corporate financial options reflect the attempts of the money managers to balance and win the tax shield as against the increased

profitability and inverse, i.e. financial loss and bankruptcy. Optimal leverage along with the optimal dividend policy is studied in some models, such as one developed by Fan and Sundaresan (2000) which revolves around the flow-based insolvency. Here, default occurs when fluctuating cash level becomes lower than the coupon to be paid. Optimum dividend policy covers distribution of differences between the cash and the coupon, when positive. Financial policies, such as dividend and leverage, will affect managerial policy and decision of managers to join as owner of the firm, an issue tested by many, such as, Mahadwartha (2002), Mahadwartha and 1316 Afr. J. Bus. Manage. Hartono (2002), Crutchley and Hansen (1989) and Jensen et al. (1992) who tested the issue with different perspectives and variables. Mahadwartha (2002), Mahadwartha and Hartono (2002) used Indonesian data and find a significant result in support of managerial ownership to control agency cost of equity and agency cost of debt. The main differences between these two studies are in firm specific variables, observation and period of analysis.

Research Objectives

The research objective is to obtain better and appropriate information about /on dividends policy. In this research, we identify and explain the determinant of dividend policy. Therefore , We know that financial leverage is one of the factors influencing on dividend policy. This factor will be discussed by relationship and effectiveness as negative or positive relationship. The original objective in research is to determine effect financial leverage on dividend policy in food companies listed in Tehran Stock Exchange. The research secondary objectives are as follows:

Determining the debt ratio to earnings per share dividend,
The impact profit yield on dividend per share,
The impact of changes revenue on dividend per share.

Research Background

In the mid 1950s, Lintner reported a number of dividend policies, which were the outcome of his interviews with corporate managers. First of them, firms are primarily concerned with the stability of dividends, followed by earnings which were treated as the most important determinant of any change in dividends. Third, all the financial decisions are taken in pursuance of dividend policy. Lintner (1956) presents his findings into the following model:

$$\Delta D_{it} = \alpha_1 + \alpha_2 E_{it} + \alpha_3 D_{i,t-1} + \varepsilon_{it}$$

Where, ΔD_{it} is the change in dividend from time t-1 to time t, for the firm i, E_{it} is the earnings of the firm i during a period t, D_i is the actual dividend payment during period t-1, β_1 and β_2 are parameters and finally ε_{it} is the error of the model. Lintner's estimation of the above model appeared 'fairly good', explaining 85% of the dividend changes in his sample of companies

A comprehensive analysis of the critical performance of Lintner model was made by Fama and Babiak (1968) and the Lintner's model was tested, empirically, with their own data and procedure. The results obtained by Fama and Babiak (1968) explored that Lintner's model was performing satisfactorily but asserted that the model presented by Lintner could be improved further by introducing another variable; the earnings retained from the operations of last year, but without constant term, which they thought, would enhance its effectiveness.

According to Jensen and Meckling (1976), Jensen (1986) and Stulz (1988), financial leverage has an important role in monitoring managers thus reducing agency costs arising from the shareholder-manager conflict. Dynamics, deterministic variables, factors of dividend payout policy

and practices of 320 non-financial institutions, listed in KSE during the period 2001 to 2006, were examined by Hafeez and Attiya (2009) by applying the extended Lintner (1956) model. The results of the investigations by Hafeez and Attiya (2009) identified that non-financial companies listed with KSE, adopt the policy of relying not only upon current earnings per share but also upon past dividend per share payments. Hafeez and Attiya (2009) further reported the findings of the panelregression performed to examine the dividend payout policy that dividends tend to be more concerned to current earnings than previous earnings. Some more corporate practices, observed and noted by Hafeez and Attiya (2009) were that firms with stable flow of cash and profitability pay more and larger dividends and that ownership structure and market liquidity shows having positive impact on dividend payout policy and practices, while the available investment opportunities and leverage have the inverse effect on dividend payout ratio.

Patsouratis (1989) examined the empirical data of the Greek corporate dividend policies and behavior by applying the covariance which was based on the research work by Brittain (1964) covering 25 firms during the period 1974 to 1983. Later on, Joannos and Filippas (1997) evaluated the dividend payment practices of 34 business firms registered with Athens Stock Exchange for the period 1972 to 1988 the results of which helped to draw general conclusion that dividend policy of the Greek companies reflected the Lintner's model. The dividend payment practice from the current year profits constitutes the most related and important variable which causes the change in the dividend while dividend payment practices and policies of the companies are also influenced by the previous dividend paying period.

Mookerjee (1992) noted that dividend declaration is considered so important that some firms are forced by law to pay dividends, even though through external finances. Nakamura (1985) observed that the Indian firms have the practice of paying dividend by borrowing from banks, at subsidized rate, than from their own profit.

Vasiliou and Eriotis (2003) tested one of the basic models in dividend policy; the model of Lintner (1956). They concluded that the original model introduced by Lintner could be improved in two ways; by treating the change in the dividend between time t and time t-1, as independent variables and as independent variables, the change in the earnings of the firm between time t and t-1 and the change in dividend between time t-1 and t-2:

$$\Delta D_{it} = \alpha_1 + \alpha_2 \Delta E_{it} + \alpha_3 D_{t-1} + \varepsilon_{i-t}$$

Where D_{it} is the dividend of the firm i at time t, E_{it} is the net income of the firm i available to stockholders at time $D_{it} = D_{it} + D_{i,t-1}$ is the change between the dividend at time t and time t-1, for the firm i, $\Delta E_{it}(E_{it} + E_{i,t-1})$ the change in the net income available to stockholders, at time t and time t-1, and ε_{it} is the error at time t. The next empirical model that they test considers the same variables, dependent and independent, but this time without the changes between time t and t-1

$$D_{it} = \alpha_1 + \alpha_2 E_{it} + \alpha_3 D_{i,t-1} + \varepsilon_{it}$$

Eriotis and Vasiliou (2003) are of the view that Greek companies adopt discrete dividend practice, i.e. payment of dividend, depending upon the long-run target of dividend payment (represented by the dividend variable with a lag) which is adjusted according to the net earnings of the firm, a fact which is 'well known'. However, a company's dividend decision has a direct impact on its financial mix. Assume for a while that the management of a firm has already decided how much to invest and has chosen its debt-equity mix for financing these investments. The decision to

pay a large dividend means, 'simultaneously deciding', to retain little, if any, earnings; which in turn results in a greater reliance on external equity financing. Conversely, given the firm's investment and financing decisions, a small dividend payment corresponds to high earning retention with less need for externally generated equity funds. From the above analysis, it follows that a company's dividend decision has an immediate impact upon the firm's financial structure.

However, the link between dividend policy and capital structure has not been investigated upon, adequately, in many countries but Greece, where Eriotis and Vasiliou (2003) investigated the association of the dividend policy with the debt ratio. The investigation was performed by considering a model that associates the corporate dividend per share at time t with a long-run target dividend per share (represented by the dividend variable at time t-1), the earnings per share at time t, and the debt ratio (expressed as the ratio of total debt to total assets) at time t. Their regression results suggest that there is a positive association between dividend policy and the examined variables for the majority of the firms listed on the Athens Stock Exchange for the period 1996 to 2001.

Rao and Lukose (2003) studied the capital structure determinants of non-financial firms of India before and during the liberalization of financial markets in 1997 and cross sectional examination of the market and book value leverage were studied upon for the period prior 1990 to 1992 and post 1997 to 1999 liberalization periods with the help of conventional explanatory variables, such as, tangible asset model, growth rate, size, and profitability. The main targets were domestic conglomerates, foreign or smaller private companies. Foreign firms were, inversely, correlated with the leverage but the industry dummy variables were not proved significant.

DeAngelo et al. (2004) observed significant correlation between the dividend payment decision and the ratio of earned capital to total controlling capital, size of the firm, profitability of the company, growth rate, leverage and cash in hand and previous dividend payment history. The dividend payment has a hidden management opportunity as with the retention of the earnings, increases the money managers control upon the retained earnings which may be applied for better investment opportunities but may also be disbursed without any suitable monitoring. The leverage (Lev) also influences the dividend behavior of companies, provided the level of the leverage is high, which means that investment in the firm is comparatively riskier in the manners of cash flow. The negative impact of leverage upon the dividend payment documented by Higgins (1972) and McCabe (1979) who finds that companies who have a past of higher leverage normally pay lower dividend to avoid the higher cost of raising external capital for the company.

The negative association of dividend and leverage was also supported by Rozeff (1982) who hypothesized that if a firm has higher operating and financial leverage, other things kept equal, the firm will choose lower dividend payout policy to lower its costs of external financing. His findings were based on his hypothesis that dividend payout is a significantly negative function of firm's past and expected future growth rate of sales, a significantly negative function of its beta coefficient by the influence of financial leverage, a significant negative function of the percentage of stock held by insiders, and significantly positive function of the firms' number of common stock holders.

A small portion of Chinese firms was, empirically, investigated upon by Huang and Song (2005) to verify the phenomenon that the financial leverage was correlated with conventional variables, determining the capital structure of the companies. Their investigations confirmed the previous findings from the various researchers that leverage was positively correlated with the size of the firm and the fixed physical assets of the firm and relatively correlated with profitability and non debt tax shields, applied by the firms while the results of the investigation of the Chinese companies also revealed a positive correlation between the leverage and the volatility of the stock. It was found that understudy Chinese companies had, significantly, lower long-term debt.

Huang and Song (2005) finally, remarked that static trade trade-off model provided a reasonable account of the capital structure of understudy Chinese companies as compared to the pecking order hypothesis and that while the ownership structure is there to affect the capital structure, as noted by the Jensen and Meckling (1976), the minor shareholding in China cannot be expected to have much effect.

Li et al (2007) observed that capital structure and the quality of the financial institutions depends upon the capital suppliers. By applying the Chinese statistical agencies' database of 700 listed and 260,095 unlisted companies, Li, Yue and Zhou (2006) examined the relationship between the different forms of leverage and the specific characteristics such as capital structure, institutional management, micro and macro-economic factors and that Chinese firms are highly leveraged with short-term debt, while it was also noted that ownership and institutional factors account for about a third of the total variation in leverage ratios.

Mahagaonkar and Narayanan (2007), in their book, used appropriately feasible least square methods to develop a model of capital structure for the manufacturing sector of India which included the control mechanism for the firm size, tax rate, cash in hand, interest coverage, and profitability. Their analysis also included the effect of tenure of the firm on leverage by interacting with each of the independent variable with a dummy variable for the age and size as well. Size and the profitability were proved to be most important determinant factors for the capital structure for the new firms. Size was positively while the profitability was inversely related to the leverage.

Research Hypotheses
1.   DR (Leverage) has no impact on DPS (dividend per share)
2.   DY has no impact on DPS (dividend per share)
3. ΔE has no impact on DPS (dividend per share)

Research Methodology and Statistical Population
Statistical society includes all food companies (other than Sugar companies) listed in Tehran Stock Exchange for years 2003 to 2010. These companies
1.   Must be listed in Tehran Stock Exchange before 2003 and since the beginning of 2003, their shares should be transacted in Stock Exchange.
2.   Their transaction should not interrupt in the Stock during the years 2003 to 2010. That means Companies share should be active in Stock, and have been no interruption more than three months.
3.   Their financial years end has been leading to (date) 29 March and has no change in financial years during the years 2003 to 2010.
4.   Their information such as financial statements and notes are available.
5.   They must not be part of investment companies.
6.   The companies should be profitable and their share-holder's book value of equity must be positive in during the study.

In spite of the fact that statistical society include all food companies (other than sugar companies) listed in Tehran Stock Exchange and statistical society is limited , then all food companies listed in Stock Exchange were selected and we had sample volume that was uniform/similar with statistical society, i.e. N=n. Finally, 242 companies were selected as the sample size.

Operationalization of variables
Key variables of the model are dividend per share (DPS), debt ratio (DR), dividend yield (DY) and changes in earnings (_E), initial calculation of which are given below:

Dividends per share (DPS) = Total amount of dividends ÷ No. of shares of the firm i at time t.

Debt ratio (DR) /Leverage = Total debt ÷ Total assets of the firm i at time t.

Dividend yield (DY) = Dividend per share ÷ Price of the share (The chosen price, applied as denominator, corresponds to the share price at the end of financial year, when all the dividend announcements for corporate dividend have been made).

Changes in earnings (ΔE) = Earnings it –Earnings i, t-1 ÷Earnings i, t-1 and ε it is the error term.

Research theoretical framework and model of the study

This paper tests the relations of the dividend of the firm with the capital structure, the last year's dividend yield and the changes in the earnings of the firm. The dividend policy of the firm is taken as the dependent variable (DDPS) while the Debt Ratio (DR) and Dividend Yield (DY) are taken as the independent variables and change in earnings ΔE as a dummy variable. Thus, to test the hypothesis, following model is, empirically, tested and applied:

$$DPS_{it} = \alpha_0 + \alpha_1 DR_{it} + \alpha_2 DY_{i,t-1} + \alpha_3 \Delta E_{it} + \varepsilon_{it}$$

Where it DPS is the dividend per share of the firm i at time it t, DR is the debt ratio (expressed as the ratio of total debt over total assets) of the firm i at time t, DY i,t-1 is the dividend yield of the firm I at time t-1, ΔE it is the change in net earnings before taxes of the firm i at time t.

The financial leverage is independent variable and three factors such as debt ratio, yield and changes in dividend / profit are effective and quantitative factors on it (financial leverage). Dividend policy is considered as dependent variable that Dividend per share is only quantitative variable that depend on dividend policy. In this research, the impact of three factors (debt ratio, yield and changes in profit) was measured by dividend. Then, from its results, relationship of financial leverage on dividend policy was obtained by regression and correlation coefficient. In fact, this research reviews how / what percentage above factors has effect on dividend policy and whether there are also other factors that have impact on this policy. According to above explanations , the descriptive model is shown as figure 1.
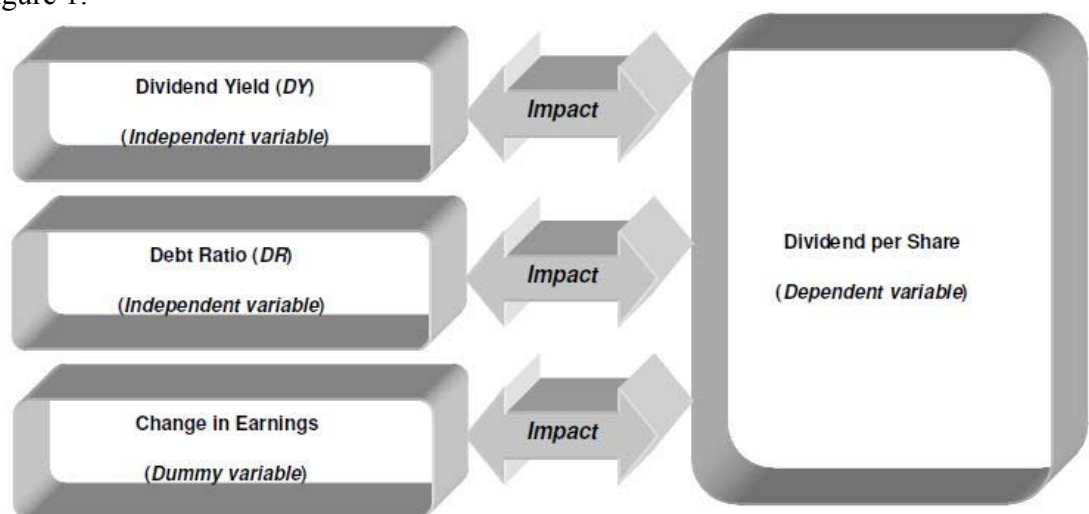

Figure 1. Conceptual framework.

Results of data analysis

In descriptive analysis, mean, median, maximum, minimum, Std. Deviation, skewness and kurtosis were computed.

Table 1. Descriptive statistics for the variables

	DPS	DR	DY	ΔE
Mean	1.9641E2	.1983	27.5749	14.3215
Median	1.0000E2	.1500	27.5700	-1.0000
Maximum	957.00	66.28	657.61	990.00
Minimum	.00	-76.55	-67.09	-944.00
Std. Deviation	2.34258E2	6.95019	5.87216E1	2.80737E2
Skewness	1.165	-2.252	5.556	.387
Kurtosis	.390	96.043	55.014	4.497
N	242	242	242	242

According to above table, the value mean of stock dividend as dependent variable is computed 1.9641E2, which is a good explanation of company's profitability and managers are interested in increasing shareholders assets / possessions. The value of median is 1.00E2, and minimum Stock dividend and maximum of that and Std. Deviation are computed as value of zero, 957 and 2.3425E2, respectively. These figures are that the profitable value can deviate from mean by 2.3425E2 percentages to any two side.

Mean of debt ratio as independent valuable / variant is 0.1983. It means that on the average, 19% of food company's assets are provided by debt, and its remainder is obtained of distribution of Stock. Median is 0.15 and the value of minimum debt is -76.55 and maximum debt and Std. Deviation debt are computed as 66.28 and 6.95019, respectively.

As table 1 indicates, mean of Stock yield is 27.5749 that is large quantity. That is, company's share cost is lower than dividends. Perhaps, by the reason of that investors have to emphasize on capital profits. Median is 27.57 and approximately is as equal as mean. The value of minimum Stock yield, its maximum and Std. Deviation are -67.09 , 657.61 and 5.87216E1, respectively.

In above table, mean of changes earnings is 14.3215 , that almost companies performance becomes more often. Median is -1.00 and minimum changes in earnings and maximum and its Std. Deviation are -944.00, 990.00 and 2.80737E2, respectively, that is very larger than mean.

Hypothesis 1: Debt ratio (DR) has effect on dividend per share (DPS).

In examining the relation between debt ratio (DR) and dividend per share (DPS) , we use Pearson's Correlation. As it is shown in table (2), correlation between debt ratio (DR) and dividend (DPS) is 0.102 and significance level is 0.114 that is more than 0.05. Then, by 95% confidence, it can be said that there is no significant relationship between debt ratio and dividends.

Regression test was used for examining effect debt ratio (DR) on dividend per share. The Correlation of debt ratio variable (r) is 0.102 and coefficient of determination (R^2) in variable is 1% that means debt ratio variable has an effect on dividend per share. In other words, hypothesis H1 is rejected.

Table 2. Correlation matrix

		DPS	DR	DY	ΔE
DPS	Pearson Correlation	1	.102	.315	.376
	Sig. (2-tailed)		.114	.013	.002
	N	242	242	242	242
DR	Pearson Correlation	.102	1	.227	.315
	Sig. (2-tailed)	.114		.180	.021
	N	242	242	242	242
DY	Pearson Correlation	.315	.227	1	.123
	Sig. (2-tailed)	.013	.180		.103
	N	242	242	242	242
ΔE	Pearson Correlation	.376	.315	.123	1
	Sig. (2-tailed)	.002	.021	.103	
	N	242	242	242	242

Hypothesis 2: Dividend yield has an effect on dividend per share.

The Pearson correlation was used for examining relationship between Dividend yield (Dy) and dividend per share. As it is shown in table (2), correlation between dividend yield and dividend per share is 0.315 and significance level test is 0.013 that is smaller than 0.05. Therefore, it can be said by 95% confidence, there is a significant relationship between dividend yield and dividend.

Regression test is used to examine effect of dividend yield on dividend per share. The correlation of debt ratio variable is 0.315 and determining coefficient (R^2) variable is 9.9%.

That means, dividend yield has 9.9 percentage effects on dividend per share.

Hypothesis 3: Changes in earnings (ΔE) have effect on dividend per share

The Pearson correlation was used to examine relationship between changes earnings (E) and dividend per share (DPS). As it is shown in table, correlation of changes in earnings (ΔE) and dividend per share (DPS) is 0.376 and significance level is 0.002, that is smaller than 0.05. Therefore, it can be said by 95% confidence, there is a significant relationship between changes earnings and dividend per share.

The regression test was used to examine effect of change earnings (ΔE) on dividend per share. The correlation of debt ratio variable is r=0.376 and determining coefficient (R^2) variable is 14.1% effects on dividend per share.

The main hypothesis: The financial leverage has effect on dividend policy in food companies listed in Tehran Stock Exchange.

The regression model is summarized as follows that is related to original hypothesis test.

$$DPS_{it} = \alpha_0 + \alpha_1 DR_{it} + \alpha_2 DY_{i,t-1} + \alpha_3 \Delta E_{it} + \varepsilon_{it}$$

The following hypotheses are examined for what variable remains in regression model and what variable is deleted from regression model:

$H_0 \quad : \qquad = 0$

$H_1 \quad : \qquad 0$

Although P- value is smaller than α_i , therefore Hypothesis H_0 is rejected , that means α_i is not zero and all variables are remained in profit equation. According to table 3, the regression line equation is obtained as following:

$$DPS_{it} = 196.659 + 3.409 DR_{it} + 4.407 DY_{i,t-1} + 6.027 \Delta E_{it} + \varepsilon_{it}$$

In given equation, three variables including debt ratio, dividend yield and change earnings, all three factors, have effect on DPS. But their effect in table (3) is 0.122. It means that research variables have only 12.2 percentage effect on dividends, and there are other factors that may have an effect on Stock dividend and it changes food company's dividend policy listed in Stock.

Table 3. Correlation coefficient for changes in earnings

$DPS_{it} = \beta_0 + \beta_1 DR_{it} + \beta_2 DY_{i,t-1} + \beta_3 E_{it} + \epsilon_{it}$				
	Coefficient(β_i)	t	Sig.	Std.error
constant	196.659	11.785	.000	16.687
DR	3.409	1.569	.118	2.173
DY	4.147	4.184	.034	.257
Δ E	6.027	.501	.617	.054
R2	.122			
R2 adj	.118			
F	.928			

Conclusion

In some cases , our results are similar to Asif & et al(2011) findings although in some other cases, they are not the same. In their finding , there is a significant and converse relationship between dividend and debt ratio , but in our results, significant relationship was not observed. Also , there is asignificant and positive relationship between Stock dividend and yield and changes in earnings that has absolute accordance with Asif & et.al's results. The general results was in accordance with Asif & et.al's results that are based on other effective factors on dividends.

Jelling (2007) presented that there is no significant relationship between company profits that meet financial leverage rather than profits have high financial leverage in the same times. Other results in research explain if comparison is performed by other factors such as free cash flow and company's growth and development , difference in profit will be significant, which is related to the results of the current study. That means, there are other factors having a high effect on dividend policy.

Amidu & et.al's(2006) results that the studied effective factors on profit payments in Ghana companies , are shown that there is a positive relationship between debt payment , stock yield , cash flow , changes in earnings and tax. Also , there is a negative relationship between profit payments with financial risk , institutional share-holders assets , debt ratio and its growth.

Hashemi and Akhlaghi (2010) found a significant and positive relationship between financial leverage and dividend policy and profitability, and suggested that they are incongruent with our results. But, financial leverage as an effective factor on food companies dividend policy can be related to our results.

Hashemi and Kamali (2011) studied whether gradual increase in financial leverage has effect on management of companies profit listed in Stock , and their results indicated there is no significant relationship between profit value management with high financial leverage and companies involved in increasing financial leverage. Totally, financial leverage is not an effective factor on companies dividend listed in Stock, which is not in agreement with the results of the current research.

Also, Salehnejad and Gayour (2010), Karamie and Eskandar (2010) presented that ratio of ROE and ROA are effective on changes Stock Costs, but have no significant effect on financial

leverage. They also studied that in industrial separation level, the results of effecting financial ratio are different with other industries.

In another study done by Izadinya and Rasaeyan (2009), Rezvaniraz (2010), Alavy (2009), it was specified that yield rate and Stock dividend have negative and significant relationship with financial leverage and debt ratio , that are related to our results . Also, Jahankhani and Ghorbani (2006), Nourvash and Yazdani (2011) have obtained results that are similar to our results of the study.

Recommendations of the study
The research limitations involved a limited number of companies listed in Tehran Exchange by preconditions that may have altered research generalizability . This issue should be taken into account in extension of our results of companies listed in Tehran Stock Exchange. It is suggested to study effects of financial leverage on dividend policy in various industries and companies listed in Tehran Stock Exchange and study effective factors on dividend policy in food companies and all listed in Stock Exchange.

According to hypothesis, it can be said that managers can provide positive and profitability for share-holders by decreasing the debt payment time, and this case will be verified by proper management of receipt account and good performance of current debt. Also managers can provide positive and profitability value for share-holders by decreasing debt and that case will be verified by proper management of dividend policy.

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