

## The Evaluation Relationship between the Factors Affecting the Security of Information Systems and the Financial Reporting

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**Abstract:** Security of information systems is threatened by a lot of factors. The effect of these factors on financial reporting is incredible. In this paper, we evaluate the relationship between timely reporting with Risk of physical and network information systems in Tehran stock exchange. For this purpose, of among 205 selected companies in stock, 104 companies was selected in a simple random way, as a sample, and observation was evaluated for a period of five years (years 2008 to 2012). The purpose of the research, applied research; In terms of the type of research design to rely on historical data, the events and the way the inductive inference is Descriptive. In order to do this project, we used from statistical techniques of “K- S” T- Student, Combined Linear Regression Analysis and ... . Hypothesis test results indicate that a reverse relation between Risk of physical and Risk of network information systems with timely reporting Financial Statements. It means that with increasing security risk in information systems of selected companies, financial reporting was done with a more delay. The estimated relation showed that with increasing company risk level, larger company size and better financial performance, the financial reports is presented with a lower delayed.

**Keywords:** Information Systems; Risk of Physical; Risk of Network; Financial Reporting; Timeliness

### 1. Introduction

In capital markets of developing countries, timely reporting is considered as a main tool to decrease abuse of update information by staffs within the company (Owusu-Ansah, 2000).

The importance of information timeliness for decision-making is examined in many researches (Ball et al, 2000).

This study deals with several factors that can be effective in financial notes (statements) reporting. Timely reporting of financial statements has been used as a criterion to publish financial reports.

Like the other features of information, timeliness is also a qualitative Criterion and here it is a challenging problem to change it into a quantitative one in order to make use of it in

statistical tests and to gain more effective information about it.

As mentioned in statement 57 of the US accounting definitions No2, the solution is to use it in the frame of days and more elaborately by hours.

In order to measure financial reporting timeliness of the selected companies in this research, the scale of reporting speed was used (the time difference between legal publication date of financial reports and publication date of financial reports by companies in day).

Computerized accounting information systems can accelerate financial statements preparations and can win human weak points (shortcomings) in data processing.

As information systems have become more prevalent in business, the consequences of information system security violations have become more and more costly (Sun et al, 2006).

For example, the 2010 Computer Crime and Security Survey on 738 organizations by the Computer Security Institute reported a total estimated annual loss of \$190 million caused by information systems security incidents (Gordon et al, 2010). Concepts of computerized delinquencies and information security were beyond the specific geographical boundaries changing into a global problem. Williams asserts that any kind of security faults, even a very small one may lead into a very big and costly loss (Williams, 1995).

Security of accounting dealings processing is an important matter. So, accountants need science and awareness about threats and hazards related to computer security (Davis, 1997).

Information systems risk is a kind of firm's operational risks. Security risk is caused by external and internal relevant factors (Feng et al, 2013). This study wants to search whether physical risk and network risk of accounting information systems can influence timely financial reporting within the accepted companies by Tehran stock exchange, and if yes, how large is this effect? In this study, risk of physical security and information systems network of the companies were completed via ranking the check list gathered from company data.

Timely reporting is a function of other factors, some of which were examined in this study such as firm operation indices (ROE), financial risk of the firm, and firm size. According to the importance of information systems and universities' ignorance about it, conducting such research is critical.

### **1.1. Research Background:**

Literature review of this study is divided into two groups. The first group refers to risk of information systems and the second one

concerned with effective factors on reporting manner (style).

Feng, N. and Wang, (2013), relevant variables to security risk are classified into six groups including physical security, network security, host security, software security, information and support security, communication and productivity security.

Probability of risk occurrence and its severity were evaluated. Case study results showed that probability of network security risk and productivity and communication security risk is higher than specified threshold and their vulnerability of publication must be more exactly analyzed.

Hamzehnia, M. (2013) evaluated security in systems via phase petri network and security criteria in ISO/IEC9126 such as Access control, access audit capability, for protecting data from manipulation and encoding the data.

Leventis, S., Weetman, P. (2004) declared about effects of efficiency returns and its variations during the year before the date of the financial statement reports.

Aubert, Francois, (2006) examined effective factors on reporting delay in French firms. He selected a sample with 1131 companies during 1997 up to 2002 and evaluated the effects of bad news, losses, leverage, returns of efficiency, number of analysts, stock price fluctuations, firm size, technology, turnovers, ownership expenses (costs), and the different kinds of financial statements on reporting delay. Research results showed that there is a significant relation between reporting delay and all kinds of financial statements, leverage, stock price fluctuations, turnovers number of analysts and bad news while there is not such a relation between reporting delay and other variables.

Dogan, M. Coskun. (2007) selected a sample containing 249 companies accepted in Istanbul stock exchange in 2005.

In this research, the relation of four independent variables with timeliness of financial reporting is evaluated.

These four independent variables are good and bad news (or company profit and loss indicated by two ROA & ROE criteria, financial risk firm size and firm special field of industry). The results showed that timeliness of financial reporting date is affected by firm profitability capacity.

Firms with good news (having a high error rate of investment returns and or higher returns of equity) have published their financial statement sooner than companies with unpleasant news. Results also showed that firm size, i.e. financial risk, relevant timing and policy to timely reporting of previous years were effective on companies timely reporting.

Etemadi, A. H, Yarmohammadi (2003) examined effective factors on interim statements timely reporting of the accepted companies by Tehran stock exchange. This study consisted of a sample with 40 companies during the years of 1998 – 2000, focusing on these variables; firm size, profitability, operational complexity, years of acceptance in exchange market, ownership combination, existence or lack of accounting desirable costs and stock trades. At last, result show that only stock trades have positive effects on speed (fastness) of interim statements. It means the greater turnover (stock trades) in a specific period, this period reports will be more rapidly published in the market.

Mahdavi and Jamalianpoor (2010) studied the factors affecting annual financial reporting velocity in the listed firms of stock exchange market in a period of 1999 to 2008. Using multivariable regression, they studied the relation between firm size, financial and non-financial ratios and re-investment of current earnings and financial reporting velocity or time difference between annual audit report due and the expiration date of firm's financial year. The results show that there is a significant relation

between report velocity and kinds of financial and non-financial ratios, that is, firms with lower debt ratio have a higher velocity in presenting annual report.

Khodadadi, et al. (2012) studied the relation between firm's financial performance and financial reporting timing in the listed firms of Tehran Exchange Market in a period of 2004 to 2010. This research studies variables including return on equity, stock yield changes, financial risk, and firm size.

The results indicate that there is a positive significant relation between return on equity and stock yield changes and accelerated financial statements reporting compared to last year (it equals the number of days that firm reports financial statements sooner than last year), and there is a negative significant relation between financial risk and financial risk changes and accelerated financial statements reporting. The results, also, indicate that bigger firms present financial reports on time.

### **2.1.) Research hypotheses**

**Major hypothesis:** there is a relation between effective factors on security risk in information systems and publishing financial reports in the accepted companies by Tehran stock exchange.

#### **Minor hypotheses:**

1- There is a relation between risk of physical security in accounting formation systems and timely publication of companies' financial reports.

2- There is a relation between security risk of Network accounting information systems so-called Internet (electronic) marketing and timely publication of companies' financial reports.

### **2. Materials**

The present paper is an applied study, while it is retrospective in terms of research design, for it's relies on the historical information and this descriptive study, concludes inductively. This paper dealt with information during the years of 87 – 91 and examined effects of physical security risk of information systems and network

security risk on financial reports timely publication of the chosen companies.

**1.2. Statistical population, sample and sampling:**

The research statistical community included the whole accepted enterprises in Tehran stock exchange with such conditions:

1. Their fiscal period must be ended in March (month) to increase company comparison aspect.
  2. A five-year financial report of the companies must be available.
  3. They must not be in possession of investment companies or financial (dealers) brokers.
  4. Companies' lack of losses.
  5. There shouldn't be in the house in transactional index for longer than three months.
- Regarding these limitations, 205 companies were chosen as a statistical population, among which 104 ones were selected in simple random sampling method. The computation formula is as follows:

$$n = \frac{t^2_{(\alpha/2,df)} \cdot S^2}{D^2}$$

$$n = \frac{t^2_{\left(\frac{0.025}{8}\right)}(28.162)}{(1.2)^2} = \frac{(2.3060)^2(28.162)}{(1.2)^2} = 104$$

(1)

D: absolute value of estimation error that equals 1, 2 Mb the steady.

$t_{(\alpha/2,df)}$ : a point of T-student distribution with df= n-1 degree of freedom, that the area located in its right side equals  $\alpha/2$ .

n: pilot sample that is nine in this study.

S: standard deviation of the studied pilot sample

**2.2. Analysis methods:**

- ✓ Analytic descriptive that: mean central indices, skewness distribution indexes were applied.
- ✓ Special method: descriptive methods, panel analysis and some software were used in this project including: views 7, SPSS 20, Excel.
- ✓ Testing defaults:
  1. K – S test very used to evaluate normality of data distribution and residuals;
  2. Fitness of linear pattern and nonexistence of irrelevant points (scattering diagram);
  3. Nonexistence of estimation error autocorrelation was examined via regression model in Durbin Watson test;
  4. Pearson linear correlation coefficient criterion was applied to measure linear independence of independent variables;
  5. Variance inflation factor and tolerance factor were used for colinearity test among independent variable;
  6. White test of homogeneity with Fisher and Kascoer criteria were applied for homogeneity test of variances steadiness.
  7. In order to determine panel or pooled model with Random or fixed effects Chaw and Hussmann tests were used.

T and F statistics were used for generalizing parameters to the related community and for specifying the relations.

**3.2. Research model:**

**Table 1: Variables**

Type of variable	Variable name	Criterion Calculation	Symbol
Dependent	Financial Reporting	Timely Reporting of Financial Statements	Y
Independent	Risk of Physical	1- Security in the ISO/IEC9126 in the Internal Organizational	X <sub>1</sub>
	Risk of Network	1- Security in the ISO/IEC9126 in the External Organizational	X <sub>2</sub>
Control	Size of Company	Logarithm of Revenue of Sales	X <sub>3</sub>
	Performance of Company	Return on Owner's Equity	X <sub>4</sub>

The Company's Overall Risk	Beta of Company	X <sub>s</sub>
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Delay in releasing financial reports = the due time for releasing financial reports – the release time of firm's financial reports (2)

If the firm delays releasing its financial reports, this equation is negative; if it reports on time, the answer is zero; and positive answer means that the firm has released the reports before due time.

Physical security risk and information systems network associated with the firms are calculated from 0 to 1 using security criterion in ISO / IEC 9126 model, and the point of finished checklist rating from the selected firm's data, and considering factors such as ease of access, observing access levels, coding security, audit capacity, the capacity of providing backup, firewall, protection against unauthorized access and audit levels, and if necessary, information modification as reliability or security risk complement.

Subtracting this value from 1, security risk is obtained. Such rating is defined as physical risk on interior-organization level and as security risk on exterior-organization or e-commerce level.

To calculate firm size, sales revenue logarithm is used (Zimmerman, 1983).

The article considers return on equity as a criterion for performance measurement. (Dugan, et al. 2007)

$$\frac{\text{Return on owner's equity} = \text{Net profit after tax}}{\text{Average on owner's equity}} \quad (3).$$

Beta coefficient is used as an indicator to determine firm's total risk, and it is evaluated on the basis of stock software.

**3. Results and discussion**

The population consists of selected firms from the listed firms in Tehran Stock Exchange until the end of 2012, and their dated performance data (except for the security risk of information systems) is gathered from Rahavard Novin stock software.

Physical security risk and information systems network associated with the firms are calculated by the finished checklist's rating from the selected firms' data.

Findings are described in Table 2. Observation has a total of 104 cases per year, and 520firm -year in a period of 5 years (2008 to 2012).

**Table 2:** Describes the Research Finding

Description	Minimum	Maximum	average	Coefficient of skewness	Coefficient of elongation
Financial Reporting	(25)	15	5	0.004	0.013
Risk of Physical	0.1112	0.8516	0.4535	0.0145	0.0452
Risk of Network	0.0125	0.9458	0.5624	0.1250	0.0954
The Company's Overall Risk	0.14	7.15	3/2512	0.5624	0.0412
Performance of Company	0.212	0.8542	0.3251	0.0895	0.0985
Size of Company	11.452	25.165	18.1112	0.1254	0.3251

Example of calculation:

$$\text{Risk of Physical Companies} = C_1 0.1236 + C_2 0.5632 + C_3 \dots + C_{104} 0.6925 = 47.164$$

$$\text{Average on Risk of Physical} = \frac{47.164}{104} = 0.4535$$

**1.3. Results in the form of findings description:**

1. Releasing financial reports in selected firms in terms of per day, at least (25) days of delay and at most 15 days before the due time, and on the average, releasing financial reports 5 days before the due time.
2. Physical security risk of information systems in selected firms in terms of percent, at least 0.1112, and at most 0.8516 and the average amount of risk in firms were 0.4535.

3. Security risk in the firms' information systems, in terms of percent, is at least 1.25, and at most 94.58, and the average risk between the firms was 56.24.
4. Firms' total risk or Beta in selected firms was at least 0.14, and at most 7.15, and the average risk of firms was 3.25.
5. Firm's return on equity as a measure of financial performance, in terms of percent, was at least 2.12, and at most 85.42, and on the average of 32.51.
6. Firm size in the sample, as their sales logarithm, is measured at least 11.452, and at most 25.16. The value of this variable is determined 18.11, on the average.

**2.3. Assumptions Analysis:** Before applying the regression model, the assumptions of using this model are assessed. These assumptions include:

**1.Normality of variables distribution:** The descriptive statistics of Table 2 including skewness and stretching coefficients show that the normality of variables are confirmed, since they almost tend to zero, that is the normality of variables is confirmed tolerably. To judge the normality of dependent variable distribution and independent variables of population, Kolmogorov-Smirnov is used.

**Table 3:** Kolmogorov-Smirnov test for the dependent variable

variable		Z score Kolmogorov-Smirnov	Significance level	result
Financial Reporting	Y	1.356	0.123	Normal distribution

**Table 4:** Kolmogorov-Smirnov test for the independent variables

variable		Z score Kolmogorov-Smirnov	Significance level	result
Risk of Physical	X <sub>1</sub>	0.165	0.0950	Normal distribution
Risk of Network	X <sub>2</sub>	0.145	0.0990	Normal distribution
The company's overall risk	X <sub>3</sub>	0.179	0.0782	Normal distribution
Size of company	X <sub>4</sub>	0.185	0.0576	Normal distribution

Performance of Company	X <sub>5</sub>	0.216	0.0845	Normal distribution
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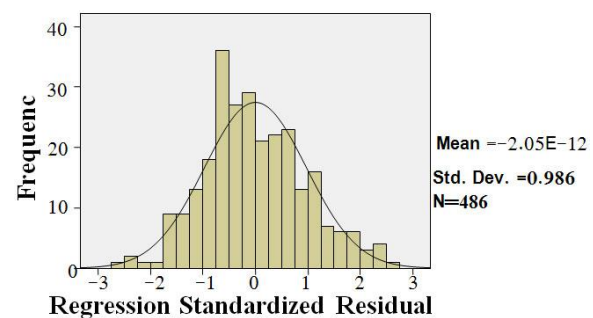
**2. Errors independence test:** Durbin Watson statistic is used in this context. According to the Table 5, the value of Durbin Watson for the regression model in this research is between 5. 1 and 5. 2; So, H0 assumption saying there is no correlation between the errors is confirmed and multiple linear regressions might be used on this basis

**Table 5:** Errors independence test

The coefficient of determination	Adjusted coefficient of determination	Standard error	Camera Watson Statistics
0.462	0.356	0.65892111	1.9255

**3. Reviewing the normality of errors distribution:** In this case, the histogram of errors distribution is compared with normal curve. As shown in the graph, in the estimated regression model, the average of errors distribution is almost zero, standard deviation is near 1 (0.994), and consequently errors distribution in regression model is normal.

**Dependent Variable: EP**



**Figure 1:** Curved parts of the Regression model errors

**4. The linear independence of independent variables:** Theoretically, each independent variable is gathered in a different way and they don't have a linear dependence.

To measure the linear independence of independence variables of the model, Pearson's correlation coefficient is used. Following table



shows measurement results. In all cases, the total number of data was 520, numbers of each cell are removed and the remaining numbers are Pearson correlation coefficients and significance level. The calculated correlation coefficients measure mutual linear effects of dependent variables on each other based on binary comparison.

**Table 6:** The results of the linear independence of the independent variables

variable	Risk of Physical	Risk of Network	The company's overall risk	Size of company	Performance of Company
Risk of Physical	1				
Risk of Network	0.0123 0.0196	1			
The company's overall risk	0.0245 0.0745	0.07458 0.05241	1		
Size of company	0.2130 0.3254	0.1265 0.0023	0.3521 0.0042	1	
Performance of Company	0.1896 0.0124	0.0125 0.0021	0.1654 0.045	0.1235 0.0052	1

Based on calculations and according to Table 6:

- There is a direct relation between all variables, because calculated correlation coefficients are positive for all independent variables.

There is a weak linear relation between independent variables. Since, the calculated coefficients, regardless of their sign, tend to zero. Based on this, the relation might be tolerable and the linear independence of independent variables is confirmed.

**5. Multicollinearity Test between independent variables:** Binary Multicollinearity Test among independent variables based on measuring tolerance factor is another form of assessing linear independence among independent variables; the results are summarized in Table 7: According to the results of Table 7, since in all 10 cases tolerance is more than 0.2 and tolerance factor almost tends to 1(so less than 5), the

assumption of no multicollinearity among all independent variables is confirmed.

**Table 7:** Multicollinearity Test between independent variables

Description of Variables	Tolerance	Variance inflation factor
Risk of Physical and Risk of Network	0.978	1.028
Risk of Physical and The company's overall risk	0.707	1.415
Risk of Physical and Size of company	0.461	2.175
Risk of Physical and Performance of Company	0.951	1.046
Risk of Network and The company's overall risk	0.962	1.031
Risk of Network and Size of company	0.981	1.017
Risk of Network and Performance of Company	0.875	1.112
The company's overall risk and Size of company	0.923	1.231
The company's overall risk and Performance of Company	0.885	1.325
Size of company and Performance of Company	0.987	1.119

**6. Test of homogeneity or consistency of variances:** This research uses White Test for homomorphism with two measures of Fisher and Q-square. According to research results in Table 8, H0 is confirmed both on 95% and 99% reliability level based on homomorphism or equality of variances

**Table 8:** Test of homogeneity of variance (White)

Test Criteria	The test statistic	Significant level	Test result
Fisher test	4.9965	0.0000	Assumption of homogeneity of variance will be accepted.
K Two test	75.2345	0.0000	Assumption of homogeneity of variance will be accepted.

**7. Determining the appropriate model to estimate regression model:** Considering research literature on one hand, and the limited sample size in selected stock firms, and the number of variables in estimation equation on the other hand, using cross-sectional regression for each year had no significant results.

Then, in this study, pool data or data panel is used. In order to determine the appropriate model (consolidated or data panel with fixed or random effect) Chow or Hausman tests are used. Chow test is used to determine panel regression type in terms of having constant or non-constant Y- intercepts.

Based on Table 9, it could be concluded that, in all testing years, H1, based on inequality of

Y-intercepts, is confirmed. In other words, there are individual or group effects, and Panel data method is used to estimate the regression model.

**Table 9:** Summary results of the Chow test

F test	F statistics	probability	The test result
quantity	***3.007817	0.0000	Reject the null hypothesis

\*\* Significant at 99% level

When it was clear that Y-intercepts are not equal in different years, the method of model estimation must be chosen from fixed or random effects methods, that's why Hausman test is used.

Table 10 summarizes the results from Hausman test:

**Table 10:** Summary results of the Hausman test

Description	$\chi^2$ statistics	probability	The test result
quantity	***58.002697	0.0000	Reject the null hypothesis

\*\*\* Significant at 99% level

According to test significance level, is confirmed and the regression model fit in this research, using panel data model estimation, is done with "appropriate fixed effects method".

**3.3. Analyzing the relation between variables:**

With regard to setting defaults for using compound linear regression, this method is used to determine a relation between the dependent variable and independent variables.

Based on the research model, mathematical relation between the variables is defined as the following compound linear:

$$Y = \alpha + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \beta_4X_4 + \beta_5X_5 \tag{4}$$

In this section, using compound linear regression, parameters from the above equation are estimated. Table 11 summarizes the results of estimating regression parameters in the expression of the relation between the variables.

**Table 11:** Estimation of model parameters

Description	Symbol	Coefficient	Standard coefficient	T statistic	Significant level
The width of source	$\alpha$	8.725	0.0000	6.1254	0.0020
Risk of Physical	$\beta_1$	-2.125	-2.352	-4.3264	0.0095
Risk of Network	$\beta_2$	-1.125	-1.9854	-3.5648	0.0099
The company's overall risk	$\beta_3$	0.758	0.6524	5.2145	0.0009
Size of company	$\beta_4$	5.452	6.4521	6.2154	0.0007
Performance of Company	$\beta_5$	1.254	2.3251	7.1254	0.0004

If the estimated parameters of the above table are substituted in the linear parametric relation of research model, the mathematical equation between the variables are like the following linear equation:

$$Y = 8.725 + X_1 - 2.125 + X_2 - 1.125 + X_3 0.758 + X_4 5.452 + X_5 1.254 \tag{5}$$

Eliminating Y-intercept or fixed value, the estimated linear relation for this equation, the linear relation is as follows. In this case which is known as standard or adjusted form, all changes in the dependent variable is presented based on the changes in independent variables.

$$Y = 0.0000 + X_1 -2.352 + X_2 -1.9854 + X_3 0.6524 + X_4 6.4521+ X_5 7.1254 \tag{6}$$

The kind of relation between each independent variable and the dependent variable could be interpreted according to the results from regression parameters estimation as summarized in Table 11. As a general rule in cases when estimated coefficient or independent variable's gradient is positive, there is a direct relation between the independent variable and dependent variable; and when the estimated gradient is negative or below zero, there is a reverse relation between independent and dependent variables. In this part, regarding this general rule and the signs of coefficients or estimated



gradients, the relation between variables are analyzed:

**1. The relation between physical risk and releasing financial reports:** Based on regression estimations, and considering the negative sign of this coefficient, it could be concluded that: 'there is a reverse relation between the amount of physical risk of information systems in sample firms and the release time. That is, along with the increase in physical risk inside the organization, the release time is increased against the due time, in another term; the firm releases financial reports with longer delays. "

**2. The relation between network risk and releasing financial reports:** Based on regression estimations, and considering the negative sign of this coefficient, it could be concluded that there is a reverse relation between "the amount of network risk of information systems in sample firms and the release time. That is, along with the increase of network risk in communication atmosphere outside the organization, the release time is increased than the due time, in other words, the firm releases financial reports with longer delays. "

**3. The relation between network risk and releasing financial reports:** Based on regression estimations, and considering the positive sign of this coefficient, it could be concluded that "there is a direct relation between the amount of firm's total risk in random sample firms and the release time. That is, along with the increase of firm's total risk, the release time is increased than the due time, in other words, the firm releases financial reports with shorter delays. "

**4. The relation between firm size and releasing financial reports:** Based on regression estimations, and considering the positive sign of this coefficient, it could be concluded that "there is a direct relation between

firm size based on sales logarithm in sample firms and the release time. That is, along with the increase of sample firm size, the release time is decreased than the due time, in other words, the firm releases financial reports with shorter delays. "

**5. The relation between firm's financial performance and releasing financial reports:** Based on regression estimations, and considering the positive sign of this coefficient, it could be concluded that "there is a direct relation between return on equity as the criterion for firm's financial performance in sample firms and the release time. That is, along with the increase of return on equity in firms or the improvement of financial performance, the release time is decreased than the due time, in other words, the firm releases financial reports with shorter delays. "

With regard to using random sample from among the selected stock firms, and in order to generalize the findings about the relation between the variables, this section considers estimated relation generalization on the basis of T-student and Fisher tests:

**A) Significance test for each parameter of the estimated relation:** As shown in the last column of Table 11, significance levels based on the results of T-test, are calculated as independent variables for Y-intercept parameters and independent variables gradient in the population selected from Stock Exchange Market as independent variables. Comparing each one of these significant levels with test significant level (1%), the linearity of the relation between each independent and dependent variables is confirmed.

**B) The significant test of estimated linear relation:** In this regard, variance analysis and Fisher test are used. The results are summarized in the following table:

**Table 12:** Analysis of Variance

Errors	Total changes	Degrees of freedom	average changes	F statistics	Significance level
Between-group	0.372	5	0.0931215	15.218	0.00
Daroneh group	2.955	513	0.0061192		
Total	3.327	518			

The Table calculates square and mean square of interior and exterior group, and calculates Fisher statistics based on that, and also, its corresponding significance level.

According to the above Table, since the significance level is less than 1% and tends to zero, then, H1 is confirmed, assuming that at least one of the independent variables has a linear relation with the dependent variable.

#### 4.3. Inference:

To evaluate the relation between information system risk and financial reports release time, the population is defined with 205 firms, imposing some limitations. Among the chosen firms, 104 firms were randomly selected and their performance data was achieved based on financial reports presented in Stock Exchange Market, or based on assessment checklists for physical and network risk.

After findings description and analyzing the presuppositions of a compound linear regression, the relation between variables was estimated. Based on the results from Kolmogorov-Smirnov test and White homomorphism, and other appropriate tests, it was determined to estimate the relation between variables through a compound linear regression method.

The results from a regression estimation reveal a reverse relation between interior and exterior - organization risks (or physical and network) in information systems and financial reporting. In other words, increased risk of information systems in these firms causes the financial reports release by longer delays. Estimated relation, also, indicated that there is a direct relation between other independent variables

including firm size, total firm risk and financial performance with the release time

#### 5. Conclusion

Medium physical risk in the selected firms is calculated 0.4535, and medium network risk in these firms is estimated 0.5624. Feng and Yong estimated medium physical risk 0.5233, and medium network risk 0.2217. This research uses checklist method and it may consider people's desire, but considering high difference in calculating network risk confirms the idea that selected firms don't give much importance to their network security. Considering that most selected firms use Honeypots or only one tool as the security of information systems, this idea is rather confirmed.

The estimated relation indicates that the larger the firm size, the shorter delayed are the financial reports. Big firms, generally, report on due time for two reasons. First, they possess more resources, more accounting staff who are more educated, and more improved accounting information systems which can report on time. Most big firms are able to install equipment and computer sites, purchase computer software or use programmers to write necessary programs. Applying this tool leads to providing fast and immediate reports and timely annual reporting. Secondly, having stronger internal control systems in order to help the audits to spend less time on content and observation tests, leads to shorter delayed auditing, and also, the firms facilitate auditing by sharing some of their staff with the auditors and controllers, consequently, firms could report fast( Dougan et al :2007).

Estimated relation indicates that there is a direct relation between total firm risk and financial performance (return on equity) and the release time. In other words, increasing firm's risk level and improving financial performance, the financial reports release time is decreased and financial reports are presented with shorter delays. The results of this research resemble the

results of Dougan et al(2007) and Leventis and Weetman (2004).

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