ARTICLE

THE CALCULATION OF BRAND VALUE AND STUDYING JOINT EFFECTS OF BRAND VALUE AND ADVERTISING EXPENDITURE ON COMPANY'S FINANCIAL AND STOCK RETURN

Marzieh Karimi[1*], Mirfeiz Fallahshams[2], Hamidreza kordlouei[3], Hoseyn Vazeifehdoust[4]

[1]Dept. Business Management, Qeshm International Branch, Islamic Azad University, Qeshm, IRAN
[2]Dept. of Business Management, Central Tehran Branch, Islamic Azad University, Tehran, IRAN
[3]Dept. of International Business Administration, Qeshm International Branch, Islamic Azad University, Qeshm, IRAN
[4]Dept. of Business Management, Science and Research Branch, Islamic Azad University, Tehran, IRAN

ABSTRACT

There are two prevailing approaches toward measuring a company's brand value: customer-oriented approach and corporation-oriented approach. The customer-oriented approach is the same as marketing and behaviorists approach; and corporation-oriented approach is based on financial data. In this study we have applied one of the most recent methods of calculating brand value, which evaluates all three dimensions of market, finance and accounting, and is known as the corporation achievement. Then we tested the joint impact of brand value and advertising value on a corporation's financial performance and on stock return research model, using unbalanced data panel including 378 observations on 27 food industries in Tehran Exchange Stock over a period of twenty-one year old [1994-2014). According to the results the joint impact of advertising budget and brand value on return on assets [ROA) is confirmed as an indicator of corporation's financial performance. However in the case of stock return, only the impact of brand value is confirmed.

KEY WORDS
Brand value, Stock Return, Return on assets, Advertising

Published: 10 October 2016

***Corresponding Author**
Email:
Marzieh11karimi@gmail.com

INTRODUCTION

According to Aaker [1], the most important assets of a company are the intangible assets. The main problem; however, in measuring of intangible assets impact is that they are normally not capitalized and not appear in a company's balance sheet and financial statements. Currently companies have become more aware of the importance of their intangible assets. In the past, value of a company was all determined by its tangible assets such as physical assets like land or buildings, or capital funds and investments. Understanding the concept of brand management can determine brand equity status and probably impact of intangible assets. Organizations spend high levels of capital for advertising, marketing and promoting activities, which is helpful for both their products and the whole organization [2].

Advertising has been a kind of strategy applied by most of organizations in order to create brand value [3]. Brand in recent years has become to one of the most popular marketing topics. The estimated value of a company's brand sometimes constitutes a significant part of company's physical assets. In this study, in absence of a resource to calculate and publish brand values of companies, we have calculated their brand values. There are various approaches toward measuring brand value. Financial approach suggests that brand value should be measured based on financial calculations of the indictors of financial statements. However according to behavioral approach, the method of attitude measurement shall be used [4]. In this study, brand value is calculated using financial approach. There are limited numbers of researches which measures brand value and advertising financial results. Marketing managers are always pushing pressure to increase marketing and advertising budget. According to Rust et. al. [5], marketing managers have not been held accountable to demonstrate the effect of advertising and marketing on shareholder value. The lack of accountability of this effect can threaten the standing of the marketing function within firms [6]. Therefore in this study we tried while using a proper method to evaluate the company's brand, present answers to questions such as the impact of company's brand and advertising expenditure on financial performance and stock returns.

According to Philip Kotler[7] a brand can be defined as a name, term, sign, symbol, design or a combination of these that distinguishes the maker or seller of a product or a service from other competitors'.

LITERATURE REVIEW

Macro Approaches to Defining Brand Value: Brand value can be analyzed based in both marketing and financial approaches. Farkuhar's first definition of brand value is stated as: It is the value that a brand adds to a product [1,8]. Aaker[9] defined brand value as a set of assets and liabilities related to the brand,

which is calculated considering the value of the product or services offered. High brand value is considered as a competitive advantage, because the make the company be able to put a higher price for its products, develop a better commercial leverage, increase sales margin and profits and decrease its vulnerability [10]. Keller [11] suggests that when a customer reacts to a well known brand as desired, we can say the brand creates a positive value in the customer's mind. Also when customers react to marketing activities related to a specific brand as not desired, the brand creates a negative value in the customer's mind [11].

Financial Approaches toward Brand Value Measurement: There are different approaches toward measuring brand value. According to Granense & Guilding, there are four approaches or evaluation methods: Cost Based Approach, Market Based Approach, Income Based Approach, and Formulary Approach.

Cost based approach measures capital expenditures allocated to build and maintain brand. Historical cost method explains how discount rate can be used in accordance with applied historical expenditures in present value. Market based approach can calculate brand value and price of brand. Income based approach focuses on future Potential of brand. This approach can determine company's future net income derived from brand, and then discount it for calculating present value of brand. Formulary approach includes several criteria for determining brand financial value. This is a proper approach for internal management goals and financial reporting to out of organization. In this method, an indicator to measure brand profitability is essential. The Inter Brand, For example, as a consulting company uses this method to evaluate Brand value [4]. There also is another method applying in the calculation of brand value, named corporation achievement method, which is the base of calculating brand value in this study and will be fully explained in methodology section.

The Resource Based Review has been the framework for the test of hypotheses in this study. The Resource Based Review [RBV) attributes the competitive advantage of a corporation to its total resources. In accordance with this approach, all assets of a corporation, its particular capabilities, organizational processes, business features, its information and knowledge, and anything helping organization to increase its efficiency and effectiveness are regarded as the corporation's resource [12]. This theory is related to corporation asset and brand value, and the relationship between them and return on assets [ROA). Central to the RBV approach is the theory that firm growth is equally sustained by a company's internal resources in addition to its external resources [13].

Since a brand is considered as an asset, which creates current and future income and cash flow in the organization, therefore market value of the organization and consequently shareholders value should be affected by brand value [14]. Therefore in this study, the brand value as an internal resource which is known as a part of intangible assets is considered as a key factor in the growth of organization. Brand related advertising develops competitive advantage and prevents entrance of new competitors to a market. Advertising turnover can measure the effectiveness and efficiency of conversion of advertising expenditure to positive and long-term brand value for a corporation [2].

Dutordoir, Verbeeten and Beijer [15] studied the effect of changes in brand value on stock return. This study assumed that positive reaction of stock prices against changes in brand value of companies with high cash flow, and valuable growth opportunities with high potential in manufacturing new products or presenting new services will experience an enhancement. This study is based on information of 503 company's brand value announced by Interbrand during 2001 to 2012. These researchers found some evidences indicating the abnormal stock returns are obtained in dates of brand value announcements. Another result of their studies suggested the importance of brand in general growth of organization. However they couldn't find any evidence showing that high brand value creates a possibility in increasing the prices.

Billet , Jiang and Rego [16] research was about the impact of customer perceptions of a company's product on its return in stock market. They examined consumers' believes of 1200 brands and found out a brand with high prestige is an important factor in creating an opportunity in the stock market.

Belo et. al. [17] have defined a company's brand as following: It is an intangible asset that demonstrates the value that customers see in products of that company comparing other competitors. Therefore a brand is a great competitive advantage for a company. They tested the role of brand in risk and value of companies. Their evaluation of brands were in accordance with the companies' advertising expenditures; as a result they found out that a company focusing on its brand has more sock returns than others.

Ruenrom and Pattaratanakun [18] evaluated Corporate Brand Success [CBS). They suggest a new method for brand evaluation that includes three factors of market, Finance and accounting. They studied the relation between brand and sales income. According to the results there was a direct relationship between a company's brand and its sales.

Krik et. al. [19] examined the relation between brand value and company's value. They stated stock market value of a company demonstrates total value of present and future income estimated by shareholders, and this value includes both tangible and intangible assets. Therefore they assumed there is

a direct relationship between company's brand and stock market value. Their studies approved their assumption.

Peterson and jeong [20] examined the effect of research and development budget and advertising on brand value and financial performance of a company. The results indicated a significant relationship between marketing activities financial performance of the company.

Montanges and Van Riel [14] examined the relationship between brand value and shareholder value. In this study the brand values of 43 companies in Denmark during 1993 to 1997 were calculated. They found a significant relationship between changes in brand value and changes in shareholder value. This study considered three factors of total shareholder return, earnings per share and market-to-book ratio as shareholder value.

Hozier and Schatzberg [21] conducted a research about stock return and organization performance regarding advertising expenditures. These researchers examined stock market reaction and selected organizations' performance in relation with advertising announcement of the Wall Street Journal. They had recorded a decline in the stock market value before the announcement. This decline was also observed in operating and cash income.

Literature Review in Iran: Nikoukar et. al. [22] studied on factors affecting brand equity. In addition to reviewing and evaluating previous models, they presented a new model for calculating the brand equity, and finally by providing a balance sheet and a numerical formula, they introduced a mathematical model to measure the approximate value of the brand, then implemented it in a sample company.

Abdollahkhani and ebrahimi [23]tried to calculate brand value using the method of corporate brand success. Their research was about the relationship between company's brand value and its market share. They concluded that there are direct relationships between company's brand value and sales, and between company's brand value and stock market value.

MATERIALS AND METHODS

This study, regarding purpose, is an applicable research, and considering nature, is a correlational one, which its results can be helpful for a wide range of researchers.

Research Hypotheses: In accordance with research literature[24] the resource based review is the basic foundation of first hypothesis. Marketing decision of a company can seriously affect financial performance of it. Therefore there is a hypothesis that brand value of a company and its advertising expenditure can jointly affect return in assets of the company [as the company's financial performance indicator). As a result, our first hypothesis can be stated as following:

Hypothesis 1- Advertising budget and brand value are jointly and positively associated with return on assets[ROA).

Return on assets is a financial indicator demonstrating profitability and success of the company, while what is appealing for shareholders is return on their investments. Therefore the resulted hypothesis s as following:

Hypothesis 2- Advertising budget and brand value are jointly and directly associated with stock return.

Population, Sample and Time Period of the research: In this study we desire to calculate brand value of manufacturing company which their products were used by general consumers. We also want to examine the impact of this value and advertising budget of companies on their financial performance and stock return. According to our studies and interviews done with professors, companies activating in the food industry were selected as the population. Considering the selected population, 27 companies and their data from 1994 to 2015 were studied. Rah Avard software was used for collecting needed data, which is available in the library of Stock Exchange Organization.

Since the studied population in this research involves food industry companies active in Tehran Stock Exchange, that their financial statement data is available, we used systematic elimination sampling method, which is a non-probability sampling method. Therefore the method will be non-probability sampling and on the basis of information required, the selections will be judgmental. Excel and Eviews softwares are used in order to do calculations, preparing data and analyzing them.

Research variables: This study involves two dependant variables and two independent variables. Brand value and advertising expenditures has been studied as independent variables; and return on assets and stock return has been studied as dependent variables.The relationships between variables can be demonstrated as the following model[Fig. 1]:

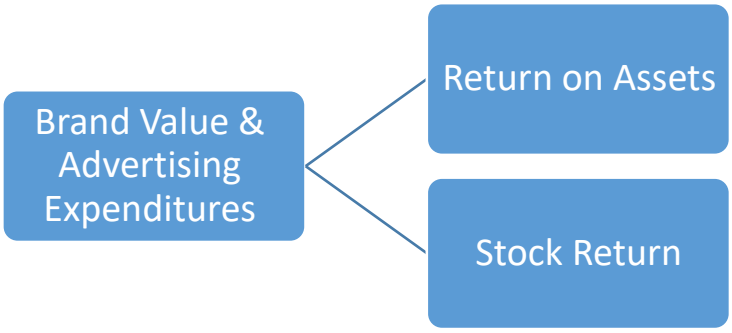

Fig. 1 :The relationships between variables can be demonstrated as this model [24]

Brand Evaluation: In this study, the Corporate Brand Success [CBS) valuation, introduced by Ruenrom and Pattaratanakun [18], has been used to measure the brand value.

Corporate Brand Success Valuation [CBS): Enterprise value and company's brand value are two concepts, which were used to measure CBS. They have been calculated in two following steps:

Step 1: The Calculation of Enterprise Value
In order to calculate enterprise value, company's market value, acquired by stock market value multiplying stock numbers of company, should be added to the proffered stock value [in the case of existence) and also current liabilities. Finally the whole available cash should be subtracted from the result.

Enterprise Value = MV×Q+Preferred Stock [if any)+Current Liabilities – Cash

Step 2: The Evaluaton of Company's Brand
Clearly, the value of an enterprise includes all tangible and intangible values of the enterprise. Therefore brand value of a company includes factors such as awareness, distinction, honesty, superiority, attraction, market share, quality and stability comparing others. With regard to the fact that brand of a company is an intangible asset [11], In order to measure company's brand value: total book value of assets, except cash, shall be deducted from the value of corporation and then the company's goodwill value which is an intangible asset shall be added. The result indicates the company's brand value that can be a reflection business performance of the company. This equation includes all three financial, marketing and accounting dimensions:

Brand [CBS Valuation) = Enterprise Value – [Book Value of total Assets – Cash) + Goodwill

RESULTS

Data Description and Sample Characteristic: The first step in analyzing data is to describe or summarize the data, using descriptive statistics. For this purpose, the descriptive statistics has been used to clarify the state of variables and the sample group, and findings are explained by means of statistical language.

The Dependent Variables' Descriptive Statistics: Return on stock and return on assets have been considered as dependent variables of this study. The results of measuring central tendencies and dispersion of dependent variables are presented in [Table 1]. The information presented in this table indicates that the there is no significant deviation in distribution curves of these variables, comparing to normal distribution.

Table 1: The Measures of Central Tendencies and Dispersion of Dependent Variables

Variable	Number	Lost	Mean	Std. Deviation	Varaince	Skewness	Kurtoesis	Std. Devation	
								Skewness	Kurtoesis
Stock Return	378	189	45.8474	122.1975	14932.24	6.213	58.325	0.125	0.25
Return on Assets	378	189	11.2207	13.1175	172.069	0.33	1.467	0.125	0.25

The Independent Variables' Descriptive Statistics: Advertising expenditure and brand value are considered as the independent variables of this study. The information resulting from measures of central tendencies and dispersion of these variables are presented in Table 2.The information presented in this table indicates that the there is no significant deviation in distribution curves of these variables, comparing to normal distribution.

Table 2: Measures of Central Tendencies and Dispersion of Independent Variables

Variable	Number	Lost	Mean	Std. Deviation	Variance	Skewness	Kurtosis	Std. Deviation	
								Skewness	Kurtosis
Advertising Expenditure	378	189	33489.17	65197.32	4.25E+09	3.98	18.805	0.125	0.25
Brand Value	378	189	5.38E+11	1.38E+12	1.92E+24	5.902	41.636	0.125	0.25

Inferential Statistics

Reliability Test of Variables: This section deals with examination of stability and reliability of the variables. In order to examine the stability, we can use tests of Im, Pesaran and Shin [1997), Levin and Lin [1992), or some other well-known tests. The results of these two tests are presented in Table 3.

Table 3: Tests of Im-Pesaran-Shin [IPS) and Levin-Lin [LL)

Test		Im-Pesaran-Shin		Levin-Lin	
Symbol	Variable	Statistic	p-value	Statistic	p-value
SR	Stock Return	-9.29381	0	-14.7213	0
ROA	Return on Assets	-3.92978	0	-6.0856	0
AER	Advertising Expenditure	-4.88781	0	-6.54907	0
BV	Brand Value	-3.81918	0	-5.23522	0

According to the results [Table 3], since in both tests, p-value is less than 0.05, so the variables have been reliable in the research period. IPS test findings indicate that the variables mean and variance have been constant during the time, and variables covariance has also remained constant in different years. Therefore, using these variables doesn't lead to spurious regression.

Normality Test: The normality of variables distribution is a fundamental assumption of applying parametric tests. Of course the distribution doesn't need to be normal, and it can be explained in the case of large size of sample and no high skewness. In order to test distribution of variables in this study, we used the Kolmogorov-Smirnov test.The results of K-S Test using SPSS software, relating this variable is as Table 4.Considering this table and Z-statistics of Kolmogorov-Smirnov test, since significance level of all variables has been less than 0.05, the null hypothesis $[H_0)$ is rejected, therefore the mentioned variables can't follow a normal distribution.

Table 4: Kolmogrov- Smirnov Test

Variable		Z Kolmogrov-Smirnov	Significance Level	Result
SR	Stock Return	4.739	0	Not normal distribution
ROA	Return on Assets	1.757	0	Not normal distribution
AER	Advertising Expenditures	5.716	0	Not normal distribution
BV	Brand Value	6.796	0	Not normal distribution

The Analysis of Nature of Varables and Test hypotheses: This study, using the correlation method and the regression analysis, based on postrier data study, has attempted to predict dependent variables through a set of explanatory variables, and its data has been presented as company-annual and a combination of cross-sectional and time series. Therefore the study used panel data regression method to examine the conceptual model. To use the analysis of panel data regression, a number of fundamental assumptions shall become justified. In accordance with this analysis, the model is selected in two forms of pooled or panel; in the case of approval of the panel model, one of these two forms of random effects or fixed effects model is fundamental, being specified through Limer and Hausmann Test. Other assumptions: they are normality of the distribution, linearity of relationship between explanatory and dependent variables, no linear relationship among explanatory variables, homogeneity of variance, the model residuals independence and the model residuals normality. No justification of these assumptions that might be large sample size, no extreme skewness and equality in the size of groups within sample can be explained. You can see the results of testing fundamental assumptions in the following.

The Model 1 to test hypothesis 1: Advertising budget and brand value are jointly and directly associated with return on assets [ROA).

$$ROA_{it} = Bl_i + B2\ AER_{it} + B3\ BV_{it} + B4(AER_{it} * BV_{it})$$

AER is advertising expenditure; BV is brand value.

At the first step, the fitness of first model is performed in a, b, c and d sections, following essential hypotheses to select the best method.

The Examination of Independence of the Error Between the Actual and Predicted Values: In order to examine independence of the model errors, the Durbin-Watson test has been used. If the resulted values place 1.50-2.50, the model lacks of auto correlation. Considering the calculated value of this regression model is 0.831 and doesn't belong to the mentioned interval, therefore it is approved that there is a serial correlation of residuals in the first model. Therefore, there should be a first-order autoregressive variable [AR(1)), added to the first model as an added independent variable.

Heteroscedasticity: the values resulting from the White test [F-statistic) indicates that F-statistic at the error level of 0.05 is not significant; however it is significant at the error level of 0.01. Therefore the null hypothesis indicating lack of heteroscedasticity among data at the error level of 0.1 is totally rejected. For this reason, we had better use the GLS regression model.

Table 5: The Results of Heteroscedasticity of the First Model

Regression Model	White Statistic	P-value	Test Results
First	2.038323	0.0598	Heteroscedasticity

Collinearity Test of Independent Variables: Applying two factors of variance inflation [VIF) and variance tolerance among independent variables, is a way to identify whether a collinear relationship exists or not. According to data presented in [Table 5] the tolerance value of all independent variables is more than 0.4, VIF value is approximately 1 [much less than 4); therefore the assumption of not existence of a collinear relationship is approved.

Table 6: Collinearity Test of Independent Variables

Symbol	Variables	Tolerance	VIF
AER	Advertising Expenditure	0.571	1.752
BV	Bran Value	0.611	1.636
AER*BV	Advertising Expenditure – Brand Value	0.412	2.429

Determining an Appropriate Model to Estimate the Regression Model: The regression Analysis using compositional series needs a set of preliminary tests including slopes of periods and sections and types of effects. In order to choose between pooled and panel models, the Limer test has been used. The Hausman test has also been used for determining types of effects. The Limer test helped to examine slope of company and periods, and in the case of significance the panel model was used. Then in the case of significance in random effects test, the fixed effects test has been applied. On the basis of significance level, Chow test results indicate that the hypothesis [of the integrated model) is not confirmed. In other words, there are individual and team groups effects, and in order to estimate regression model of the study, the panel data method should be applied. Therefore to determine the type of panel model [using random and fixed effects), the Hausman test is applied. Realizing the y-intercept is not the same for different years, it is necessary to determine a method using in estimating the model [random or fixed effects). For this purpose we have used the Hausman test. This test examines the null hypothesis indicating compatibility of random effects estimation against the alternative hypothesis. The results related to Hausman test of model 1 are presented in [Table 6-4]. According to the results, the test is significant at confidence level of %99, indicating alternative hypothesis confirmation; therefore on the basis of the Hausman test, fitness of the first regression model using the panel data model by the method of fixed effects can be appropriate.

Table7: Results of Tests for Selecting a Proper Model for Applying Pooled or Panel Model and Types of Variables Effects in Model 1

Purpose & Test	Chow Test			Hausmann Test		
	f-statistc	Error Level	Result	Chi-square statistic	Error Level	Result
Section Test	5.734980	0.000	Significant Effects	27.176782	0.000	Fixed Effects

Now since the best method of examining the first model has been proved to use an additional first order autoregressive independent variable, with the help of the fixed effects model and GIS, the examination of its fitness is shown in Table 8.

The f-statistic value [27.68754) suggests significance of the whole regression model. As we can see at the bottom of the table, the determination coefficient and the adjusted determination value of the model are %72 and %69, respectively. Therefore, we can conclude in the mentioned regression equation, almost %69 of changes in return on assets are jointly and directly explained by the independent variables of advertising expenditures and brand value. In this table, the positive [negative) numbers in the coefficient value column indicate direct [indirect) effects of each variable on company's ROA.

Table 8: Results of the First Regression Equation's Fitness

Variable	Variable Coefficient Value in First Model	t-statistic	Level of Significance	Result	Relationship Direction
C	7.595714	6.173998	0	Confirmed	+
AER	-2.81E-05	-2.45104	0.0148	Confirmed	-
BV	1.31E-12	2.050963	0.0411	Confirmed	+
AER*BV	4.02E-18	2.349399	0.0194	Confirmed	+
AR[1)	0.6766379	13.25505	0	Confirmed	+
Coefficient of Determination	Adjusted Coefficient of Determination	f-statistic	Total Level of Significance		
0.721891	0.695818	27.68754	0		

According to Table 8, the significance level [sig) of advertising expenditure variable [AER) [0.0148) is less than the considered significance level in this study [%5). The absolute value of t-statistic related to this variable [2.451) is more than the calculated t-statistic presented in the table with same degree of freedom. Return on investment reduces by 28 units, per 10000 units increase in advertising expenditure.

The significance level [sig) of brand value variable [BV) [0.0411) is less than the considered significance level in this study [%5). The absolute value of t-statistic related to this variable [2.051) is more than the calculated t-statistic presented in the table with same degree of freedom. Return on investment increases by 13 units, per 10000000000 units increase in advertising expenditure.

The significance level [sig) of advertising expenditure-brand value variable [AER*BV) [0.0194) is less than the considered significance level in this study [%5). The absolute value of t-statstic related to this variable [2.349) is more than the calculated t-statistic presented in the table with same degree of freedom. Return on investment increases by 4 units, per 100000000000000000 units increase in advertising expenditure.

Therefore, H0 has been rejected at the confidence level of %95, and H1 indicating "advertising budget and brand value have a joint and direct relationship with ROA" has been confirmed. Therefore, the first hypothesis stating "advertising budget and brand value [independent) are jointly, directly and significantly correlated with ROA [dependent)" has been confirmed.

The Second Model for Testing Hypothesis 2: advertising budget and brand value has a direct and joint association with stock return.

This hypothesis is examined by the following model.

$$SR_{it} = B1_i + B2\ AER_{it} + B3\ BV_{it} + [AER_{it} * BV_{it})$$

SR is Stock Return; AER is Advertising Expenditure;BV is Brand Value.

In the beginning, fitness of second model is performed in a, b, c and d sections, following essential hypotheses to select the best method.

Independence of Errors Between Real Values and Predicted Values: In order to examine independence of the model errors, the Durbin-Watson test was used. On the basis of this test, if values place 1.50 to 2.50, the model lacks autocorrelation. According to the value resulted from the test of this regression model [1.936572), it is in the mentioned interval, therefore residuals serial correlation of the second model is not confirmed.

Heteroscedasticity: Similar two model 1, in order to estimate the heteroscedasticity, the White test was applied. The values resulting from the test [F-statistic) indicates that F-statistic at the error level of 0.05 is significant. Therefore the null hypothesis indicating lack of heteroscedasticity among data at the error level of 0.05 is totally rejected. For this reason, we had better use the GLS regression model.

Table 9: The Results of Heteroscedasticity of the Second Model

Regression Model	White Statistic	P-value	Results
2nd	8.025432	0.0199	Heteroscedasticity

Collinearity Test of Independent Variables: According to data presented in Table 9 the tolerance value of all independent variables is more than 0.4,the variance inflation factor [VIF) is approximately 1 [much less than 4); therefore the assumption of not existence of a collinear relationship is approved.

Table 10: Collinearity Test of Independent Variables in the Second Model

Symbol	Variables	Tolerance	VIF
AER	Advertising Expenditure	0.571	1.752
BV	Bran Value	0.611	1.636
AER*BV	Advertising Expenditure – Brand Value	0.412	2.429

An Appropriate Model for Estimating the Regression Model: The regression analysis using compositional series needs a set of preliminary tests including slopes of periods and sections and types of effects. In order to choose between pooled and panel models, the Limer test has been used. The Hausman test has also been used for determining types of effects. The Limer test helped to examine slope of company and periods, and in the case of significance the panel model was used. Then in the case of significance in random effects test, the fixed effects model has been applied. On the basis of significance level, Chow test results indicates that the hypothesis [of the integrated model) is not confirmed. In other words, there are individual and team groups effects, and in order to estimate regression model of the study, the panel data method should be applied. Therefore to determine the type of panel model [using random and fixed effects), the Hausman test is applied. Realizing the y-intercept is not the same for different years, it is necessary to determine a method using in estimating the model [random or fixed effects). For this purpose we have used the Hausman test. This test examines the null hypothesis indicating compatibility of random effects estimation against the alternative hypothesis. The results related to Hausman test of model 2 are presented in table 10-4. According to the results, the test is significant at confidence level of %99, indicating alternative hypothesis confirmation; therefore on the basis of the Hausman test, fitness of the first regression model using the panel data model by the method of fixed effects can be appropriate.

Table 11: Results of Tests for selecting a proper model for applying pooled or panel model and types of variables effects in model 2

Purpose & Test	Chow Test			Hausman Test		
	f-statistic	Error Level	Result	Chi-square statistic	Error Level	Result
Section Test	1.922230	0.0414	Significant Effects	21.463771	0.0001	Fixed Effects

Now since the best method of examining the second model has been proved to use the fixed effects model and GIS, the examination of its fitness is shown in Table 11.

The f-statistic value [2.229) suggests significance of the whole regression model. As we can see at the bottom of the table, the determination coefficient and the adjusted detemnation value of the model are %15 and %8.6, respectively. Therefore, we can conclude that in the mentioned regression equation, almost %9 of changes in stock return are jointly and directly explained by the independent variables of advertising expenditures and brand value.

Table 12: Results of the Second Regression Equation's Fitness

Variable	Variable Coefficient Value in second Model	t-statistic	Level of Significance	Result	Relationshp Direction
C	38.0565	4.566851	0	Confirmed	+
AER	-9.99E-05	-0.648015	0.5174	Rejected	
BV	2.24E-11	2.922019	0.0037	Confirmed	+
AER*BV	-1.74E-17	-0.75648	0.4499	Rejected	

Coefficient of Determination	Adjusted Coefficient of Determination	f-statistic	Total Level of Significance
0.156592	0.086308	2.227994	0.000399

Data Description and Sample Characteristic: According to Table 12, significance level [sig) of advertising expenditure variable [AER) [0.517) is more than the considered level of significance of the present study [%5), the absolute value of t-statistic related to this variable [0.648) is also less than the calculated t-statistic value presented in the table with the same degree of freedom. Therefore we can conclude, advertising expenditure does not affect stock return.

The significance level [sig) of brand value [BV) [0.0037) is less than the considered level of significance in the present study [%5), the absolute value of t-statistic related to this variable [2.922) is also more than the calculated t-statistic value presented in the table with the same degree of freedom. Therefore, Stock return increases by 22 units, per 10000000000 units increase in brand value.

The significance level [sig) of advertising expenditure-brand value [AER*BV) [0.4499) is more than the considered level of significance in the present study [%5), the absolute value of t-statistic related to this variable [0.756) is also less than the calculated t-statistic value presented in the table with the same degree of freedom. So, advertising expenditure-brand value can't affect stock return.

Therefore, the null hypothesis is confirmed at the confidence level of %95, and the altenative hypothesis [H1), indicitaing that advertising budget and brand value are jointly and directly related to stock return is not confirmed. Therefore, Hypothesis 2, indicating that "Advertising budget and brand value [independent values) are jointly and directly correlated with stock return [dependant value)" has not been confirmed.

CONCLUSIONS

In this paper, on the basis of the literature review, we considered the joint effect of brand value and advertising expenditure on stock return. The first hypothesis, in accordance with available literature, has assumed brand value and advertising value are jointly affecting return on assets [ROA). The results revealed that this hypothesis is confirmed. Regarding the results of testing H1, we can realize that costs spended for advertising and creating brand value [marketing costs) have a positive and significant relationship with ROA, which can be an acceptable reason for justifying costs spended in marketing, and the effects of these costs on company's financial performance can be demonstrated. The Hypothesis 2 considered the joint effect of brand value and advertising expenditure on stock return. The results didn't confirm this hypothesis. However more studies suggested brand value has a positive effect on stock return, but the effect of advertising expenditure was not confirmed, and totally the joint effect of advertising expenditure and brand value on stock return was not confirmed. Generally we can conclude company's brand value has a direct and significant relationship with ROA and stock return, which indicates that the concepts of brand value need to be a special consideration. For testing these two hypothesis a proper method of evaluation was essential. Previous studies had discussed various methods for evaluating company's brand. The problem with these methods was their complexity, hard measurement of many subjective factors and also that they were considering only one dimension of a corporation's activity. This research has applied a model proposed by Ruenroom and pattaratanakun [2012)[15] for evaluating company's brand, which almost resolved former problems.

CONFLICT OF INTEREST
There is no conflict of interest.

ACKNOWLEDGEMENTS
None

FINANCIAL DISCLOSURE
None

REFERENCES

[1] Aaker D. [1991). Managing brand equity. New York: Free Press.
[2] Herremans I, Ryans Jr., J., & Aggarwal, R. [2000). Linking advertising and brand. Business Horizons, [May-June): 19-26.
[3] Natalei Mizik , Robert Jacobson.[2008). Valuing Branded Business, American Marketing Association,73:.137-153
[4] Azizi Sh, Darvishi Z, Namamian F, [2011]"Studying determinants of brand value in the companies listed on Tehran Stock Exchange, using financial approach", journal of Business Administration Outlook, N.6, PP 9-32.
[5] Roland T.Rust,Tim Ambler el.[2004). Measuring Marketing Productivity:Current Knowledge and Future Directions.Journal of Marketing , vol. 68,pp. 76-89
[6] Eng L., Keh H. [2007). The Effects of Advertising and Brand Value on Future Operating and Market Performance. Journal of Advertising, 36[4): 91-100.

[7] Kotler, P. [1991). Marketing Management: Analysis, Planning and Control, 8th Edition, Englewood Cliffs, New Jersey, Prentice Hall. 33
[8] Keller KL. [2005). Building, Measuring, and Managing Brand equity, New Delhi: Prentice Hall of India.
[9] Aaker DA. [1992). Managing the Most Important Asset: Brand Equity. Planning Review , 20 [5), 56-58.
[10] Aaker DA, Joachimsthaler [2006). Brand Leadership. New York, NY: Free press.
[11] Keller K. [1993). Conceptualizing, Measuring, and Managing Customer-Based Brand Equity. Journal of Marketing, 57[January): 1-22.
[12] Attaran J, [2011), A review of source-based approach in competitive advantage", Journal of Tadbir[Plan), N.232.
[13] Penrose, E. [1959). The Theory of the Growth of the Firm. New York, NY John Wiley.
[14] Charles Pahud DE Mortanges, Allard Van Riel.[2003). Brand Equity and Sharholder Value.European Management Journal, Vol.21,pp.521-527.
[15] Marie Dutordoir, Frank HM Verbeeten, Dominique De Beijer.[2014). Stock Price Reactions to Brand Value Aannouncements:Magnitude and Moderators. Intrnet J. of Research in Marketing, 32: 34-47
[16] Mattew T.Billet, Zhan Jiang, Lopo L.Rego.[2014). Glamour brand and glamour stocks. Journal of Economic Behavior & Organization. Vol.107,pp. 744-759.
[17] Belo, Frederico., Lin, Xiaoji. And Vitorino, Maria. [2013), available at http://ssrn.com/abstract=1805124
[18] Ruenrom,Guntalee and Pattaratanakun,Suppakron,[2012),Corporate brand success valuation : an integrative approach to measuring corporate brands,International journal of business strategy , volume 12 , Number 3.
[19] Kirk, C. P., Ray, I., Wilson, B., [2012), The impact of brand value on firm valuation: The moderating influence of firm type, Journal of Brand Management, Macmillan Publishers Ltd. 1350-23IX Jour.
[20] Robert A. Peterson & Jaeseok Jeong.[2010). Exploring the impact of advertising and R&D expenditures on corporate brand value and firm-level financial performance, J. of the Acad, Sci. [2010) 38:677–690.
[21] George C. Hozier, Jr., John D. Schatzberg. [2000]Advertising Agency Terminations and Reviews: Stock Returns and Firm Performance. Journal of Business Research, vol.50,pp.169-176.
[22] Nikukar Gholam Hossein, Ekhlasi Amir, Tolu'i Pedram, [2012), A mathematical model to determine brand equity and its implementation in a company", Year 4, N.11.
[23] Khani Abdollah, Ebrahimi Khadijeh, 2014, "The effect of brand value on companies' sales revenue and market value", Journal of Modern Marketing, Year 4, N.2.
[24] Ukiwe,Alladin,[2009),The joint impact of brand value and advertising on corporate financial performance and on stock return, Walden University.