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Effect of Business Groups Affiliation on Cash Holdings and Return on Equity

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ABSTRACT

Nowadays, business groups play an outstanding role in financial markets. Corporates in the trading groups are able to use technology, capital, human resources, productions and services of other members in the group in addition to their own resources and capabilities. Thus, this paper studies the effect of business group affiliation on cash holdings and return on equity. The sample involves 94 corporates among those accepted in Tehran Stock Exchange. In this research, the effect of business group affiliation on cash holdings and return on equity during 2010-2015 has been investigated; in total, it includes 564 observations for the research. Statistical method applied here is the multivariate regression in the data panel way. Results achieved by the research hypotheses indicate that there is a significant relationship between business group affiliation, cash holdings and return on equity.

1 Introduction

Business groups are of a unique organizational structure including a number of independent legal corporates which are officially and unofficially joined. Researchers have mentioned several reasons on the existence of costs and benefits for the corporates in the groups but few researches have been conducted on the financial reporting methods in the desired corporates. In many recent and developed economies, business groups play crucial roles. Business group is consisted of corporates which engage in business under common financial or administrative control in a variety of markets and the members are connected through the interpersonal and ethnic relationships or business backgrounds. Therefore, dependency on business groups can affect the future corporate cash holdings and return on equity; here, this paper aims to investigate the affiliation effect of business group on cash holdings and return on equity as well as effective factors in the corporates accepted in Tehran Stock Exchange.

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2 Research Background

Weixing et al. [16] entitled the effect of business groups on corporate cash holdings studied the impact of a business group dependency upon the cash holdings and investments of members during 2000-2014. Results have shown that the dependency led to considerably manage cash holdings and increase the return on assets. Ma et al. [11] investigated business groups and their impact on corporate performance in developing economies. Research sample involved 1119 Chinese corporates in Shenzhen and Shanghai Stock Exchange in 2014. Results demonstrated the role of business groups in filing the ownership gaps of corporates in the developing economy in China. It refers to the business groups with the motivation and ability to supervise the managers in the affiliated corporates similar to the owners.

Manos et al. [13] studied the effect of business groups on dividend policy in Indian corporates and concluded that percentage of profit distribution in the affiliated corporates is less than the independent ones. Also, the affiliated corporates upon varied business groups pay more profit as compared to the others. Almeida and Kim [8] have addressed internal capital markets in business groups concerning Asian financial crisis and defined a variety of industries and liquidity as internal capital market indices. Results have suggested that the relationship between investments after financial crisis and two mentioned indices is positive. Findings indicated that Korean corporates in business groups during Asian financial crisis used their internal capital markets to decease the negative effects. Whereas similar defeats which could not rely on internal capital markets encountered the decreased investment and profitability; in other words, Korean business groups played a positive role after Asian financial crisis.

Manos [13] studied the effect of membership in business groups on the financial leverage and believed that information problems and market defects might cause the formation of such phenomena as business groups. Research statistical sample involved 1811 corporates accepted in India Stock Exchange in 2000. Results displayed that financial leverage decisions made by the corporates in a business group were significantly different from the independent ones. Furthermore, they found that the corporates in a business group had a considerable access to state and foreign loans. Beuselinck and Deloof [9] addressed the effective tax rate in the independent and affiliated corporates in Belgium Stock Exchange. They stated that two or more corporates have been able to decrease the total liquidity flow resulting from tax payment through transfer of profit from a profitable corporate to a lien one; probably, it would be done by transitional pricing which is different from the market value. Research findings suggested that the corporates in a business group in Belgium were of lower effective tax rate than the independent ones and there was a positive relationship between profit before tax and effective tax rate among the independent corporates; also, there were extensive financial relationships among the corporates in Belgium business group.

Samphantharak [14] applied a sample of 907 corporates in Thailand Stock Exchange during 1993-1996 to study the internal capital markets in business groups and concluded that group size, control variables and intragroup mediators were directly related to tendency towards facilitating allocation of resources. Since the groups with absolute control could transfer the resources freely all around the member corporates, the allocation as a controller may refer to the final cost that was the same among the corporates in the group; in addition, the variety of industries might be of no impact on the transfer of resources within the group. Verschueren and Deloof [15] investigated the effect of intragroup debts and guarantees on financing decisions and reported that intragroup debts might worsen the relationship between the corporate and creditors because of the reduced debts level outside the group. They proposed

that mutual debt consolidation by the corporates in business group could improve the mentioned relationship leading to the enhanced debts level; accordingly, internal capital markets have played an important role in financing of corporates in Belgium business group.

Khodamipour and Habibi [4] in a research on the effect of membership in a business group on profit quality proposed that business group refers to a set of legal corporates with an independent legal personality and unit reporting one. The research aimed to study the effect of membership in a business group on profit quality which was measured by three quality criteria such as accruals, profit prediction and equitable profit in various industries. To analyze the research hypotheses, multivariate regression model was utilized. Research sample included 72 corporates in Tehran Stock Exchange during 2000-2011. Results indicated that in the corporates of a business group, accruals, profit prediction and equitable profit quality were higher as compared to the independent ones. Based on these criteria, it may be concluded that profit quality is higher in the affiliated corporates.

Qolami [6] reviewed the relationship between the membership in a business group and profit management in the corporates accepted in Tehran Stock Exchange using annual data during 2007-2012 in a correlation study based upon combined data. To analyze the research hypotheses, multivariate regression model has been used. To measure the profit management, two criteria based on accruals and profit management might be applied through manipulating the real activities and membership in business group was utilized as a fictitious variable. Findings indicated a significant relationship between membership in business group and profit management. According to research literature, motivation to expropriation of minority shareholders and opportunistic earnings management are considerable in the corporates in business groups. The corporates are able to expropriate minority shareholders due to pyramid property structure. On the other hand, the mentioned corporates can easily transfer the resources due to formation of an intragroup market and provide encouragements to earnings management due to shared property relationships through transactions and resource deviations among the corporates in business group so that potential motivations to earnings management are created. In this paper, it has been tried to provide useful information to the users of financial statements through investigating the relationship between membership in a business group and earnings management in Iran. It is obvious that future researches may contribute to assess the results in this regard.

Pourheydari and Deldar [2] studied the effect of business groups on dividends policy in Tehran Stock Exchange based on signaling, agency, hierarchy and life-cycle theories. Sample involved 145 corporates accepted in Tehran Stock Exchange during 2001-2010. To examine the research hypotheses, Tobit model has been used. Contrary to the predictions, the achieved results suggested that dividends rate was lower in the affiliated corporates than the independent ones. Also, dividends rate was higher in the corporates dependent on various and large business groups as compared to the others. Findings have shown that there was a negative significant relationship between information asymmetry and foreign financial affiliation as well as dividends policy.

Dividends policy in the affiliated corporates is less sensitive to information asymmetry and foreign financial affiliation in comparison to the independent ones as well. Furthermore, dividends policy in the affiliated corporates to various and large business groups is less sensitive to information asymmetry and foreign financial affiliation as compared to the ones affiliated to the other groups. Research results indicated no significant relationship between corporate life span and dividends policy. Kaich [7] investigated the effect of business groups on investment behavior and decreased financing limitations of corporates in stock exchange and concluded that the membership in business groups affected the investment behavior and reduction of financing limitations.

3 Theoretical Frameworks

Nowadays, business groups play an important role in financial markets. Corporates in business groups can apply technology, capital, human resources, productions and services of other members in addition to their own resources and capabilities. According to shared property structure, cash holdings management is presented in these groups. Cash holdings refer to relative ability in converting the assets into cash and sometimes, it is considered as easy conversion of assets to cash; also, it indicates the relationship between short-term debts and cash items.

In a broader concept, ability to deposit of obligations refers to ability to cash collection or available funds for specific purposes [3]. Business group is defined as a set of legal corporates with an independent legal personality and a unit reporting one in different markets under common financial control [5]. Based on section 4 of standard 14, business group is a main business group and its sub-units [1]. Corporates in business groups encounter few problems with regard to financing needs since they are able to guarantee the loan repayment of other members; on the other hand, the corporates can be financed by the other members concerning cash needs. In other words, internal capital market is formed to engage the members in financing with respect to borrowing and repaying loans easily. Structure of relationships between groups is different in different countries. These differences are more likely to be resulted from different structures of official ownership involving various roles of governments and unofficial social networks [12].

Concerning business group, two views have been raised; their difference leads to create a motivation for more researches on the relationship between these groups and cash holdings. One view explains that the corporates in business groups can transfer financial resources due to the formation of intragroup markets and encourage the liquidity management by transactions and resource deviations among corporates due to shared property relationships leading to the decreased cash holdings. According to second view, positive and negative effects of corporates in the group may influence the other members and each corporate may attempt to put its performance and earnings at appropriate levels in order to avoid the negative effects; it prevents the other corporate owners from managing the earnings resulting in the enhanced cash holdings [16].

Investment refers to the expenditure flow spent to increase or fix real capital amount. In fact, it is defined as the expenditure flow allocated to production plans with no immediate products. These investment plans are likely to be as the increased material capital and human capital or inventory. Actually, investment is a flow with a determined amount by all the plans that have more net positive present value or internal rate of return than interest rate which are known as net present value criterion and final investment return, respectively [16]. Thus, in this research, it is to review whether business group affiliation affects the corporate cash holdings and return on equity of shareholders in the corporates in Tehran Stock Exchange.

Research hypotheses are examined using the models applied [16] as follows. To investigate the relationship between business group affiliation and cash holdings in the corporates in Tehran Stock Exchange, the following regression model will be used.

$$Cash_{it} = \beta_0 + \beta_1 GROUP_{it} + \beta_2 POLICY_{it} + \beta_3 GROUP_{it} * POLICY_{it} + \beta_4 LIQ_{it} + \beta_5 SIZE_{it} + \beta_6 Q_{it} + \beta_7 LEV_{it} + \beta_8 CF_{it} + \beta_9 CAPEX_{it} + \beta_{10} DIV_{it} + \beta_{11} CONCEN_{it} + \varepsilon_{it}$$

To investigate the relationship between business group affiliation and return on equity of shareholders in the corporates in Tehran Stock Exchange, the following regression model will be used.

$$ROE_{it} = \beta_0 + \beta_1 GROUP_{it} + \beta_2 POLICY_{it} + \beta_3 GROUP_{it} * POLICY_{it} + \beta_4 LIQ_{it} + \beta_5 SIZE_{it} + \beta_6 Q_{it} + \beta_7 LEV_{it} + \beta_8 CF_{it} + \beta_9 CAPEX_{it} + \beta_{10} DIV_{it} + \beta_{11} CONCEN_{it} + \varepsilon_{it}$$

4 Research Methodology

There are two main hypotheses throughout this paper as follows:

1- There is a significant relationship between business group affiliation and corporate cash holdings.
2- There is a significant relationship between business group affiliation and return on equity of shareholders.

This research is an applied one using a correlation method from the viewpoint of content and nature in an inductive framework. Therefore, theoretical frameworks and research data are gathered by library studies, articles and websites in order to confirm or reject the hypotheses inductively.

4.1 Data Collection Method

Data used in this research have been collected by financial statements, attachments and primary information of stock exchange board as well as information bank of stock exchange using Tadbir pardaz and Rahavard novin software.

4.2 Time Scope, Research Population and Sample

Current research has been conducted during 2010-2015 with a statistical population consisted of all the corporates in Tehran Stock Exchange. Sampling was done by systematic removal method considering some specific features; corporate features are as follows:

1- They have been accepted in Tehran Stock Exchange before 2009.
2- They are not belonged to banks, investment companies, and insurances ones.
3- Their fiscal year is the end of March.
4- Required data are accessible in this regard.

Regarding the mentioned limitations, sample involved 94 corporates.

5 Research Findings and Conclusions

To examine the hypotheses, dependent variables normality, variance similarity and lack of self-correlation assumptions are needed to be established; otherwise, the results would be unreliable leading to false conclusions. After being assured of regression assumptions, research hypotheses are to be examined. Results achieved by H_1 have been summarized in Table 1.

H_1: There is a significant relationship between business group affiliation and cash holdings.

According to the studies performed in a period of 2010-2015 and research findings, F-Limer probability value was smaller than 5% so that integrated model assumption was not confirmed; in other words,

individuals and groups were ineffective and panel data method was utilized to estimate the desired models. Also, Hausman test value was larger than 5% to determine the use of fixed effect model against random effects.

Thus, fixed effects model assumption was rejected; in fact, there was no relationship between estimated regression error and independent variables so that random effect model was applied to estimate the parameters and test the hypotheses. Afterwards, H_1 was examined on the basis of regression model estimates indicating that first, t-test was lower than 5% for the business group affiliation variable significantly applied in regression model; namely, the mentioned variable has been an important factor in determining the corporate cash holdings.

Table 1: Results of H_2

$$Cash_{it} = 3.130819 + 23.38483 * GROUP_{it} + 1.328892 * POLICY_{it} + 1.294463 * GROUP_{it} * POLICY_{it} - 17.57066 * LIQ_{it} + 0.395655 * SIZE_{it} - 0.635613 * Q_{it} - 0.854122 * LEV_{it} - 0.151491 * CF_{it} - 0.002464 * CAPEX_{it} - 2.827601 * DIV_{it} + 0.063702 * CONCEN_{it}$$

Variables	Estimate coefficient	Standard error	t-test statistic	t-test probability
GROUP	23.38483	0.685617	34.10770	0.0000
POLICY	1.328892	0.143600	9.254098	0.0000
LIQ	-17.57066	0.840.842	-20.89649	0.0000
SIZE	0.395655	0.029196	13.55148	0.0000
Q	-0.635613	0.101974	-6.233083	0.0000
LEV	-0.854122	0.084231	-10.14034	0.0000
CF	-0.151491	0.018395	-8.235416	0.0000
GROUP*POLICY	1.294463	0.134101	9.652842	0.0000
DIV	-2.827601	0.375937	-7.521462	0.0000
CONCEN	0.063702	0.005086	12.52416	0.0000
CAPEX	-0.002464	0.000218	-11.25469	0.0000
C	3.130819	0.328712	9.524489	0.0000
Determination of coefficient	0.722933	Durbin-Watson criterion		2.189632
Adjustment coefficient	0.722498			
F-Fischer statistic	2119.703			
F-Fischer probability	0.000000			

Second, reviewing the adjustment coefficient refers to explanatory power of model in order to explain the dependent variable i.e., corporate cash holdings. Therefore, results indicated that business group affiliation variable has explained almost 72.29% fluctuations resulted from cash holdings. As well, given F statistical probability value as lower than 5% indicated the significance of the whole model statistically. Furthermore, based upon positive business group affiliation explanatory variable, it might be concluded that the increase in variable would enhance the impact of corporate cash holdings.

Thus, test results have confirmed H_1; namely, there was a positive correlation interaction between business group affiliation and cash holdings in Tehran Capital Market. Results reported by [16] addressed the effect of business groups on cash holdings and suggested that business group affiliation led

to the increased corporate cash holdings and return on assets; they are in accordance to the current research results. H_2 results have been summarized in Table 2.

H_2: There is a significant relationship between business group affiliation and return on equity. According to the studies performed in a period of 2010-2015 and research findings, F-Limer probability value was smaller than 5% so that integrated model assumption was not confirmed; in other words, individuals and groups were ineffective and panel data method was utilized to estimate the desired models.

Table 2: Results of H_2

$$ROE_{it} = 0.538764 + 0.986351 * GROUP_{it} + 0.221425 * POLICY_{it} + 0.395655 * GROUP_{it} * POLICY_{it} - 0.204989 * LIQ_{it} + 23.38483 * SIZE_{it} - 1.482550 * Q_{it} - 17.57066 * LEV_{it} + 0.281646 * CF_{it} - 2.108451 * CAPEX_{it} + 0.451212 * DIV_{it} - 0.305613 * CONCEN_{it} *$$

Variables	Estimate coefficient	Standard error	t-test statistic	t-test probability
GROUP	0.986351	0.038950	25.32330	0.0000
POLICY	0.221425	0.005511	40.17390	0.0000
LIQ	-0.204989	0.005610	-36.53720	0.0000
SIZE	23.38483	0.685617	34.10770	0.0000
Q	-1.482550	0.143601	-10.32409	0.0000
LEV	-17.57066	0.840842	-20.89649	0.0000
CF	0.281646	0.008349	33.73244	0.0000
GROUP*POLICY	0.395655	0.029196	13.55148	0.0000
DIV	0.451212	0.055029	8.199414	0.0000
CONCEN	-0.305613	0.121974	-9.384083	0.0000
CAPEX	-2.108451	0.207927	-10.14034	0.0000
C	0.538764	0.021254	25.34860	0.0000
Determination of coefficient	0.784533	Durbin-Watson criterion		2.229632
Adjustment coefficient	0.713298			
F-Fischer statistic	2241.703			
F-Fischer probability	0.000000			

Also, Hausman test value was larger than 5% to determine the use of fixed effect model against random effects. Thus, fixed effects model assumption was rejected; in fact, there was no relationship between estimated regression error and independent variables so that random effect model was applied to estimate the desired parameters and test the hypotheses. Afterwards, H_2 was examined on the basis of regression model estimates indicating that first, t-test was lower than 5% for the business group affiliation variable significantly applied in regression model; namely, the mentioned variable has been an important factor in determining the shareholders return on equity. Second, reviewing the adjustment coefficient refers to explanatory power of model in order to explain the dependent variable i.e., shareholders return on equity. Therefore, results indicated that business group affiliation variable has explained almost 78.45% fluctuations resulted from shareholders return on equity. As well, given F statistical probability value as lower than 5% indicated the significance of the whole model statistically. Furthermore, based upon positive business group affiliation explanatory variable, it might be concluded

that the increase in variable would enhance the impact of shareholders return on equity. Thus, test results have confirmed H_2; namely, there was a positive correlation interaction between business group affiliation and return on equity in Tehran Capital Market. Results reported by [16] addressed the effect of business groups on return on equity and suggested that business group affiliation led to the increased cash holdings and return on assets; they are in accordance to the current research results.

7 Conclusion and Suggestions

Given the confirmed result of H_1 indicating a significant relationship between business group affiliation and cash holdings, shareholders and investors are proposed to consider the business group affiliation as an effective factor in corporate activities and performance since the results have shown that the affiliated corporates are of higher cash holdings; actually, the business groups are more likely to influence the members and through transferring cash holdings to the other members and selling the products in the markets, they will be considerably powerful in absorption of liquidity and increase of cash holdings as they support the other corporate in the group. Finally, more return can be achieved.

Given the confirmed result of H_2 indicating a significant relationship between business group affiliation and return on equity, shareholders and investors are proposed to purchase the shares of corporates affiliated to business groups since the results have shown that the affiliated corporates are of higher returns and cash holdings; actually, through higher cash holdings, the corporates are engaged in more investments causing more profits. Increased cash holdings will increase the corporate inputs, improve the corporate position and enhance future investments.

Finally, more profits and return on equity are achieved.

Conduction more studies will pave the way to future researches and following topics are suggested to investigate:

- the relationship between business group affiliation and the growth of final cost of a product in a corporate
- the relationship between business group affiliation and the growth of R&D costs
- the relationship between business group affiliation and the conservative profits
- the relationship between business group affiliation and the increase of cash inflows
- the relationship between business group affiliation and the increase of fixed assets
- the relationship between business group affiliation and the growth and development of corporate
- the relationship between business group affiliation and the costs of marketing and sales

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