The Relationship between Cash Flow and Financial Liabilities with the Unrelated Diversification in Tehran Stock Exchange

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Abstract: The research aimed to examine the relationship between ratio of cash flow and financial liabilities with the unrelated diversification of companies listed in Tehran Stock Exchange. The required data was extracted from financial statements of companies listed in Tehran Stock Exchange from 2008 to 2013 for 92 samples of companies. They were analyzed using regression models of the combined data. The results showed a significant positive correlation between ratios of cash flow with the unrelated diversification. There is a negative correlation between ratios of financial debt with the unrelated diversification. As a result, it can be said that advantages of diversity of the unrelated investment include avoiding costs of foreign financing, the resulted costs by problems of asymmetric information and agency costs of free cash flow. The financial benefits will cause a motivation for various decisions on investment, especially companies with high sensitive to financial limitations.

Keyword: The Unrelated Diversification, Free Cash Flow, Financial Debt, Agency Cost, Local Capital Market.

Introduction

Nowadays, many of organizations in the world are moving toward increasing their business activities' environment. Response to cooperation needs and communication with other companies can be considered as one of the reasons. By investing in other firms and achieving part of their shares, managers try to achieve their variety return on investment, in one hand, and in participate in their decisions, on the other hand. Perhaps for this reason and other technical reasons such as providing raw materials and final product distribution system within organization, many organizations have turned to variety (Tehrani & Vahed Ahmadian, 2006). Financial studies suggest two basic views that provide theoretical incentives for the unrelated diversification. The first and second views are associated with agency costs of free cash flow and financing of capital market respectively, which they affect diversification in decision-making (Stagliano et al., 2014). The first view is brought up due to different reasons such as power, funding and implementing management strategies (Jensen, 1986; Stulz, 1990; Aggarwal & Samwick, 2003).

The second view is related with domestic capital market advantage for company's investment. Investment market can allow companies to avoid transaction costs, reduce problems related to financial constraints and prohibit costs of information asymmetry caused by costs of foreign financing (Stein, 1997; Khanna & Palepu, 1997). Both arguments compete with each other. The arguments are based on management authority, but they are quite different in terms of decision-making. The first view considers the decision as a result of opportunistic behaviors; while the other one considers the made decisions as effective growth methods within company. The unrelated diversification is result of management power. The present research compares agency costs of free cash flow with domestic capital

market perspective. It assesses the effect of agency costs of free cash flow and domestic capital market perspective. The different forces express reason of companies' interest to participate in the unrelated diversification (Stagliano et al., 2014). In theoretical and experimental studies, there has been suggested that free cash flow and debt can be an appropriate index for previous arguments that affect the unrelated diversification decisions. The financial variables explain the unrelated diversification decisions. Vannoni (2000) has identified negative effects on diversification (related and unrelated) and has proposed that reducing diversification can be affected by the relationship between different designs. He also stated that heterogeneity of industry sectors is related with investment diversity. Castaldi et al (2006) concluded that Italian great manufacturing firms are more diversified than small companies. Companies with more diversification are more risky than companies with low diversification. La Rocca (2009) observed that firms with the unrelated diversification investments are more debt that this debt can be considered as a financing source (Stagliano et al., 2014). Jensen (1986) predicts that if there are available more managers of free cash flows, they will do opportunistic behaviors such as investment in projects with less net income of cash flows, spending additional costs, waste of earnings etc. He also predicted that enhancing financial leverage will discipline managers and reduce their opportunistic behaviors. For this reason, paying debt leaves fewer funds for managers. Factors affecting free cash flow hypothesis of Jensen (1986) are the main actors of agency theory (managers, shareholders and creditors) (Namazi & Shokrullahi, 2013).

Excessive amount of free cash flow leads to internal inefficiencies, waste of corporate resources and consequently, agency costs. Another motivation for using the unrelated diversification is benefits of domestic capital market that reduces external financial liabilities, costs of information asymmetries and contract cost between firms and financiers, especially for companies that suffer from poor financial performance and are financially inefficient and underdeveloped. The underdeveloped capital markets require high transaction price, poor information disclosure and lack of information intermediaries in product markets, labor and capital. In such conditions, domestic capital market plays an effective role to reduce financial constraints and transaction costs due to information asymmetry between investors and company because foreign financial debt acts as a disciplinary mechanism and companies with the largest debts are likely monitored by their debt providers. The monitored companies are less interested to perform various designs. As a result, companies with less cash flow in foreign capital markets are more interested to use the unrelated diversification because director of a company has little money that it reduces their opportunistic behaviors. Therefore, management is interested to create the unrelated diversification strategy to decrease financial costs and suppliers' supervision (Stagliano et al., 2014).

Materials and Methods

The research method was descriptive, correlation type. Its population consisted of all companies listed on the Tehran Stock Exchange from 2008 to 2013. Companies with the following features were considered as the research sample:

1. Their information should be studied perfectly;
2. To comparability of information, their fiscal year should be ended on 20 March;
3. Their trading interval should not be more than six months;
4. They should not be financial and investment firms.

The following regression model was used to achieve the research objectives:

$$DU_{i,t} = \beta_0 + \beta_1 CF_{i,t-1} + \beta_2 D_{i,t-1} + \beta_3 TA_{i,t-1} + \beta_4 SI_{i,t-1} + \beta_5 GO_{i,t-1}$$

Where, DU indicates the unrelated diversification that is derived from the following equation (Tehrani & Vahed Ahmadian, 2006; Stagliano et al., 2014):

$$DU = \sum P_j * \ln\left(\frac{1}{P_j}\right)$$

P_j: the proportion of investment in jth business, Cash flow (CF), debt (D), firm size (SI), company growth (GO) and tangible assets (TA).

The regression test, Fisher F-test, significance t-test and Hausman test were used to analyze data. There were used Limer F-test, Durbin-Watson test, White test and Fisher test to choose panel and compilation data methods, test autocorrelation, test heterogeneity of variances and test stability of variables respectively.

Results

Table 1 shows descriptive statistics of the provided variables in the research.

Table 1. Descriptive statistics of the research variables.

	$DU_{i,t}$ (the unrelated diversification)	$CF_{i,t-1}$ (cash flow ratio)	$D_{i,t-1}$ (financial debt ratio)	$TA_{i,t-1}$ (tangible assets)	$SI_{i,t-1}$ (firm size)	$GO_{i,t-1}$ (company growth)
Mean	0.2728	0.1275	0.2641	0.2755	5.9878	0.3986
Middle	0.0000	0.1012	0.2400	0.2200	5.8700	0.1500
Max	2.4635	0.6517	2.5800	0.8900	8.0600	113.3900
Min	0.0000	-0.4085	0.0000	0.0000	4.7000	-1.0000
SD	0.4622	0.1417	0.2126	0.2069	0.6220	4.8360
Skewness coefficient	1.8393	0.5569	2.9236	0.8932	0.8882	23.1237
Slenderness coefficient	6.1264	4.3869	28.2328	3.0711	3.7950	540.3196
Observations	552	552	552	552	552	552

Table 2 shows results of the model estimation. By considering to the last column of the Table, VIF value is less than 5 for all variables (VIF< 5). So, there is no co-linearity between the independent variables. Therefore, the fitted model is validated. For this purpose, F-test was used to examine significance of the model. According to the calculated probability for F-statistic (0.0001), it can be argued that the fitted regression model is significant. Given to coefficient determination of the fitted model, it can be argued that about %55 of changes in the dependent variable (the unrelated diversification) are explained by the independent variables. According to the research findings, the estimated coefficient of the independent variable ($CF_{i,t-1}$) in the Table indicates a significant positive relationship between ratio of cash flow and the unrelated diversification at level of 0.05 because the calculated p-value for coefficient of the independent variable is less than 0.05. Therefore, it can be said that there is a significant positive relationship between ratio of cash flow and the unrelated diversification at confidence level of 95%.

The estimated coefficient of the dependent variable ($D_{i,t-1}$) in the Table indicates a significant negative relationship between ratio of financial debt and the unrelated diversification at level of 0.05 because the calculated p-value for coefficient of the research dependent variable is less than 0.05. Therefore, it can be said that there is a significant positive relationship between ratio of financial debt and the unrelated diversification at confidence level of 95%. The estimated coefficient of the dependent variable ($TA_{i,t-1}$) in the Table indicates a significant positive relationship between ratio of tangible assets and the unrelated diversification at level of 0.05 because the calculated p-value for coefficient of the research dependent variable is less than 0.05. Therefore, it can be said that there is a significant positive relationship between ratio of tangible assets and the unrelated diversification at confidence level of 95%. The estimated coefficient of the dependent variable ($SI_{i,t-1}$) in the Table indicates no significant relationship between ratio of firm size and the unrelated diversification at level of 0.05 because the calculated p-value for coefficient of the research dependent variable is less than 0.05. Therefore, it can be said that there is no significant relationship between ratio of firm size and the unrelated diversification at confidence level of 95%. The estimated coefficient of the dependent variable ($GO_{i,t-1}$) in the Table indicates a significant negative relationship between ratio of firm growth and the unrelated diversification at level of 0.05 because the calculated p-value for coefficient of the research dependent variable is less than 0.05. Therefore, it can be said that there is a negative significant relationship between ratio of firm growth and the unrelated diversification at confidence level of 95%.

Table 2. Summary of statistical results of testing the research model.

Variable	Coefficients	SD	t-statistics	Sig	VIF
C (intercept)	0.1683	0.0654	2.5736	0.0103	-----
$CF_{i,t-1}$ (cash flow ratio)	0.2376	0.0423	5.6127	0.0000	1.09
$D_{i,t-1}$ (financial debt ratio)	-0.1160	0.0252	-4.6087	0.0000	1.11
$D_{i,t-1}$ (financial debt ratio)	0.1212	0.0294	4.1229	0.0000	1.10
$D_{i,t-1}$ (financial debt ratio)	-0.0082	0.0113	-0.7264	0.4679	1.02
$D_{i,t-1}$ (financial debt ratio)	-0.0019	0.0003	-7.1867	0.0000	1.02
Fisher F-statistic (Sig)	5.3796 (0.0001)	Durbin- Watson statistic		1.6046	
Coefficient of determination	0.5470	The adjusted coefficient of determination		0.5382	

Discussion and Conclusion

The research aimed to examine the relationship between ratio of cash flow and financial liabilities with the unrelated diversification of companies listed in Tehran Stock Exchange. The findings showed a significant positive relationship between ratio of cash flow and the unrelated diversification. To explain these findings, it can be said that excessive amount of free cash flow will lead to internal inefficiencies and waste of organizational resources and consequently, agency costs. In large companies that managers have fewer shares and shareholders look for value maximization, managers have considerable freedom to pursue their personal interests. If there is information asymmetry and mechanisms to align interests of shareholders and managers are not fully efficient, managers may use free cash flow and apply projects with negative net present value to increase their interests. Moreover, this strategy can stabilize position of managers by increased demand for management skills. Instead of distributing free cash flows among owners, managers tend to re-reinvest on it because payments to shareholders reduce resources under control of managers and consequently, their power. On the other hand, probably due to the need to attract new funds by company, it will increase supervision of capital market.

As a result, it can be said that the unrelated diversification is the result of management power. Other findings showed a negative significant correlation between ratio of financial debt and the unrelated diversification. Domestic capital market benefits is another motivation for using the unrelated diversification that reduces foreign financial liabilities, costs of information asymmetry, contract costs between companies and foreign suppliers and avoid transaction costs, especially for companies suffer from poor financial performance and are inefficient and underdeveloped financially. Using management power, the unrelated diversification strategy produces a budget through creating domestic capital market.

Therefore, reducing concerns about financial restrictions will limit asymmetric information problems that are related to factors of external financing. It makes correlations among different business units are cash flows departments. The made decisions are considered as effective output growth within companies. So foreign financial debt causes more supervision and control by suppliers and has a negative impact on the unrelated diversification. Survival and success of organizations in the contemporary competitive and mysterious world, which change, speed, complexity and uncertainty are its main features, requires selecting and implementing effective strategies and continuous improvement of performance. It is implemented by designing and defining objectives and strategies, planning and executing strategies and consequently, controlling and evaluating performance. Strategic management is a process that is used by many well-known and successful companies in the world to guide their programs and activities with long-term horizons towards achieving organizational goals and mission. Corporate diversification is a form of corporate strategy for companies that many managers apply it to improve performance of their company. Stagliano et al (2014) conducted a research on the unrelated diversification in field of business. The research results revealed the main role of domestic capital market.

Advantages of the unrelated diversification include avoiding costs of external financing, high costs of opportunistic problems and information asymmetry. Although previous studies have suggested two distinct forces that influence decision-making simultaneously. In Italy, financial benefits have caused motivations for various decisions on investment. In addition, reasoning of domestic capital market has a strong influence on decision to participate on investments of the unrelated diversification, especially companies that are highly sensitive to financial constraints. According to the obtained results by Stagliano et al (2014) free cash flow has various incentives for managers to engage in the unrelated diversification investment because it has advantages for managers such as power and prestige, which is associated with management of a company. Jensen hypothesis states powers of management and investment problems that can cause free cash flow. Rajan et al have observed that managers may invest on different counterproductive policies. Therefore, the present research examined the relationship between ratio of cash flow and financial debt with the unrelated diversification. The test results show that cash flow is an incentive for decision-making of managers on the unrelated diversification. Some financial benefits of the unrelated diversification include reducing financial constraints; avoid transaction costs and costs of information asymmetry that are associated with external costs. Debt acts as a disciplinary mechanism and companies with the largest debts are likely monitored by their debt providers. The monitored companies are less interested to perform various designs. It is considered as an opportunistic behavior. Companies with ability to generate more cash flow enjoy easy access, lower prices and available financing.

Therefore, they are not interested to participate in various designs. Another motivation for using the unrelated diversification is benefits of domestic capital market that reduces external financial liabilities, costs of information asymmetries and contract cost between firms and financiers, especially for companies that suffer from poor financial performance and are financially inefficient and underdeveloped. As a result of management discretionary power and opportunistic behavior, the unrelated diversification not causes conflict of interests, but coordinates costs and their

control. In connection with business diversification hypothesis, it is proposed that financial managers act strategically when they decide to apply diversification strategy to reduce debt costs. They should firstly assess their current position, advantages-weaknesses points and opportunities-threats and then expand their business scope using a clear visibility, if they identified diversity as an appropriate method to achieve objectives of their organization (Hajiha & Maghami, 2014). Literature shows that by diversifying business paths, firms can benefit from economies of scope (Tis, 1982), increasing market power and competitive advantage (Markides & Williamson, 1944) and theory of efficient domestic capital markets (Hajiha & Maghami, 2014). A perspective shows that diversification reduces firm value and this reduction is usually resulting of diversification strategies of managers on their favor. Another view is that diversification is an important strategic decision that managers do when outcomes of diversification are valuable (Hajiha & Maghami, 2014). According to the research findings, it is suggested that top managers act strategically when they decide to apply diversification strategy to reduce debt costs. They should firstly assess their current position, advantages-weaknesses points and opportunities-threats and then expand their business scope using a clear visibility, if they identified diversity as an appropriate method to achieve objectives of their organization. It is also suggested that they analyze organizational factors and mechanisms and select the unrelated diversification in proportion with their internal mechanisms (financial constraints, free cash, debt, management style, etc.).

Conflict of interest
The authors declare no conflict of interest

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