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5.   **KEYWORDS**: Abstract must be followed by a list of keywords, subject to the maximum of five. These should be arranged in alphabetic order separated by commas and full stops at the end.

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      INTRODUCTION

      REVIEW OF LITERATURE

      NEED/IMPORTANCE OF THE STUDY

      STATEMENT OF THE PROBLEM

      OBJECTIVES

      HYPOTHESES

      RESEARCH METHODOLOGY

      RESULTS & DISCUSSION

      FINDINGS

      RECOMMENDATIONS/SUGGESTIONS

      CONCLUSIONS

      SCOPE FOR FURTHER RESEARCH

      ACKNOWLEDGMENTS

      REFERENCES

      APPENDIX/ANNEXURE

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- When listing two or more works by one author, use --- (20xx), such as after Kohl (1997), use --- (2001), etc, in chronologically ascending order.
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BOOKS
- Bowersox, Donald J., Closs, David J., (1996), "Logistical Management." Tata McGraw, Hill, New Delhi.
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CONTRIBUTIONS TO BOOKS
- Sharma T., Kwatra, G. (2008) Effectiveness of Social Advertising: A Study of Selected Campaigns, Corporate Social Responsibility, Edited by David Crowther & Nicholas Capaldi, Ashgate Research Companion to Corporate Social Responsibility, Chapter 15, pp 287-303.

JOURNAL AND OTHER ARTICLES
- Schemenner, R.W., Huber, J.C. and Cook, R.L. (1987), "Geographic Differences and the Location of New Manufacturing Facilities," Journal of Urban Economics, Vol. 21, No. 1, pp. 83-104.

CONFERENCE PAPERS
- Garg, Sambhav (2011): "Business Ethics" Paper presented at the Annual International Conference for the All India Management Association, New Delhi, India, 19–22 June.

UNPUBLISHED DISSERTATIONS AND THESES
- Kumar S. (2011): "Customer Value: A Comparative Study of Rural and Urban Customers," Thesis, Kurukshetra University, Kurukshetra.

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- Garg, Bhavet (2011): Towards a New Natural Gas Policy, Political Weekly, Viewed on January 01, 2012 http://epw.in/user/viewabstract.jsp

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DO FINANCIAL AND NON-FINANCIAL VARIABLES EXPLAIN THE DIFFERENCE BETWEEN THE COMPANIES' BOOK VALUE AND MARKET VALUE?

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ABSTRACT

This study intends to describe the influence of financial and non-financial factors on the difference between the companies' book value and market value. Also, we survey the explanatory power of these factors. For this purpose, 101 companies were selected and studied. These companies were selected randomly and we used statistical regression method. This study was carried out from 2008 - 2011. The obtained results confirm that residual income as well as administrative and sales expense ratio and individual administrative and sales expenses affect the difference between historical costs based values and market value. Also, in the reliability level of 90% it was confirmed that economic added value affect this parameter. Leverage ratio could not explain the difference between book value and market value. Besides, the obtained results showed that among non-financial components, executive board ratio, auditor opinion and employees' education level affect this difference. Independent auditor opinion factor had the maximum influence. Stock market trusts Certified Public Accountants (CPAs) and involves auditor opinions in investigating companies.

KEYWORDS
book value ,financial variables, market value ,non-financial variables.

INTRODUCTION

It has been always very important to investors and stockholders to investigate the difference between the market value of a company's stocks, which is determined by the stock market, and its book value derived from accounting records. The market value of a company is not essentially derived from financial records. Instead, accounting values could be considered as an appropriate tool for company valuation purposes. Stockholders and investors know this matter and they always seek for other types of information including intangible assets like intellectual capital, the structure of human resource and their education level, the structure of managing board, company's products and so on.

A lot of researches have been carried out in other countries aimed at determining the impacts of other effective components on companies' value and in most cases they confirmed that non-financial components affect the market value of companies.

In general, non-financial components have been studied assessed in the form of concepts of balance scoreboard and intellectual capital.

In this study, we are about to survey separately and jointly the influence of the difference between market value and book value generating due to the effects of financial and non-financial components.

REVIEW OF LITERATURE

Fama & French, (1992, 1995, and 1996) investigated the relationship between book value to market value ratio and stock return. Through conducting single and multiple tests, they realized that there is a positive and important relationship between book value to market value ratio and stock return as well as a negative relationship between the size of corporation and stock return. In 1998, Ponitev and Skull (1998) tested the influence of book value to market value ratio on stock return. Their results revealed that usually there is a positive relationship between book value to market value ratio and stock return. If we consider other variables as independent variables, the predicting capacity of this ratio looses its statistical importance for explaining stock return.

In a research, Bruce, et al (2010) disclosed valuable information and based on the priority and importance of financial and non-financial factors tested stockholder's information using BSC technique (balance scorecard) as a tool reflecting the relationship of financial and non-financial measures and realized that stockholders encounter with the same restrictions when they use and process the different disclosures of juridical, environmental or similar reports.

In another study Dainelly and Giunta (2011) discussed the effects of non-financial measures in Europe clothing industry and through stock price analysis they realized that as far as non-financial measures in clothing industry concerns, most companies depend on intangible assets. Therefore, predicting the power of non-financial measures would be very useful in determining the trend of market stock.

Various researchers have been carried out different studies on experimental relationship between clarifying environmental issues and company's value. in a short term view, event based studies show a reaction in stock market before and after announcing a specific event like a nuclear calamity, oil or chemical pollution of sea and judicial decisions [Meal and Schenives, 1983; Blakocier and Paten, 1994; Paten and Nancy, 1998].

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According to the findings of Manoa and Calra (2009) the market value of those companies which were clearly reporting environmental issues prior to specific events experienced less negative impacts compared with ones which were reporting after specific events.

In a research, Chiang Liang (2005) studied the effects of financial and non-financial measures on the difference between book value and market value of companies in Taiwan electronic industry. The result of his research confirms the strong influence of non-financial measures together with financial measures on this difference. In a research which was carried out among Spain banks, Jozen Saenz (2005) investigated the effects of human resource index on price to book value ratio. He believes that the intellectual capital of companies assigns the main part of the difference between companies' market value and book value to itself. The result of his study strongly confirms this assumption.

Ming Ching Chen, Shu Cheng and Yuchang Hang (2005) carried out a research and concluded that the effects of intellectual capital and added value indices have direct and positive relationship with companies' financial performance and market value. They concluded that the intellectual capital of companies increases companies from stock market point of view. Therefore, companies should pay more attention to this measure.

Chang Hang and Mao Chang van (2008) realized that compared with current system i.e. generally accepted accounting principles, economic added value couldn't explain the market value of companies and its difference with book value. In their views, the information embedded in intellectual capital is more valuable for stock market.

Bioli, 2005 realized that the US and Canadian regulations for financial reports consider the variations of companies' market value and reported non-financial measures , i.e. environmental obligations while according to academic resources, environmental non-financial information could be more useful for investors [Hags, 2000; Chormier and Magnan, 2007].

Boos (1998) pointed out several well-known companies which are successful in the world like Coca Cola and Microsoft in order to show the relationships between market value, book value, replacement cot and unexpected value. He realized that the main reason which increases the unexpected value of Coca Cola Company has been covered up by its brand value. Microsoft relies apparently on the capabilities of market channels and continuous R&D activities in order to empower itself to show a higher unexpected value ratio. Moreover, Amir and Loo (1996), lethenro Larker (1999), Videng, Videgn, Loo & Narin (1999) attempted to describe the source of the difference between companies' book value and market value. Amir and Loo pointed out that distance communications, biotechnology and software industries have invested considerable money in the form of assets like R&D activities and commercial developments. However, this kind of investment has not been taken into consideration as expenses or reference changes. Therefore, they seriously estimated the revenues and book value of companies. Even negative values were presented and there was no similarity in companies' market values. Amir and Loo (1996) assessed the data gathered during 1984-1993, from 14 cell phone service provider companies. Their results show that some tangible assets can explain the performance of companies' stock price. Lethner and Larker (1999) used 83 small banks in west America as their samples. Their results indicate that consumer satisfaction parameter has a considerable positive effect on the stock price of companies while it is not reflected completely in the book value of companies.

Alnour &Kim-Smith (2007) realized that R&D as well as strategic applications has been almost structured and during their investigation project the normal activities of companies implied that despite of the fact that financial and non-financial values jointly have significant influence on development and strategic applications the research activities of companies however, have paid more attention merely to financial values. However, we can argue that companies differ from each other form strategic point of view and the influence of financial and non-financial values differs from one company to other one [bemani, Longfield Smith, 2007].Kapalan and Norton emphasize to use the results of balance sheet for investigating the financial and non-financial factors of strategy establishment [Kapalan and Norton, 2004].Also, Manva and Kaller (2009) assessed the influence of environmental reporting of financial and non-financial parameters on the analysis of environment and financial performance relevance and declared that in the financial transparent related to environment issues, market valuation is very important. Moreover, their results reveal that the increase of value relevance is generated due to the mandatory disclosure of environmental information

The findings of the research of Biksia (2002) showed that: a) after applying proper controls, financial information would be proportional with value changes and b) the market product status of a company can help investors to have a better understanding of the financial information, especially income. On the other hand, non-financial information supports the financial information relevance. Nadana Abayadra (2010) evaluated Australia's high tech industries using financial and non-financial measures. Her findings give evidences indicating that book value is an important factor of income level obtaining from stock pricing process. These findings also support previous studies in which investors depend increasingly on frequent information sources [Abayadra, 2010].

In a research with the title of "Mental Accountability and Balanced Scorecard" Fereydoon Rahnemay Rooposhti and Arezoo Jalili (2011) realized that during performance evaluation using balanced scorecard method the mental accountability of people can challenge the benefits of this system.In a research with the title of " disclosure of financial reporting: the role of non-financial performance measures" Qorbani (2008) conclude that non-financial performance measures have the values of "relevance" and "the capacity of predicting future financial performance measures" but has lower reliability and comparability compared with financial measures. Also, managers' opinions and thoughts as well as accounting rules and standards affect information disclosure methods.The results of another research with the title of "the experimental investigation of the informational content of stock's book value and net income", which was carried out in strong and declining companies, show that in strong companies, net income has stronger link with company's value than book value. But in declining companies the relationship between book value and company's value is almost similar to the relationship of income and company's value. Although the relationship of book value is higher to some extent but it is not statistically significant [Mohammad jvan Saei, et al, 2011]. In two years of study during 2003-2004, Mehrani and Karami tested the use of financial and non-financial historical information in order to distinguish between successful companies and bankruptcy ones. The obtained results show that both financial and non-financial information affect stock return.

IMPORTANCE OF THE STUDY

This research is important in that in addition to financial measures it investigates the influence of non-financial measures, within balanced scorecard frames, on companies' values while in traditional evaluations (current state) only financial components are considered. In other words, we assess the qualitative and quantitative response of stock market to the components affect companies' values.

STATEMENT OF THE PROBLEM

The subject of this research is the investigation of the influence of non-financial components as well as the amount of this influence on companies' values. Also, the effects of non-financial components are studied and their intensities are determined.

OBJECTIVES

The object of this study is to investigate the influence of financial measures including economic added value and residual income as well as the influence of BSC and intellectual capital based non-financial factors like the number of employees, company's age and employees' education level on the difference between market value and book value as well as book value to market value ratio.

HYPOTHESES

1. Financial components can significantly explain the difference between companies' book value and market value.
2. The financial and non-financial components of companies can jointly explain this difference.

RESEARCH METHODOLOGY

The method of this research is descriptive-analytic by which variables correlation is assessed. Also, since it surveys past events it is Ex-Post Facto type.

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STATISTICAL POPULATION

The statistical population of this study covers the companies accepted in TSE (Tehran Stock Exchange) which meet the following requirements:

1- The stocks of these companies should be exchanged in share board during research period.
2- The financial data of these companies should be available.
3- Their fiscal year of these companies should be ended at March.
4- The companies should not belong to financial investors, banks and insurance categories.

STATISTICAL SAMPLE

Since the mentioned requirements restrict the number of authorized companies, our statistical sampling were carried out randomly and 101 companies were selected.

RESEARCH PERIOD

Research Period is from 2008 - 2012.

RESEARCH MODEL

Considering the hypotheses of this research as well as the financial and non-financial variables affecting the variable of the research, research model is presented as follows:

$MV_{it} - BV_{it} = \alpha_0 + \alpha_1 LEV_{jt} + \alpha_2 AS_{jt} + \alpha_3 G_{jt} + \alpha_4 OTHEXP_{jt} + \alpha_5 EVA_{jt} + \beta AS/S_{jt} + \alpha_6 RI_{jt} + \varepsilon_{jt}$ **(equation 1)**

In which BV, MV, EVA, RI, LEV, AS, G, AS/S respectively stand for book value, market value, leverage ratio, administrative and sales per capita, operating income growth, administrative and sales expense to operational income ratio. Also, "other" stands for other non-financial components like employees' education, company's age, auditor opinion, executive board ratio and company's ownership.

DEPENDENT VARIABLES OF RESEARCH

The difference between book value and market value is considered as our dependent variable. The book value of a given company is considered as the mean of the total assets of that company during a three years period in terms of historical costs recorded in the accounted annual financial statements. The market value of a given company equals to the product of the value of that company in stock exchange and the number of its shares.

INDEPENDENT VARIABLES OF RESEARCH

The independent variables include: a) the mean of company's operative income growth within a three years period, b) the mean of administrative and sales expenses within a three years period divided by the mean of sales revenue at the same period, c) the mean of operational incomes within a three years period divided by the mean of the number of employees at the same period d) the mean of total liabilities of the company divided by the mean of its whole assets within a three years period, e) the age of company and f) employees' education.

COMPANY'S OWNERSHIP

If government is the owner of more than 50% of a company it is a state company (state-owned company) otherwise it is a private one.

Executive board ratio: equals to the full time members of the board of directors divided by the total members of the board of directors.

Auditor opinion: if the auditor opinion is positive the assigned value would be 1 otherwise it would be zero.

The added value of company

(equation 2) $VA_i = I_i + DP_i + D_i + T_i + R_i$

The residual income of company is derived from the following relation:

(equation 3) $RI_t = CI_t (BV_{t-1} * R)$

RESULTS & DISCUSSION

DESCRIPTIVE STATISTICS

Studies on the descriptive statistics of research variables revealed that the ratio of companies' book value to market value is 15% and the leverage ratio is 63% which rises up to 78% in cement and auto making industries. The percentage of added value in tile, cement and petrochemical industries was higher than other industries while in cement and mining industries this was the residual income which was higher than other industries. In average, the income growth rate of companies was 9.5% and the variance of this rate was a high value and around 67%. In 67% of companies the auditor had positive view with a recommendation clause. 39% of companies were state companies. These state companies had lower added value and their income growth rate was 7.5% in average. In state companies executive board ratio was 47% while it was 74% in private companies.

RESULTS OF HYPOTHESES

HYPOTHESIS 1:

Financial components can significantly explain the difference between companies' book value and market value.

To prove this hypothesis we can see that ANOVA table (Analysis of Variance) has confirmed this. The following table presents regression ANOVA in order to confirm the certainty of the existence of linear relationship between variables.

TABLE 1: THE RESULTS OBTAINED FROM THE SIGNIFICANCE TEST OF THE REGRESSION MODEL OF GENERAL HYPOTHESIS

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	5.883E25	6	9.806E24	149.365	.000
Residual	5.383E24	82	6.565E22		
Total	6.422E25	88			

Above, we presented the ANOVA table in order to confirm the certainty of the existence of linear relationship between variables.

The value of sig is sig=0.000 and it is less than 5%. This confirms that it is a significant assumption that our regression model is linear.

With a reliability level of higher than 95% we can eliminate H_0 and accept H_1 which means that the assumption that linear regression model is linear has been confirmed.

COEFFICIENTS' SIGNIFICANCE TEST

In addition to approving that the coefficients are significant, this test determines the direction of the effects of coefficients on the independent variable. The statistics t defines that the coefficients are significant. We can use sig column instead of the t statistics. Following confirming coefficients' significance, the coefficients calculated in Beta column determine both direction and the magnitude of the dependant variable influence on the independent variable.

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TABLE 2: THE RESULTS OBTAINED FROM COEFFICIENTS SIGNIFICANCE TEST APPLIED TO HYPOTHESIS

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations			Collinearity Statistics	
	B	Std. Error	Beta			Zero-order	Partial	Part	Tolerance	VIF
1 (Constant)	-1.577E10	1.328E11		-.119	.906					
Value added	-.108	.064	-.058	-1.697	.093	-.371	-.184	-.054	.871	1.147
Residual income	1.161	.052	.797	22.304	.000	.905	.927	.713	.801	1.249
Income growth	-2.277E10	5.035E9	-.594	-4.524	.000	.098	-.447	-.145	.059	16.871
Administrative expense per	1.043E9	1.262E8	.616	8.270	.000	.348	.674	.264	.184	5.426
Expense to revenue	5.029E11	5.309E11	.131	.947	.346	.136	.104	.030	.053	18.759
Leverage ratio	1.917E9	2.335E11	.000	.008	.993	.128	.001	.000	.943	1.061

The Beta column of the above table represents respectively the constant value and the coefficients of the independent variables of the regression relation. Therefore, the equation of this model will forecast the difference between book value and market value through the following equation.

Since in Beta column the slope of line contains high values we use the standard coefficients of this column. The equation derived from Beta column is written without the constant number and it is called Standard Equation.

HYPOTHESIS 2:

Financial and non-financial variables could jointly explain significantly the difference between book value and market value. The following table assesses the regression ANOVA in order to determine the certainty of existence of linear relationship between variables.

TABLE 3: THE RESULTS OF THE SIGNIFICANCE TEST OF THE REGRESSION MODEL

Model	Sum of Squares	Df	Mean Square	F	Sig.
1 Regression	5.902E11	11	5.366E10	79.566	.000
Residual	5.193E10	77	6.744E8		
Total	6.422E11	88			

The above mentioned table contains the regression ANOVA for determining the certainty of existence linear relationship. The value of sig is sig=0.000 and is less than 5%. Therefore, the assumption that the linearity of regression model is significant is confirmed. With a reliability level more than 95% we can eliminate H_0 and accept H_1. This means that the assumption that the linearity of the regression model is significant is confirmed.

COEFFICIENTS' SIGNIFICANCE TEST

In addition to approving that the coefficients are significant, this test determines the direction of the effects of coefficients on the independent variable. The statistics t defines that the coefficients are significant. We can use sig column instead of the t statistics. Following confirming that the coefficients are significant the coefficients calculated in Beta column determine both direction and the quantity of the dependant variable influence on the independent variable.

TABLE 4: THE RESULTS OBTAINED FROM COEFFICIENTS SIGNIFICANCE TEST APPLIED TO HYPOTHESIS

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations			Collinearity Statistics	
	B	Std. Error	Beta			Zero-order	Partial	Part	Tolerance	VIF
1 LEV	6231.329	25219.82	.009	.247	.806	.128	.028	.008	.830	1.204
EV A	**.231**	**.374**	**.225**	**1.932**	**.030**	-.371	.117	.033	.072	13.858
RI	**1.308**	**.108**	**.898**	**12.137**	**.000**	.905	.810	.393	.192	5.209
GROWGHT	**-2389.59**	**518.517**	**-.623**	**-4.609**	**.000**	.098	-.465	-.149	.057	17.420
EXPENE	**106.924**	**13.607**	**.631**	**7.858**	**.000**	.348	.667	.255	.163	6.142
EXPENCE TO REVRNUE	54411.13	55224.10	.142	.985	.328	.136	.112	.032	.051	19.757
CONTINUTY	109.042	229.023	.017	.476	.635	.014	.054	.015	.867	1.154
EDUCATIONS	**-17.258**	**10.842**	**-.186**	**-1.992**	**.016**	.127	-.178	-.052	.077	13.035
AUDIT OPINION	**528.279**	**2381.188**	**.207**	**.222**	**.025**	-.050	.025	.007	.977	1.024
TYPE OWNEHIP	1068.359	7170.624	-.006	-.149	.882	.262	-.017	-.005	.748	1.336
EXE- BOARD	157.406	409.865	.013	.384	.702	-.018	.044	.012	.975	1.025

The Beta column of the above table represents respectively the constant value and the coefficients of the independent variables of the regression relation. Therefore, the equation of this model will forecast the difference between book value and market value through the following equation.

Since in Beta column the slope of line contains high values we use the standard coefficients of this column. The equation derived from Beta column is written without the constant number and it is called Standard Equation.

Since the sig values of the residual income, growth rate and individual expense factors is less than 5% and in all parameters we have: sig=000, only in the three mentioned variables the individual expense of H_0 is eliminated and H_1 is accepted. This means that among all variables only the three mentioned variables affect book value and the influence of other variables is not confirmed. Also, growth rate has reverse relationship with book value (line slope is negative) while the two independent variables i.e. residual income and individual expense have direct relationship with book value. Beta coefficient determines the influence magnitude of each independent variable. We can observe that the influence of residual income parameter is Beta=0.898 which is higher than other variables.

FINDINGS

The obtained results indicate that among financial components related to the performance of companies, added value with the reliability level of 90% as well as residual income, administrative expenses to sales ratio, individual administrative expenses to sales ratio and operational income growth rate had significant influence on the difference between companies' book value and market value in both hypotheses. Similarly, among non-financial components, employees' education, executive board ratio and independent auditor opinion had significant influence on the considered difference and could explain this difference to

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some extent. Of course, the financial and non-financial parameters gave different qualitative and quantitative explanations but the most important factor was residual income.

RECOMMENDATIONS/SUGGESTIONS

Based on the results of this research as well as other studies indicating the important effects of non-financial measures on companies' values from stockholders points of view as well as regarding the fact that the conceptual manifestos published by FASB recommend companies to disclose their non-financial information voluntary we recommend companies' managers to show their sensitivity to non-financial information disclosure and similar to financial information consider non-financial one as important information and only disclose this type of information when it is necessary.

CONCLUSIONS

Since the influences of both financial and non-financial parameters on companies' values have been confirmed, the theory of "the informational content of financial and non-financial factors" has been approved. Therefore, we expect stock market to be sensitive to non-financial values similar to financial values which implies the experts and experience of stockholders and higher efficiency of Iran's stock market. It should be mentioned however that we selected limited variables and the research was carried out in a limited period of time. So, we can support the results of this study through doing other studies. This behavior of stock market could be subjected to signal theory in which instead of pure income, stock holders pay more attention to the quality of information as well as environment.

SCOPE FOR FURTHER RESEARCH

This research did not consider some non-financial information. We suggest next researchers to consider these factors in their studies and assess their influences especially the influence of environment data disclosure and employment of graduated people.

In this research we did not eliminate the effect of industry category. We suggest next researchers to investigate its impacts. Also, for next works we suggest researchers to study the influence of the disclosure of R&D expenses and companies' entrepreneurship.

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