

The Relationship between Free Cash Flows and Agency Costs Levels: Evidence from Tehran Stock Exchange

Esmael Farzaneh Kargar^{1*} Gholam Reza Ahmadi²

Department of Business Management and Customs, Hormozgan University, Iran -1

Department of economic, management and accounting, Payame Noor University, Iran -2

* E-mail of the corresponding author: fkargar@hormozgan.ac.ir

Abstract

The objective of this study is to examine this matter that how those firms in Iran which own a significant amount of free cash flow prevent the occurrence of its related agency problems and test the effect of dividend and leverage on free cash flow.

Furthermore, there will be an examination of the difference in agency costs between companies that have and companies that do not have a low growth opportunity. In order to test the related hypotheses, profit, growth, leverage, size, and free cash flow were employed to measure the level of agency costs of the firms, whereas leverage and dividend were used as indices for financial policies to direct free cash flow problems. Following the usage of regression analysis and data collection of the firms in Iran over the period 2006-2010, the acquired results showed a positive insignificant effect of dividend on free cash flow, but they implied a positive significant effect of leverage on free cash flow. Regression results also indicated a positive insignificant effect of free cash flow on dividend, negative significant effect of growth on dividend and negative insignificant effect of leverage on dividend. Meanwhile, a positive and statistically significant effect of profit and firm's size on dividend was witnessed. For firms that have a low growth, a positive significant effect of leverage on free cash flow was observed, whereas for firms that have a high growth, results proved a positive but not significant effect. Finally, the effect of dividend on free cash flow for both categories of firms was positive but not significant.

Keywords: Agency Costs, Free Cash Flow, Dividend, Leverage

1. Introduction

The natural conflict between shareholders and managers, because of the separation of proprietorship, control and the agency costs that are resultant of shareholders' lack of ability to monitor manager's treatment, has been appropriately established in the literature (e.g., Johnson and Meckling, 1976). Jensen (1986), based on this argument, formulates the hypothesis of agency costs of free cash flow, stating that shareholders' monitoring difficulty over opportunistic behaviors of managers creates the possibility for them to spend cash flow which was internally generated, for their own benefit, instead of its spending on maximizing firm value. According to this hypothesis, the extant literature observes that more free cash results in more serious agency problems. (As an instance, Harford, 1999; Opler, Pinkowitz, and Stulz, 1999; Faulkender and Wang, 2006)

Prior research, as a makeshift for agency problems of free cash flow, has mainly aimed at ownership structure and specifically the measure of separation of ownership claims and control, as a significant determinant of agency costs. Prior study finds that the possibility of investing excess cash reserves of firms having poor governance arrangements in less productive assets is high. (Dittmar and Mahrt-Smith, 2007; Pinkowitz, Stulz, and Williams, 2006) But, mechanisms of agency reduction, being suggested in prior literature, involve the employment of debt financing (As an example, Fleming, Heaney, and McCosker, 2005; Agrawal and Knoeber, 1996) and dividend policy (such as, Holder et al., 1998; La Porta et al., 1999; Mollah et al., 2002; DeAngelo et al., 2004; Amidu and Abor, 2006; and Baker et al., 2007) remain the probable candidates as the mechanisms of agency control. Besides, a new research identifies the benefits of conservative and cautious reporting in lessening the problem of managerial agency. (For instance, Louis, Sun, and Urcan, 2009; Garcia Lara et al., 2010; Ahmed and Duellman, 2010; Hyung Ha, 2011)

In this article, the free cash flow has been stressed out as the main variable to determine the level of agency costs. In order to control the level of these costs, only the dividend policy and leverage (financial leverage), among other mentioned solutions, have a direct influence on the amount of free cash flow. Hence, in this research, the role of dividend policy and leverage as agency control mechanisms of free cash flow problem is tested, and we measure size, leverage, profit, free cash flow and growth for the measurement of level of agency costs existent in firms for testing the effect of agency costs on dividend payment.

The rest of this paper is divided into 5 sections. Section 2 reviews the previous researches. In section 3, hypotheses on the subject matter of the study are formulated. Section 4 presents research methodology to test a number of hypotheses relating to our research focus. Section 5 analyses and discusses the results of hypotheses testing and finally, section 6 is the concluding section.

2. Previous Research

Free cash flow is known as one of the criteria of examining performance and financial health of entities which was initially suggested by Jensen in 1986. As Jensen states (1986), free cash flow means the cash flow in excess of funds needed for all projects which have positive net present value (NPV). Free cash flow can have useful and important applications for shareholders and managers of entities. The important matter about free cash flow is the agency problems of the mentioned funds. In a situation in which the firm has a large amount of free cash flow, the managers can invest the excess funds in various opportunities. Regarding the limitation of assured and profitable investment opportunities, managers will probably invest in projects which either have fewer yields than the firm's cost of capital or the ones that are too risky. Those costs being imposed on the shareholders in these situations are called "agency costs of free cash flow". (Jensen, 1986)

The agency theory states that when managers' goals differ from the shareholders' and the firm's controlling mechanism is not effective enough, managers will attempt to accomplish their goals which are not necessarily in line with the shareholders' (Griffin et al., 2010). La Porta et al. (2000) mentioned that in case of company's having free cash flow, the managers will involve in wasteful practices, even in presence of increased protection for the investor. Chen et al. (2010) defined free cash flow as an index which can indicate the potential threat of excessive investments performed by the managers.

The free cash flow theory suggested by Jensen states that more internal cash enables the managers to avoid market controlling. In this situation, they do not need the shareholders' agreement and they are free to decide about the investments on their will. Managers do not tend to pay cash (like the dividends) and they are motivated to invest, even when there is no investment with positive net present value (Drobotz et al., 2010). Based on this theory, managers are motivated to collect the funds in order to increase their under-controlled resources and to acquire the powers of judgment and discernment on firm's investment decisions. Therefore, they act using the firm funds in order to avoid presenting detailed information to the capital market, although it is possible that managers invest in projects that may have negative effects on the shareholders' wealth. (Ferreira et al., 2004)

Harford (1999) states that cash rich firms' probability of making value destroying acquisitions is more. Additionally, he realizes that the reaction of the market to the declaration of a takeover bid has a negative relation with the amount of excess cash belongings of the bidder. Opler, Pinkowitz, and Stulz (1999) observe that firms which have excess cash are inclined to spend more on acquisitions and capital expenditures, even when facing weak and poor investment opportunities. Rubin (1990) also states that managers of the firms with higher free cash flow prefer to invest the mentioned funds in projects with negative NPV, instead of paying them as dividends.

Following Jensen theory, there have been many researches examining the role of free cash flow on the decisions related to the investment activities and financing. Most of these researches have supported Jensen's theory and have confirmed the agency problems in firms with high free cash flow. Gul and Tsui (1998) and Tsui et al., (2001) examined Jensen's theory in auditing framework and have considered the fact that whether the matter of free cash flow can cause a change in the risk level of auditing and the amount of auditor's effort being reflected in their fees. Having tested the firms with high free cash flow and low growth opportunities, these researchers have proved a positive significant relation between agency problems of free cash flows and the auditing fees. Moreover, these researchers found out that this relation is influenced by debt, in a way that in firms with high free cash flow and low growth opportunities and high level of debt (the control group), there is no positive relation between the agency problems and high auditing fees. Griffin et al. (2010) found evidences which indicated that the firms with high free cash flows and low growth opportunities pay a large amount of auditing fees which is indicative of the fact that in these firms, the auditors have diagnosed the agency problems of free cash flows.

Despite this fact, Tsui et al. (2001) states that in firms with high growth opportunities in which the managers' activities cannot be observed, the possibility of the occurrence of opportunistic behaviors will be more. In this case, the results of the research performed by Ferguson et al. (2007) proved that the firms with high free cash flows and high growth opportunities have high auditing fees as well.

Pinkowitz, Stulz, and Williams (2006) indicate in a nationwide study that with agency costs of free cash flow present, cash belongings are valued at a discount and value of this firm discount is even more pronounced in countries having poor investor protection, therefore stockholders own limited power in disciplining management. Jensen continues to mention the factors which can balance the agency problems of free cash flows. To do this, Jensen refers to the balancing role of debt distribution, share redemption and dividend payment to the shareholders. Firm managers usually follow the firm development, regardless of the desirable size of their firms, because the firm growth can benefit the managers in two ways; not only can it increase their under-controlled resources and their power in the firm and the capital markets, it also brings rewards for them on the account that there usually is a direct relation between the managers' rewards and the firm sale growth.

Based on Jensen's theory (1986), if the firm managers, who are following their firms' growth at any way possible, distribute free cash flows among the shareholders, instead of investing them in opportunities with negative NPV, this will be in shareholders' interests and it improves the firm status, too. The US oil industry, according to his studies, is a case of resource waste. In 1980s, the created cash flows were invested in low benefit exploratory projects. In his belief, if those firms would have paid their excess cash flows to the shareholders through share redemption or in case of its exchange with debt, they had been in a more desirable situation. He states that dividend payment in cash and the desired level of debt, decreasing the available cash to be used for optional expenditures, can reduce the agency problems of free cash flow.

Considering dividend and debt, many earlier researches have been performed with the aim of reducing agency problems of free cash flow. An increase in debt can create a mechanism which reduces the managers' supervision on free cash flows and leads to a reduction in agency costs. (Myers, 1997; Agrawal and Knoeber, 1996; Yilei, 2006)

Fleming, Heaney and McCosker (2005) name some advantages related to debt financing usage in controlling and reducing agency costs. However, Grossman and Hart (1982) and Williams (1987), developed the argument which states that more financial leverage may exert influence on managers and decrease agency costs via the threat of liquidation, which can cause personal losses to managers' salaries, esteem, perquisites, and, as Jensen states (1986), via creating pressure to produce cash flow for interest expenses payment. The research results performed by Gul and Jaggi (1991) show that in large-sized firms, there is a positive relation between debt policy and the amount of free cash.

The dividend is like debt, since having been announced, it will become a commitment, with the difference that the dividend has more flexibility, compared to debt. (Oded, 2008)

As Zwiebel (1996) suggests, managers of the empire-building are held forth paying out dividends voluntarily as a form of protection against disciplinary sanctions caused by outsiders. Hu and Kumar (2004) denote that managers select higher levels of payout who are more probable to make sub-optimal decisions. The same is true for managers who can be disciplined by outsiders at comparatively low expenses.

Rojeff (1982) and Easterbrook (1984) state that dividend payment, causing firms to more frequently visit capital markets for financing needs, brings them under more inquiry of capital markets. The firm, paying dividends, promises stockholders to pay out cash on a regular basis. This undertaking reduces the discretionary resources under the supervision of managers and directs them to more monitoring by capital markets, occurring when the firm needs new capital. Based on their study, they reach to the conclusion that management, by paying dividends and compelling the firm to resort to the capital markets for excess financing, can minimize equity agency costs.

On the account of non actualization of the retained earnings as future dividends, dividends are considered better, compared to them (Utami and Inanga, 2011). Therefore, dividends are paid out at the time when firms attempt to establish themselves a reputation for well treating the stockholders and note that expropriation and dispossession do not have to be a concern. As a result, dividend policy performs as a mechanism for corporate monitoring. (La Porta et al. 2000)

DeAngelo et al. (2004) reported that the occurrence of significant agency problems can be prevented by dividend payments. They believed that the retention of the earnings provides the managers' command with an additional access to more investment opportunities and with no monitoring. Sawicki (2005) demonstrated that dividend payouts can be used to assist in ultimately supervising the performance of managers in large-sized firms. In other words, in large-sized firms, information asymmetry raises due to ownership distribution, reducing the shareholders' capacity to monitor the internal and external operations of the firm, which results in management inefficient control. Of the solutions for such a problem, paying large dividends can be mentioned, since large dividends result in an increase in the need for external financing, and this need can create an increase in the monitoring of large firms, due to the existence of creditors. Bradley, Capozza, and Seguin (1998) indicate

that in firms dividing free cash flows as dividend payment, management is able to allocate fewer funds to projects which are in their best interests, instead of being in the interest of their stockholders.

Firms often use debt to control the agency problems of free cash flow in order to reduce the available funds for managers. Anyway, the capital reduction or the increased dividend is considered as a good mechanism to manage the excessive funds, even if the dividend may have less efficiency than debt (Raghunandan, Jons, 1998). Moreover in the orders of financing pyramid, first the debt and interest and then the dividends are paid. Regarding these points, debt may be a better controlling mechanism in forcing the managers to pay the future funds (Griffin et al, 2010). It must also be noted that an increase in debt amount and its crossing the optimal level can tempt the managers to not accurately prepare the financial statements in order to avoid the violation of debt agreements based on accounting numbers.

Dufrene and Hufft (1996) realize that dividend payment reduces retained earnings which were previously assigned for expansion, and then the firm is inevitably forced to pursue external financing from the capital markets. Consequently, management becomes able to optimally opt dividend and leverage to control agency costs. This replaceability between dividends and debt as substitute mechanisms to reduce the agency costs of free cash flow insinuate that those firms which use low debt ratios will be following a high-dividend payout policy (Utami and Inanga, 2011). According to Jensen's hypothesis of debt balancing, Griffin, Lont and Sun's (2010) studies showed that high debt ratio balances the agency costs of free cash flow. However, they did not find documents on the balancing role of dividend payment or share redemption.

Many earlier researches related to leverage, size, growth, free cash flow and profit for the level of agency costs in firms exist to test the influence of agency cost on dividend payment ratios. The results of studies performed to examine the relationship between free cash flow and dividend payout are as follow:

Suggestions made by the studies performed by Holder et al. (1998) and Mollah et al. (2002) state that companies which have more free cash flow should have more dividend payments in order to reduce free cash flow agency costs. The report presented by Baker et al. (2007) indicates that Canadian dividend paying firms have considerably greater cash flows. Amidu and Abor (2006) consider that cash flow position of the firms can influence the policy decision of the dividend payout of listed firms in Ghana Stock Exchange.

A number of studies, considering leverage, have reached to the conclusion that the level of financial leverage have a negative effect on the dividend policy (Such as, Crutchley and Hansen, 1989; Jensen et al., 1992; Agrawal and Jayaraman, 1994; Faccio et al., 2001; and Gugler and Yurtoglu, 2003). Their study summarized that a highly levered company is aimed at maintaining internal cash flow to accomplish the task, instead of dividing the available cash to stockholders and protecting their creditors.

The firm's growth opportunity is another effective factor on the amount of managers' opportunistic behaviors. When on one hand the manager has a relatively high amount of free cash flow and there are a lot of growth opportunities for the firm on the other hand, the managers can use this funds in line with the growth of the firm and since these investments are in line with the present trend of the firm, they have less risk and nearly the same rate of return as the current ones. Contrary to this, when the investment growth opportunities are limited, managers will perform investments which are more risky and their return differs from the current yield of the firm. (Jelenik, 2007)

The results accomplished by Rozeff (1982), Jensen et al. (1992), Dempsey and Laber (1992), Alli et al. (1993), and Holder et al. (1998) indicated that dividends were higher in firms which had low growth opportunities, while firms having high-growth opportunities had lower amount of free cash flows. Titman and Wessels (1988), Murrall and Welch (1989), and Gavers and Gavers (1993) expressed that growth firms, in comparison with non-growth firms, showed a lower level of debt to decrease their reliance on external financing, which is expensive.

Shawn Howton et al., examined the agency problems of free cash flow and growth opportunities in 1998 and they stated that firms with high growth opportunities face less agency problems and the shareholders of the firm who has much funds do not accept debt announcement, because they manage to control the excess funds. The results of this research show that the shareholders of these firms respond negatively to debt announcement and this reaction leads to the negative reaction of the market against debt announcement.

Baker et al. (2007) observes that Canadian dividend paying firms considerably have some growth opportunities. Naceur et al. (2006), while investigating the determinants of dividend policy of Tunisian stock Exchange, witness that the firms which have fast growth divide larger dividends in order to attract investors. Amidu and Abor (2006) realized that growth scenario and investment opportunities of the firms exert an influence on the dividend payout policy decision of the listed firms in Ghana Stock Exchange.

Based on Jensen et al. (1992), Han et al. (1999), and Fama and French (2000), a positive and significant relation was observed between company profitability and its dividends policy. Adaoglu's (2000) findings demonstrate that in Istanbul Stock Exchange Firms, the main variable on the amount of cash dividend is the same year's

earning. Any alterability in the earning of the firm is clearly mirrored in the dividend. Baker et al. (2007) claim that Canadian dividend paying firms have a considerably high level of profitability. Amidu and Abor (2006) realize that profitability of the firms affect dividend payout policy decision of firms in Ghana. Nacelur et al. (2006), investigating the determinants of dividend policy of Tunisian Firms, observe that the high profitable firms which have more stable earnings are capable of managing the larger cash flows and consequently, they pay higher dividends.

Fama and French (2001) show that the chance that a firm pays dividends has a positive relation with size and profitability and a negative relation with growth. It means that greater size and higher profitability infer a greater capacity to distribute cash, whereas superior growth demonstrates greater investment opportunities, and therefore, a more effective stimulus to retain cash.

Several studies have considered the effect of firm size on the relation of dividend and agency cost. In 1997 and empirical study was performed by Redding, whose goal was to consider the reason why larger-sized firms divide more profits. Capital market inefficiency and the institutional investors' tendency to pay dividend were of the hypotheses of this research. The research results showed that larger-sized firms pay more profit on the account of their having sufficient cash. Furthermore, these firms will probably increase the amount of their dividends. In conclusion, it can be said that the firm size and the amount of cash are two important and effective factors on dividend policy.

Eije et al. (2006) considered the dividend policy of the member firms of the European Union and they concluded that firm features such as the size and the age, significantly increase the tendency towards and the amount of dividend payment. On the other hand, in the firms which are expanding rapidly, there is less probability that they start distributing dividends or the the dividends ratio will be less. Baker et al. (2007) indicated that Canadian firms which are considerably larger distribute a higher rate of their dividends as cash. Eddy and Seifert (1988), Jensen et al. (1992), and Fama and French (2000) witness a positive relationship between dividend and size of firm, which showed that dividend paying firms are significantly greater. Manos (2002), Travlos et al. (2002), and Mollah (2002) also confirmed this positive relationship. The results of the study performed by Avazian et al. (2003) indicated a positive and significant relationship between dividend payment policy and size of firm. This result is indicative of the fact that more dividends payment is preferred by large-sized firms.

Utami and Inanga (2011) performed a study whose goal was to test the effect of agency costs of free cash flow on dividend policy and leverage of firms in Indonesia. They also tested the difference of agency costs between the firms which regularly distribute the dividends to the shareholders and other firms. Growth, profit, size, risk and free cash flow are used as criteria to measure the level of firms' agency problems, whereas dividends and leverage are employed as proxies for financial policies to refer to free cash flow costs. Their results, having used regression analysis model and collected the data of firms in Indonesia within the period of 1994 to 2007, demonstrate that free cash flow has a negative insignificant effect on dividend, yet state that free cash flow has a positive significant effect on leverage. Moreover, their results indicate negative insignificant effect of growth on dividend, but a positive and insignificant effect of profit, risk and firm's size was observed on dividend. For firms with 5-years period of dividend payment, a positive significant effect of free cash flow was seen on dividends, whereas for firms having dividend payment period of less than 5-years, results indicate a negative significant effect. Eventually, this result shows that the effect of free cash flow on leverage is positive and insignificant for both categories of firms.

3. Hypotheses

According to previous research, the influence of dividend payout ratio and leverage on firm's free cash flow, and the impact of free cash flow, profit, growth, size and leverage as proxies of the agency costs level on dividend payment ratios was examined, using the following hypotheses:

H1: Dividend payout ratio has positive significant effect on firm's free cash flow.

H2: Firm's leverage has positive significant influence on firm's free cash flow.

H3a: Free cash flow has positive significant effect on dividend payout ratio.

H3b: Firm's leverage has negative significant effect on dividend payout ratio.

H3c: The dividend payout is negatively influenced by growth opportunities.

H3d: Firm's profitability has positive significant impact on dividend payout ratio.

H3e: Firm size has positive significant effect on dividend payout ratio.

4. Research Methodology

4.1. Data and Sample

The required data have been collected from Tehran Stock Exchange market over a period of 2006 - 2010. The research population includes all of the accepted firms in Tehran Stock Exchange Market in the mentioned period. The selected firms out of the mentioned statistical population are the ones which: 1) have been accepted in

Tehran stock exchange market before 2006; 2) their research required data of every year is available; 3) their financial year ends in Esphand, 29th in order to compare the cases; 4) have been remained as the accepted firms in Tehran Stock Exchange Market until the end of the research; and 5) are of productive nature and not a part of banks or financial institutes. Regarding these limitations, 343 out of member firms of the research population, 59 firms were selected as the sample. These firms, using the central median index, have been divided into two categories of firms with high growth opportunities and firms with low growth opportunities.

4.2. Hypotheses Testing and Data Analysis

We formulate 5 equations in this study. Equations (1) to (5) will be analyzed using regression analysis to examine causal relationships between each dependent and independent variables.

4.2.1. Hypotheses 1 and 2

The aim of testing hypotheses 1 and 2 is to determine this matter that how extensive the firm's use of alternative mechanisms of dividend and financial leverage is. These mechanisms, as mentioned in review of literature part, have been suggested as the solution of reducing agency problems of free cash flow, by many researchers. The following models will be used to test the respective hypotheses.

$$FCF = \alpha + \beta * DIV + \varepsilon \quad (1)$$

$$FCF = \alpha + \beta * LEV + \varepsilon \quad (2)$$

For model 1 and 2, we expect β to be positive,

Since logically the firms with more free cash flow distribute more dividends in order to reduce agency problems and have higher leverage and this hypothesis will be consistent with earlier researches in this field.

4.2.2. Hypothesis 3

The objective of testing hypotheses 3 is to examine the impact of leverage, growth, free cash flow, profit and size as the proxy of agency cost level of firms for testing the influence of agency cost level on dividend policy.

$$DIV = \alpha + \beta_1 * FCF + \beta_2 * LEV + \beta_3 * GROW + \beta_4 * PRFT + \beta_5 * SIZE + \varepsilon \quad (3)$$

4.2.3. The Other Tests

We also tested the effect of leverage and dividend on the level of free cash flow for the firms of the two categories. The first category is the firms with high growth opportunities and the second category is the firms with low growth opportunities. Here, alike hypotheses 1 and 2, regression models will be used.

$$FCF = \alpha + \beta * DIV + \varepsilon \quad (4)$$

$$FCF = \alpha + \beta * LEV + \varepsilon \quad (5)$$

4.3. Measurement of Variables

The used variables in the above mentioned models have been defined and quantified as follows:

The Dividend Payout Ratio (DIV)

It is an indicator and index of the firm's dividend policy. Alike Griffin et al. in this research, we measured dividend payout ratio as cash dividends divided over stock price.

Free Cash Flow (FCF)

This is a measure to realize how much cash a company has for its ongoing and existing activities and growth after paying its expenditure. Despite the importance of the matter of free cash flow, researchers have not been able to reach to a unanimous solution regarding its calculating and measuring method and therefore there are various calculating formulations. In this research, the free cash flow is calculated as the operation profit plus the depreciation and the non-cash expenses and after subtracting tax and applying changes in net working capital and net changes in fixed assets, then having been divided over the total assets, its measures have been removed and it has been used. This method has been derived out of the model suggested by Copland.

Financial Leverage (LEV)

By the existing studies (for example Jensen et al., 1992) LEV has been employed as a proxy. In this study, it is also measured as the debt to equity ratio.

Growth Opportunities (GROW)

Most of the earlier studies used the growth rate of sales as a proxy of Growth rate (such as Jensen et al., 1992; Holder et al., 1998; Chen et al., 1999; Travlos, 2002; and Manos, 2002). In our research, we measured firm's growth as total asset plus market value of equity after subtracting total equity divided by total asset. The previous researches, such as the one performed by Kallapur and Trombley (1999), proved that this index, among the used indices, has more information content and is less influenced by other variables.

Profitability (PRFT)

In several studies, the return on equity has been used as a determinant of firm profitability (Aivazian et al., 2003, ap Gwilym et al., 2004.) and it is calculated as net profit divided by shareholder's equity.

The firm's size (SIZE)

In order to calculate these variables, the natural logarithm of the firm's total assets has been used.

5. The Results of Hypotheses Testing

5.1. Result of Testing H1 and H2

In order to use a regression, some of the primary prerequisites must be respected. As an instance, the dependent variable must have normal distribution. In this article, the dependent variable in models 1,2,4 and 5, being the free cash flow (FCF) and in model 3, being the dividend payout ratio (DIV), has been examined, using Kolmogorov – Smirnov test and the hypothesis stating the normal distribution of these 2 variables has been supported. (Refer to table 1)

Table 1: Tests of Normality

	Kolmogorov-Smirnov ^a		
	Statistic	Df	Sig.
FCF	.041	295	.200*
DIV	.039	295	.200*

a. Lilliefors Significance Correction

For hypotheses 1 and 2, dividend and leverage are our independent variables as their role are to reduce agency costs of free cash flow. Hence, we examine the two hypotheses in this study associated with the impact of dividend payment and leverage on firm's free cash flow.

Table 2: Coefficients of Regression of H1

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	-.005	.058		-.092	.927
	DIV	.087	.059	.087	1.491	.137

Dependent Variable: FCF .a

$$FCF = \alpha + \beta * DIV + \varepsilon \quad .b$$

Table 2 indicates a positive statistically insignificant effect of dividend on free cash flow with 1.491 t-values and 0.137 significance level. This result is consistent with our expectation that $\beta * DIV$ to be positive, since firms with higher dividends have greater free cash flow. The insignificance of the defined relation in hypothesis h1 in this study is consistent with other performed researches on effective factors on dividend policy in Tehran stock exchange market.

Table 3 shows a positive and significant effect of leverage on free cash flow with 3.248 t-values and 0.001 significance level. It explains that, firms with higher free cash flow probably use more leverage to reduce agency costs.

Table 3: Coefficients of Regression of H2

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	-.183	.079		-2.321	.021
	LEV	.070	.021	.186	3.248	.001

Dependent Variable: FCF .a

$$FCF = \alpha + \beta * LEV + \varepsilon .b$$

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.186	.035	.031	.987580673308	2.022

ANOVA^b

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	10.287	1	10.287	10.548	.001 ^a
	Residual	285.767	293	.975		
	Total	296.055	294			

a. Predictors: (Constant), LEV

b. Dependent Variable: TFCF

As was mentioned in review of literature part, the leverage is considered as a better controlling mechanism regarding agency costs of free cash flow. On the other hand, it distributes a higher rate of dividend as cash and reducing the available cash flow, it causes the imposition of interest expenses to the firm. Our results, regarding the effect of dividend on the free cash flow proved that firms not only do not pay enough attention to reducing agency costs of free cash flow while taking decisions on the dividend payment, but also other cases such as market reaction against the announcement of dividend payment, controlling the shareholders and other factors will influence these decisions. Instead, using financing through borrowing by creditors' monitoring mechanism, they can control the agency costs of free cash flow.

Therefore, based on these results, our firm sample is consistent with the theory which states that leverage is a more effective way to mitigate the free cash flow problem than dividend payments, on the account of its contractual obligation to pay periodic interest on debt and repay the borrowed capital at maturity.

5.2. Result of Testing H3a, H3b, H3c, H3d, H3e

To proxy for the level of agency costs of the firms, leverage, free, growth, size, cash flow and profit have been used. The agency cost measurement employed in this paper is the magnitude of free cash flows of the firm, with greater retention of free cash flows within the firm imagined as the indicator of possible agency problems and the presence of agency costs. In our hypotheses 3, dividend is a dependent variable since it performs to reduce agency costs of free cash flows. Therefore, we investigate the hypotheses 3a-3e in this study, considering the influence of agency cost on dividend payment.

Table 4: Model Summary of H3

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.407	.166	.151	.917720421935	1.885

ANOVA^b

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	48.353	5	9.671	11.482	.000 ^a
	Residual	243.399	289	.842		
	Total	291.752	294			

a. Predictors: (Constant), SIZE, PRFT, FCF, LEV, GROW

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.407	.166	.151	.917720421935	1.885

ANOVA^b

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	48.353	5	9.671	11.482	.000 ^a
	Residual	243.399	289	.842		
	Total	291.752	294			

b. Dependent Variable: DIV

Table 4 shows the coefficient of determination, or basically the R-squared. Its value falls constantly between 0 and 1, and it means as the percentage of variation of the response variables described by the regression line. Adjusted R-squared demonstrates predictors leverage, free cash flow, growth, size and profit of 0.151 with dividend as its dependent variable. This means that 15.1% of the reasons of firms' dividend payment could be explained by the predictors.

Table 5: Coefficients of Regression of H3

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-1.101	.465		-2.366	.019
	FCF	.159	.178	.050	.893	.372
	LEV	-.035	.021	-.095	-1.640	.102
	GROW	-.201	.060	-.196	-3.332	.001
	PRFT	1.342	.218	.368	6.156	.000
	SIZE	.083	.034	.139	2.452	.015

Dependent Variable: DIV .a

$$DIV = \alpha + \beta_1 * FCF + \beta_2 * LEV + \beta_3 * GROW + \beta_4 * PRFT + \beta_5 * SIZE + \varepsilon$$

DIV is dividend payment ratio, FCF is free cash flow, LEV is leverage, GROW is growth opportunities, PRFT is profitability, SIZE is size, and RISK is risk.

The regression result on table 5 shows a positive and statistically speaking, an insignificant impact of free cash flow on dividend. The significant value on this variable has been calculated as 0.372 with t-value of 0.893. These results are in complete consistency with the gained results of testing hypothesis 1 and they stated that no mutual relation have been observed between free cash flow and the dividend policy in Iranian firms.

Besides, results show a negative and insignificant effect of leverage on dividend with the significant value of 0.102 and -1.640 t-values. These results are also consistent with most of performed researches on effective factors on dividend policy in Tehran stock exchange firms, based on lack of ability in the explanation of the leverage.

On the other hand, a negative and significant impact of growth opportunity on dividend with 0.001 level of significance and -3.332 t-values was observed. This result can be interpreted as the fact that firms which have lower growth opportunities are inclined to pay dividends in order to reduce agency costs.

Considering profit and dividend, results indicate a positive and significant effect of profit on dividend. The significant value on this variable is 0.000 with t-value of 6.156. It shows that firms which have high profit are inclined to increase significant dividend payments in order to decrease agency costs of free cash flow.

The regression results prove a positive significant effect of size on dividend, as well. The significant value on this variable is 0.015 and 2.452 t-values. It means that large firms tend to increase significant dividend payments to decrease agency costs.

The results of most of the performed researches in Tehran Stock Exchange Market show that the firm's profitability has the most capability of explanation regarding the dividend policy in Iranian firms. Moreover, these results, considering the effect of the firm size on the increase of the amount of cash divided of Iranian firms are also consistent with other similar ones. These results are in line with the results gained out of the studies performed by Fama and Jensen (1983) and Rajan and Zinales (1995) and Fama and French (2001)

5.3. The Results of the Other Tests

Since the growth opportunities have a significant effect on the behavior of managers with the firm's free cash flows and they have been considered in most of researches related to free cash flows, in this study we, using the central median index, have divided the firms sample into two categories of firms with high growth opportunities and firms with low growth opportunities and we have separately tested the effect of leverage and dividends on free cash flow for each of these two categories. The results of testing the effect of dividends on free cash flow are presented in the following tables:

Table 6: firms with low growth
Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	-.079	.082		-.966	.336
DIV	.071	.077	.076	.922	.358

a. Dependent Variable: FCF

Table 7: firms with high growth
Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	.086	.087		.997	.321
DIV	.151	.094	.132	1.605	.111

a. Dependent Variable: FCF

Tables 6 and 7 show that, for both groups of firms that have low and high growth, results indicate that dividends have a positive and statistically insignificant effect on free cash flow. The coefficient on this variable is significant at 0.358 level and t-value of 0.922 for firms with low growth. The coefficient on this variable is significant at the 0.111 level and t-value of 1.605 for firms that have high growth. This suggests that firms with higher free cash flow are inclined to use dividend payments to decrease free cash flow agency costs insignificantly. Therefore, paying dividends to the stockholders, management can minimize the agency cost of free cash flows and by means of that decrease the cash flow that would else have been available for spending at the managers' discretion.

Although in many of the previous researches the gained results of the two categories of firms with high growth opportunities and firms with low growth opportunities have been different, in the present research, this kind of categorization of the firms has not had a significant influence on the results. In fact, Iranian firms, regardless of the matter of the available growth opportunities for the firm, do not pay enough attention to dividend mechanism to reduce agency costs of free cash flow.

In the following, the results of testing the effect of leverage on free cash flow have been presented.

Table 8: firms with low growth
Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	-.312	.106		-2.956	.004
LEV	.093	.027	.276	3.462	.001

a. Dependent Variable: FCF

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.276	.076	.070	.946273414039	1.873

ANOVA^b

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	10.731	1	10.731	11.984	.001 ^a
	Residual	129.838	145	.895		
	Total	140.569	146			

a. Predictors: (Constant), LEV

Dependent Variable: FCF .b

Table 9: firms with high growth
 Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-.044	.118		-.371	.711
	LEV	.039	.035	.094	1.136	.258

a. Dependent Variable: FCF

Table 8 shows that leverage of firms with low growth has a positive and significant effect on free cash flow. On the other hand, table 9 indicates a positive and statistically insignificant effect of leverage on free cash flow for firms that have high growth. Leverage of firms that have low growth has more influence on free cash flow, than leverage of firms with high growth. This is shown by the higher t-value of firms with low growth (3.462 > 1.136). It shows that firms with leverage and lower growth have higher free cash flow, in comparison with firms with leverage and higher growth.

Therefore, unlike dividend mechanism, which was not influenced by the controlling variable of growth opportunities at all, it was observed that the relation of external financing mechanism (leverage) is influenced by the growth opportunity variable, in a way that this relation has been positive and significant in the category of firms with low growth opportunities, but there is no significant relation between leverage and free cash flow in the category of firms with high growth opportunities.

5.4. Regression Assumptions

The researcher cannot use linear regression unless the following conditions are respected:

1. The mean of the residuals is zero;
2. The variance of the residuals is fixed;
3. The distribution of the model residuals is normal;
4. The dependent variable is normally distributed;
5. There is no correlation among the model residuals;
6. The independent variables are not multicollinearity.

Most of the times, the normal distribution of the dependent variable leads to the normal distribution of the model residuals. In order to prove this condition, the results of Kolmogorov-Smirnov test, which have been demonstrated in table 1, are used. It must be noted that since the dividend variable was not normally distributed in the first test, Johnson transformation in minitab software was used to normalize this distribution, whose transformation function is as follows:

$$TDIV = 4.43283 + 1.47797 * LN ((DIV + 0.0605783) / (4.19833 - DIV))$$

Furthermore, as is seen in tables 3, 4, Durbin-Watson test was used to show the lack of self-correlation of the model errors. If this test statistics falls between 1.5 and 2.5, it means that the model errors lack self-correlation. In this study, in order to test the significance of regression model, F statistics and in order to test the significance of partial coefficients of regression model variables, t statistics have been used. In case of observing inconsiderable results, the presentation of complementary tables such as Model Summary and ANOVA has been avoided. The regression models 1-5 that we use already meet the criteria for regression testing.

6. Summary and Concluding Remarks

After analyzing the data of firms in Iran within the period of 2006-2010, using regression analysis, the following results were obtained. Hypotheses 1 and 2 investigated the impact of dividend payment and leverage on free cash flow. For hypothesis 1, a positive but statistically insignificant effect of dividend on free cash flow was observed, while for hypothesis 2 we reached to a positive and significant effect of leverage on free cash flow.

Hypotheses 3 examined the effect of leverage, growth opportunity, size, free cash flow, and profit as the measurement level of agency costs present in firms to test the influence of agency cost on dividend policy. Regression results showed a positive insignificant effect of free cash flow on dividend.

For the effect of leverage on dividend, regression results showed a negative insignificant effect of leverage on dividend. For growth opportunity on dividend, a negative and significant effect of growth opportunity on dividend was witnessed. Also, results indicated a positive and statistically significant effect of profit and size on dividend.

Testing results of the effect of leverage ratio on agency cost of free cash flow are as follow.

For firms that have a low growth opportunity, results indicated a positive and statistically significant effect of leverage on free cash flow, while for firms that have a high growth opportunity, a positive but not significant effect of leverage on free cash flow was observed. Results of examining the effect of dividends on free cash flow for both firms proved a positive but not significant effect of dividends on free cash flow.

References

- Adaoglu, C., 2000. "Instability in the Dividend Policy of the Istanbul Stock Exchange (ISE) Corporations: Evidence from an Emerging Market", *Emerging Markets Review* 1, pp.252-270.
- Agrawal, A. and N. Jayaraman, 1994. "The Dividend Policies of All-equity Firms: A Direct Test of the Free Cash Flow Theory", *Managerial and Decision Economics* 15, pp.139-148.
- Agrawal, A. and C. R. Knoeber, 1996. "Firm Performance And Mechanisms To Control Agency Problems Between Managers And Shareholders", *Journal of Financial and Quantitative Analysis* 31, pp.377-397.
- Ahmed, A. S., & Duellman, S. 2010. Evidence on the role of accounting conservatism in monitoring managers' investment decisions. *Accounting & Finance: forthcoming*.
- Aivazian, V. L. Booth, and S. Cleary, 2003. "Do emerging market firms follow different dividend policies from U.S. firms", *The Journal of Financial Research* 26, pp.371-387.
- Alli, K. L., Khan, A. Q., and Ramirez, G. G., 1993. "Determinants of corporate dividend policy: A factorial analysis", *Financial Review* 28, pp.523-547.
- Amidu M. and Abor J., 2006. "Determinants of dividend payout ratios in Ghana", *The Journal of Risk Finance* Vol. 7, pp.136-145.
- Gwilym, O., J. Seaton and S. Thomas, 2004. "Dividends Aren't Disappearing: Evidence from the UK", Working Paper, University of Southampton.
- H. Kent Baker, Samir Saadi, Shantanu Dutta, Devinder Gandhi, 2007. "The perception of dividend by Canadian managers: new evidence", *International Journal of Managerial Finance* vol.3.
- Bradley, Michael, Dennis R. Capozza, and Paul J. Seguin, 1998. "Dividend Policy and Cash Flow Uncertainty", *Journal of Real Estate Economics* Vol. 26, No. 4, pp. 555-580.
- Chen, F.; Hope, O. K.; Li, Q. and Wang, X. (2010). Financial reporting quality and investment efficiency of private firms in emerging markets. *The Accounting Review*, 86 (4): 1255-1288.
- Chen, C. R., and Steiner, T. L., 1999. "Managerial ownership and agency conflicts: A nonlinear simultaneous equation analysis of managerial ownership, risk taking, debt policy and dividend policy", *Financial Review* 34, pp.119-136.
- Copland R., (1989), "Income Smoothing", *Journal of Accounting Research*, pp 101-116.
- Crutchly, C., and R Hansen, 1989. "A test of the agency theory of managerial ownership, corporate leverage and corporate dividends", *Financial Management* Vol 18, pp 36-76.
- DeAngelo, Harry, Linda DeAngelo, René M. Stulz, 2004. "Dividend Policy, Agency Costs, and Earned Equity", *Financial Economics Working Paper*, No.10.
- Dempsey, S. and G. Lafer, 1992. "Effects of Agency and Transaction Cost on Dividend Payout Ratios: Further Evidence of the Agency-Transaction Cost Hypothesis", *Journal of Financial Research* 15, pp.317-321.

- Dittmar, A., Mahrt-Smith, J. 2007. Corporate governance and the value of cash holdings. *Journal of Financial Economics*, 83(3): 599-634.
- Drobtz, W, M.Gruninger and S.Hirschvogel, (2010), Information Asymmetry and the Value of Cash, *Journal of Banking & Finance*, Vol 34, pp.2168-2184.
- Easterbrook, F., 1984. "Two Agency Cost Explanations of Dividends", *American Economic Review* Vol. 74, pp. 650-659.
- Eddy, A. and B. Seifert, 1988. "Firm Size and Dividend Announcements", *Journal of Financial Research* 11, pp.295-302.
- Eije, Henk von, Megginson, William, (2006)," Dividend Policy in The European Union", Global Privatization Advisory Committee, Italian Ministry of Economics and Finance.
- Faccio, M, Larry H.P Lang and L.Young, 2001. "Dividend and Expropriation", *American Economic Review* Vol 91, pp 54-78.
- Fama, Eugene, F., & French, Kenneth, 2000. "Testing tradeoff and pecking order predictions about dividends and debt", The Center for research in Security Prices Working Paper 506.
- Fama, E.F. and K.R. French, 2001. "Disappearing Dividends: Changing Firm Characteristics or Lower Propensity to Pay ?", *Journal of Financial Economics* Vol. 60, pp. 3-44.
- Fama, E.F. and Jensen, Michael, 1983. "Agency Problem and Residual Claims", *Journal of Law and Economics* Vol. 26, pp. 327-349.
- Faulkender, M., & Wang, R. 2006. Corporate financial policy and the value of cash *The Journal of Finance*, 61(4): 1957-1990.
- Ferguson, A. , and S. Taylor, 2007,"Free cash flow, debt monitoring and audit fees: A re-examination", Working Paper (University of New South Wales, Sydney, NSW).
- Ferreira, M. A., and A. Vilela, (2004). Why Do Firms Hold Cash? Evidence from EMU Countries, *European Financial Management*, Vol. 10, No. 2, 295–319
- Fleming, G., R. Heaney and R. McCosker, 2005. "Agency Costs and Ownership Structure in Australia", *Pacific-Basin Finance Journal* Vol. 13, pp. 29-52.
- García Lara, J. M., Garcia Osma, B., & Penalva, F. 2010. Conditional conservatism and firm investment efficiency SSRN eLibrary.
- Gaver, J. and K. Gaver, 1993. "Additional Evidence on the Association between the Investment Opportunity, Set and Corporate Financing, Dividend, and Compensation Policies", *Journal of Accounting and Economics* 16, pp.125-160.
- Griffin Paul, Lont David, Sun Yuan. Agency Problems and Audit Fees Further Tests of the Free Cash Flow Hypothesis. *Accounting & Finance*; 2010 ;Volume 50, Issue 2, pages 321–350.
- Grossman, Sanford F., and Oliver Hart, 1982. "Corporate Financial Structure and Managerial Incentives", in John J. McCall, ed.: *The Economics of Information and Uncertainty* (University of Chicago Press, Chicago).
- Gugler, K., B. Yurtoglu, 2003. "Corporate governance and dividend pay-out policy in Germany", Working paper, University of Vienna.
- HA, joo. Hyung. 2011. " Agency Costs of Free Cash Flow and Conditional Conservatism". UMI, UMI Number: 3495862
- Han, K., S. Lee, and D. Suk, 1999. "Institutional Shareholders and Dividends", *Journal of Financial and Strategic Decisions* 12, pp.53-62.
- Harford, J. 1999. Corporate cash reserves and acquisitions. *Journal of Finance*, 54(6): 1969-1997.
- Holder, M., F. Langrehr, and J. Hexter, 1998. "Dividend Policy Determinants: An Investigation of the Influences of Stakeholder Theory", *Financial Management* 27, pp.73-82.
- Howton, Shawn D., Howton, Shelly W., Perfect, Steven B., 1998. "The Market Reaction to Straight Debt Issues: The Effects of Free Cash Flow.", [Journal of Financial Research](#) vol 21 No 2, pp. 219-28.
- Hu, A. and P. Kumar, 2004. "Managerial Entrenchment and Payout Policy", *Journal of Financial and Quantitative Analysis* 39(4), pp.759-790.
- Hufft, Edward M and Uric Dufrene, 1996. "Small Firm Capital Structure Decisions : The Effect of Agency Cost", *United States Association for Small Business and Entrepreneurship*.
- Jaggi, B., and Gul, 1999. "An analysis of joint effects of investment opportunity set, free cash flow and size on corporate Debt policy" *reviewe of Quantitative Finance and Accounting* 12:p371
- Jelinek, S. 2007, "Agency Costs of Free cash Flow, Corporate Finance and Takeovers", *American Economic Review*, Vol. 76, No. 2, pp. 323-329.
- Jensen, M. C., 1986. "Agency Costs of Free Cash Flow, Coporate Finance and Takeovers", *American Economic Review* Vol. 76, pp. 323-339.

- Jensen, M., D. Solberg, and T. Zorn, 1992. "Simultaneous Determination of Insider Ownership, Debt and Dividend Policies", *Journal of Financial and Quantitative Analysis* 27, pp.247-261.
- Jensen, Michael, and William, Meckling, 1976. "Theory of the Firm: Managerial Behavior, Agency Costs, and Ownership Structure", *Journal of Financial Economics* Vol. 4, pp. 305-360.
- Jones, F. L. and Raghunandan, K. (1998). "Client risk and recent changes in the market for audit services", *Journal of Accounting and Public Policy*, Vol. 17, pp: 169- 181.
- La Porta, Rafael, Florencio Lopez-de-Silanes, Andrei Shleifer, and Robert Vishny, 1999. "Investor Protection and Corporate Valuation", NBER Working Paper, No.1882.
- La Porta, Rafael, Lopez-de Silanes, Florencio, Shleifer, Andrei and Vishny, Robert, 1999. "Corporate ownership around the World", *Journal of Finance* 54, pp.471-518.
- Louis, H., Sun, A. X., & Urcan, O. 2009. Value of cash holdings and accounting conservatism SSRN eLibrary.
- Manos, R., 2002. "Dividend Policy and Agency Theory: Evidence on Indian Firms", Working Paper, Institute for Development Policy and Management, University of Manchester.
- Mollah, S., K. Keasey, and H. Short, 2002. "The Influence of Agency Costs on Dividend Policy in an Emerging Market: Evidence from the Dhaka Stock Exchange".
- Murali, R. and B. Welch, 1989. "Agents, Owners, Control and Performance", *Journal of Business, Finance and Accounting* 60, pp.385-398.
- Myers, S. C., 1977. "Determinants of Corporate Borrowing", *Journal of Financial Economics* Vol. 5, pp. 147-175.
- Nacelur. B. S, Goad's, Beelines, 2007. "On the determinants and Dynamics of Dividend policy", *Journal of international review of finance*.
- Opler, T., Pinkowitz, L., Stulz, R., & Williamson, R. 1999. The determinants and implications of corporate cash holdings. *Journal of Financial Economics*, 52(1): 3-46.
- Pinkowitz, L., Stulz, R., & Williamson, R. 2006. Does the contribution of corporate cash holdings and dividends to firm value depend on governance? A cross-country analysis *The Journal of Finance*, 61(6): 2725-2751.
- Rajan, R. G. and Zingales, Luigi, 1995. "What Do We Know about Capital Structure ? Some Evidence from International Data", *Journal of Finance* Vol. 50, No. 5, pp. 1421-1460.
- Redding, L., 1997. "Firm Size and Dividend Payouts", *Journal of Financial Intermediation* 6, pp.224-248.
- Rozeff, M., 1982. "Growth, Beta, and Agency Costs as Determinants of Dividend Payout Ratios", *Journal of Financial Research* Vol. 5, pp. 249-259.
- Rubin, p., 1990, "Managing business Transactions", Free Press, New York.
- Sawicki, J., 2005. "An Investigation into the Dividend of Firms in East Asia", Working Paper, Nanyang Technological University, Singapore.
- Siti Rahmi Utami and Eno L. Inanga, 2011. " Agency Costs of Free Cash Flow, Dividend Policy, and Leverage of Firms in Indonesia", *European Journal of Economics, Finance And Administrative Sciences* 33, pp. 7-24.
- Titman, S. and Wessels, R., 1988. "The Determinants of Capital Structure Choice", *The Journal of Finance* Vol. 43, No. 1 (March), pp. 1-19.
- Travlos, N., V. Murinde, and K. Naser, 2002. "Dividend Policy of Companies Listed on Young Stock Exchanges: Evidence from the Muscat Stock Exchange", Working Paper.
- Tsui Judy, Gul A. Ferdinand, (1998). A test of the free cash flow and debt monitoring hypotheses: Evidence from audit pricing. *Journal of Accounting and Economics*;1998; 24 (1998) 219-237
- Tsui, J., Jaggi, B., and Gul, F. CEO Domination, Growth Opportunities, and Their Impact on Audit Fees. *Journal of Accounting, Auditing and Finance*; 2001; 16, 189-208.
- Williams, J., 1987. "Perquisites, Risk, and Capital Structure", *Journal of Finance* Vol. 42, pp. 29-49.
- Zhang, Yilei, (2006), "Are Debt and Incentive Compensation Substitutes in Controlling the Free Cash Flow Agency Problem?", *Financial management association*,
- Zwiebel, J., 1996. "Dynamic capital structure under managerial entrenchment", *The American Economic Review* 86, pp.1197-1215.

APPENDIX

Table 1: Correlations between Variables

		Correlations					
		FCF	DIV	LEV	GROW	PRFT	SIZE
FCF	Pearson Correlation	1	.087	.186**	.084	.168**	.090
	Sig. (2-tailed)		.137	.001	.148	.004	.122
	N	295	295	295	295	295	295
DIV	Pearson Correlation	.087	1	-.103	-.073	.318**	.146*
	Sig. (2-tailed)	.137		.077	.210	.000	.012
	N	295	295	295	295	295	295
LEV	Pearson Correlation	.186**	-.103	1	-.115*	-.202**	.247**
	Sig. (2-tailed)	.001	.077		.048	.000	.000
	N	295	295	295	295	295	295
GROW	Pearson Correlation	.084	-.073	-.115*	1	.366**	-.190**
	Sig. (2-tailed)	.148	.210	.048		.000	.001
	N	295	295	295	295	295	295
PRFT	Pearson Correlation	.168**	.318**	-.202**	.366**	1	-.030
	Sig. (2-tailed)	.004	.000	.000	.000		.606
	N	295	295	295	295	295	295
SIZE	Pearson Correlation	.090	.146*	.247**	-.190**	-.030	1
	Sig. (2-tailed)	.122	.012	.000	.001	.606	
	N	295	295	295	295	295	295

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed).

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