Examines the relationship between intellectual capital and social responsibility disclosure to the value of companies listed on the Tehran Stock Exchange

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Abstract: This study aimed to investigate the impact of the disclosure of intellectual capital and social responsibility have been made on value of companies. This research as applied research and gathering information and the most descriptive and correlational relationships between variables is. The study sample consisted of all companies listed on the Tehran Stock Exchange is in year 94, the 108 companies selected by systematic sampling was removed. To collect research data disclosure indicator of intellectual capital 61 items Lee et al. (2008) and disclosures social responsibility 20 items Nirwanto et al (2011) were used. According to data collected results showed that the disclosure of intellectual capital and its dimensions (including human capital, structural capital and relational capital) and disclosure of social responsibility and its dimensions (including information related to employee relations, information on community involvement and information about the production) there is a significant correlation with value of companies. Thus, generally it can be concluded that it is necessary Companies and investors to enable them to acquire sufficient knowledge of the intellectual capital on the basis of relevant information, better decisions And those investors also need to pay attention to current and short-term profit and in order to maximize their profitability a priority to invest in companies that have the most revealing of social responsibility.

[Saeid sinaei, Mahmoud ghaitasvand. **Examines the relationship between intellectual capital and social responsibility disclosure to the value of companies listed on the Tehran Stock Exchange.** *Nat Sci* 2018;16(4):55-61]. ISSN 1545-0740 (print); ISSN 2375-7167 (online). http://www.sciencepub.net/nature. 10. doi:10.7537/marsnsj160418.10.

Key words: intellectual capital disclosure, disclosure of social responsibility, value of companie

Introduction

In knowledge-based economy, knowledge and intellectual capital, as an element of producing wealth, are preferred in comparison to other obvious and physical properties. Revealing intellectual capital in annual reports helps the utility of capital market via reduction of unequal information between shareholders and the people in company.

Large companies beyond the borders of Iran provide social reports. These reports contain not only accounting information, but also some information about the effects of company's activity on maintaining environment, specially the reduction of pollution such as carbon dioxide. On the other hand, some of these companies provided their social activities beside annual financial statements.

Literature review

Background in Iran

Hossieni and Ghobadi (2016) provided a research as reporting social responsibility, financial performance and institutional ownership. Initially they investigated the relation between social responsibility of companies and the effect of mediator variable of financial performance. The results show that the mediator variable of financial performance affects on the relationship between social responsibility and institutional ownership.

Akbari el al. (2015) provided a research as the influence of advertisement on the relationship between social responsibility and the value of accepted companies in Tehran stock exchange, in 74 companies from 2008 to 2013. They showed that social responsibility has a significant impact on the value of the company.

Poorali and Hejami (2014) in their investigation on the relationship between social responsibility and institutional ownership in accepted companies in Tehran stock exchange showed a negative significant relationship between social responsibility, the information of staff's relations, production and environment, and the information of social participation and institutional ownership.

Background in foreign countries

Chen et al. (2016) in their research as the relationship between intellectual capital and market value and financial performance of accepted companies in Taiwan stock exchange showed that intellectual capital has a positive effect on the value of market and financial performance and may be determined as a criterion for future performance.

Nilsnu et al. (2015) investigated on intellectual capital and long-term performance in Japanese's IPO. They achieved that revealing the intellectual capital information causes a significant better long-term performance, thus it is very important for investment.

Septa et al. (2013) provided an article as the effect of revealing the information of companies' social responsibility on financial performance and the value of company in listed banking industry in Indonesia stock exchange. The results show that revealing companies' social responsibilities information affects on the measurement of financial performance, it means return on asset, return on exchange and return on sale.

Research hypothesis

Main hypothesis

1. There is a positive relationship between revealing intellectual capital and companies' value.
2. There is a positive relationship between revealing social responsibility and companies' value.

Research model

Sub-hypothesis

1. There is a positive relationship between revealing human capital and companies' value.
2. There is a positive relationship between revealing structural capital and companies' value.

Statistical population

The research statistical population contains all accepted companies in Tehran stock exchange in 2015.

108 companies are selected by sampling method of systematic omission.

Methodology

In this research and in descriptive level, the features of society are analyzed by frequency, percentage and tables. And in consequential level, Kolmogorov Smirnov test is used to determine if the data are normal or abnormal. If they are normal, Pearson correlation coefficient and regression test will be used to test the research hypothesis. Also SPSS 20 and EVIEWS 8 are used.

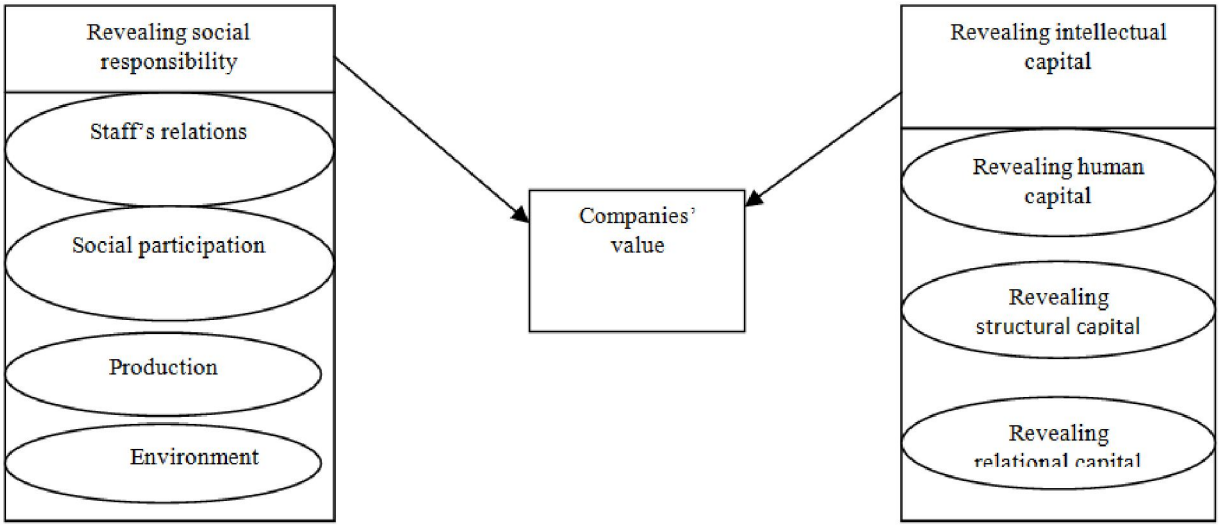

Figure 1.3. Research model

$Q_i = \alpha_i + \beta_1 HICD_i + \beta_2 SICD_i + \beta_3 RICD_i + \varepsilon$ مدل (1)

$Q_i = \alpha_i + \beta_1 EMPD_i + \beta_2 COMD_i + \beta_3 PROD_i + \beta_4 EVND_i + \varepsilon$

In this model:

Dependent variable

Companies' value

$$Q = \frac{companies\ market\ value}{companies\ office\ value}$$

Independent variables

x= checklist questions of revealing intellectual capital

y= checklist questions of revealing social responsibility

$\sum_{i=1}^{23} x_i$= HICD, revealing human capital

$\sum_{i=23}^{40} x_i$, = SICD, revealing structural capital

$\sum_{i=40}^{61} x_i$= RICD, revealing relational capital

$\sum_{i=1}^{6} y_i$ = EMPD, revealing the information about staff's relations

$\sum_{i=7}^{12} y_i$ = COMD, revealing the information about social participation

$\sum_{i=13}^{16} y_i$ = PROD, revealing the information about production

$\sum_{i=17}^{20} y_i$ = EVND, revealing information about environment

Derived from Lee et al. (2008) and Nirvantu et al. (2011) models.

Descriptive statistics.

Average, standard deviation, minimum, maximum, variables' Skewness and Kurtosis are provided in this part.

Table 1.4. descriptive statistic of variables.

According to the results of table 1.4 the average and criterion deviation in 108 sample are as following: revealing intellectual capital 27.74 and 9.54, revealing human capital 10.23 and 5.51, revealing structural capital 7.7 and 4.3, revealing relational capital 9.8 and 5.11, revealing information about staff's relations 2.07 and 1.55, revealing information about social participation 1.94 and 1.209, revealing production information 1.67 and 0.973, revealing information about environment 1.58 and 1.035, revealing information about social responsibility 7.27 and 3.89 and companies' value 1.32 and 0.496.

Testing research hypothesis.

Testing the first main hypothesis.

There is a positive relationship between revealing intellectual capital and companies' value.

Table 4.5: Pearson correlation coefficient between revealing intellectual capital and companies' value.

	Companies' value	
	Correlation	Significant level
Revealing intellectual capital	0.677	0.000

P<0.05

According to results of table 4.5, based on the significant level of 0.05, there is a significant relationship between revealing intellectual capital and companies' value. The intensity of relationship is 0.677 and in a direct way.

Regression is used in order to investigate the effect of revealing intellectual capital (X) on companies' value (Y). The results are provided in the following table:

Table 4.6: the results of model for the first main hypothesis

Explanatory variable	Dependent variable: companies' value			
	Coefficient	Beta Coefficient	T-statistic	P- value
Invariant value	0.834	-	-5.97	0.000
Revealing intellectual capital	0.045	0.677	9.4	0.000
F-statistic	89.495			
P-value	0.000			
R^2	0.458			
Adjusted R^2	0.453			
Durbin-Watson	1.811			

P<0.05

Regression for companies' value can be written as bellow:

ROA_i= +0.834 (0/045) $TICD_i$

According to table 4.6, the coefficient of revealing intellectual capital is positive and its significant level is 95%. Therefore, there is a direct and positive relationship. Based on the results the coefficient of determination for companies' value as dependent variable is 0.458. It shows that 45.8% of changes in companies' value are explained by the changes in revealing intellectual capital. As the result, the independence of remaining can be concluded. Based on table 4.6, the significant level is calculated and F-statistic is 0.000. it shows that regression significant level is 95%.

Testing the second main hypothesis

There is a positive relationship between social responsibility and companies' value.

Table 4.7. Pearson correlation coefficient between revealing social responsibility and companies' value

	Companies' value	
	correlation	significant level
Revealing social responsibility	0.454	0.000

P<0.05

According to results of table 4.7, based on the significant level of 0.05, there is a significant relationship between revealing social responsibility and companies' value. The intensity of relationship is 0.454 and in a direct way.

Regression is used in order to investigate the effect of revealing social responsibility (X) on

companies' value (Y). The results are provided in the following table:

Table 4.8: the results of model for the second main hypothesis

Explanatory variable	Dependent variable: companies' value			
	Coefficient	Beta Coefficient	T-statistic	P- value
Invariant value	-0.123	-	-1.056	0.293
Revealing social responsibility	0.074	0.454	5.24	0.000
F-statistic	27.5			
P-value	0.000			
R^2	0.206			
Adjusted R^2	0.199			
Durbin-Watson	1.677			

P<0.05

Regression for companies' value can be written as bellow:

ROA_i= (0/074) $CSRD_i$

According to table 4.8, the coefficient of revealing social responsibility is positive and its significant level is 95%. Therefore, there is a direct and positive relationship. Based on the results the coefficient of determination for companies' value as dependent variable is 0.206. It shows that 20.6% of changes in companies' value are explained by the changes in revealing social responsibility.

Testing the first Sub-hypothesis

There is a positive relationship between revealing human capital and companies' value.

Table 4.9. Pearson correlation coefficient between revealing human capital and companies' value

	Companies' value	
	correlation	significant level
Revealing human capital	0.396	0.000

P<0.05

According to results of table 4.9, based on the significant level of 0.05, there is a significant relationship between revealing human capital and companies' value. The intensity of relationship is 0.396 and in a direct way.

Regression is used in order to investigate the effect of revealing human capital (X) on companies' value (Y). The results are provided in the following table:

Table 4.10: the results of model for the second main hypothesis

Explanatory variable	Dependent variable: companies' value			
	Coefficient	Beta Coefficient	T-statistic	P- value
Invariant value	-0.051	-	-0.424	0.673
Revealing human capital	0.046	0.401	4.434	0.000
F-statistic	19.664			
P-value	0.000			
R^2	0.156			
Adjusted R^2	0.149			
Durbin-Watson	1.85			

P<0.05

Regression for companies' value can be written as bellow:

ROA_i= (0/046) $HICD_i$

According to table 4.10, the coefficient of revealing human capital is positive and its significant level is 95%. Therefore, there is a direct and positive relationship. Based on the results the coefficient of determination for companies' value as dependent variable is 0.156. It shows that 15.6% of changes in companies' value are explained by the changes in revealing human capital.

Testing the second Sub-hypothesis

There is a positive relationship between structural capital and companies' value.

Table 4.11. Pearson correlation coefficient between revealing structural capital and companies' value.

	Companies' value	
	correlation	significant level
Revealing structural capital	0.407	0.000

P<0.05

According to results of table 4.11, based on the significant level of 0.05, there is a significant relationship between revealing structural capital and companies' value. The intensity of relationship is 0.407 and in a direct way.

Regression is used in order to investigate the effect of revealing structural capital (X) on companies' value (Y). The results are provided in the following table:

Table 4.12: the results of model for the second main hypothesis

Explanatory variable	Dependent variable: companies' value			
	Coefficient	Beta Coefficient	T-statistic	P- value
Invariant value	-0.047	-	-0.407	0.685
Revealing structural capital	0.06	0.407	4.589	0.000
F-statistic	21.5			
P-value	0.000			
R^2	0.166			
Adjusted R^2	0.158			
Durbin-Watson	1.990			

P<0.05

Regression for companies' value can be written as bellow:

$ROA_i = (0/061)\ SICD_i$

According to table 4.12, the coefficient of revealing structural capital is positive and its significant level is 95%. Therefore, there is a direct and positive relationship. Based on the results the coefficient of determination for companies' value as dependent variable is 0.166. It shows that 16.6% of changes in companies' value are explained by the changes in revealing structural capital.

Conclusion

Results of testing first main hypothesis

There is a positive relationship between revealing intellectual capital and companies' value.

According to results of table 4.5, based on the significant level of 0.05, there is a significant relationship between revealing intellectual capital and companies' value. The intensity of relationship is 0.677 and in a direct way. It means that if revealing intellectual capital increase, companies' value will increase. Based on the results the coefficient of determination for companies' value as dependent variable is 0.458. It shows that 45.8% of changes in companies' value are explained by the changes in revealing intellectual capital. These results are the same as results provided by Nilson et al. (2015), Zhigal (2010), Sherand and Verchia (2004), Hemati et al. (2014), Shams and Khalili (2011) and Anvari and Seraji (2005).

Results of testing second main hypothesis

There is a positive relationship between revealing social responsibility and companies' value.

According to results of table 4.7, based on the significant level of 0.05, there is a significant relationship between revealing social responsibility and companies' value. The intensity of relationship is 0.454 and in a direct way. It means that if revealing social responsibility increase, companies' value will increase. Based on the results the coefficient of determination for companies' value as dependent variable is 0.206. It shows that 20.6% of changes in companies' value are explained by the changes in revealing social responsibility. These results are the same as results provided by Akbari et al. (2015), Jafarzadeh and Zienali (2013), Saiedi (2012), Septa et al. (2013), Servas and Tamau (2013), Lee et al (2011), Hetun (2008).

Results of testing first sub-hypothesis

There is a positive relationship between revealing human capital and companies' value.

According to results of table 4.9, based on the significant level of 0.05, there is a significant relationship between revealing human capital and companies' value. The intensity of relationship is 0.396 and in a direct way. It means that if revealing human capital increase, companies' value will increase. Based on the results the coefficient of

determination for companies' value as dependent variable is 0.156. It shows that 15.6% of changes in companies' value are explained by the changes in revealing human capital. These results are the same as results provided by Helena (2007), Hemati and Jalili (2012), Hemati et al. (2012), Namazi and Ebrahimi (2009), Anvari Rostami and Seraji (2005).

Results of testing second sub-hypothesis

There is a positive relationship between revealing structural capital and companies' value.

According to results of table 4.11, based on the significant level of 0.05, there is a significant relationship between revealing structural capital and companies' value. The intensity of relationship is 0.407 and in a direct way. It means that if revealing structural capital increase, companies' value will increase. Based on the results the coefficient of determination for companies' value as dependent variable is 0.166. It shows that 16.6% of changes in companies' value are explained by the changes in revealing structural capital. These results are the same as results provided by Nilson et al. (2015), Zhigal (2010), Sherand and Verchia (2004), Shams and Khalili (2011), Anvari Rostami and Seraji (2005).

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3/7/2018