

# A Study on the Changes According to the Adoption of Horizontal Compliance System

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## Abstract

Since 2011, Korea has entered into a mutual agreement between the tax authorities and taxpayers to open and negotiate important tax issues in advance, and operates a taxpayer system that implements the tax liability accordingly.

The horizontal Compliance Adoption is based on the taxpayers who have an internal tax control system and the tax office to sign a taxpaying agreement, and the taxpayer to voluntarily and transparently disclose important tax issues to consult with the tax authorities. Taxpayers who make tax declarations in accordance with the negotiated contents are excluded from the regular tax audit.

As a result, the adoption of a horizontal compliance tax system resulted in positive results such as eliminating tax uncertainties, strengthening communication with tax authorities, and reducing the cost of tax cooperation. These results indicate that the firm's future corporate value can change very steadily, and if the future corporate value is evaluated positively, the credit rating will also be adjusted upward. The purpose of this study is to examine whether corporate value and credit rating changed positively after introduction of corporate tax system.

**Keywords:** Horizontal Compliance Adoption; Firm value; Credit rating

## INTRODUCTION

Horizontal Compliance is a system that enables a company to quickly and accurately fulfill its tax obligations after concluding a sincere tax payment agreement with a company selected through the review of the agreement and checking the implementation status of internal tax control through regular or frequent on-site checks or telephone consultations. A corporation that enters into such a sincere tax payment agreement can solve the tax problem quickly, thereby reducing the uncertainty in tax, reducing the cost of additional tax and tax disobedience that may arise in the future, and, if sincere tax is recognized, it is excluded from the regular tax audit selection for the business year under the agreement.

The horizontal sincere tax system is regarded as an alternative to tax audits as it is a system that allows taxpayers to early resolve uncertainties over tax issues, instead of providing transparent and accurate tax information on companies.

According to the IFA(2012), the adoption of a faithful tax system has the following advantages:

- (a) Earlier resolution of issues – including pre-closing – transactions
- (b) Full disclosure and transparency means less compliance checks and the nature of these checks changes – audits can be performed quicker/more focused (in any case no hide and seek games on the facts) and become more system oriented.
- (c) More knowledge about the TPs business and a higher degree of commercial awareness leads to more efficient assessment of tax positions.
- (d) More insight in the TA's views leads to TP/TIs considering less aggressive tax planning positions.
- (e) Open discussion on tax positions means less risk of incorrect tax assessments and less need to use legal remedies. This is generally more efficient and leads to quicker legal certainty.
- (f) Disagreements on the correct amount of tax payable focus on points of law rather than on facts. This should lead to quicker settlements of disputes.
- (g) Successful ERs lead to less bureaucratic requirements for ER
- (h) participants, reducing compliance costs.

Although research on the horizontal compliance taxation system is very rare, Park In-mok and Hong Jung-hwa (2012) questioned and analyzed how horizontal compliance taxation system affects the satisfaction of corporate executives and employees and the enhancement of corporate transparency. Beck and Lisowsky(2014) examines the empirical relation between voluntary participation in the Internal Revenue Service's (IRS) Compliance Assurance Process(CAP) audit program, and tax uncertainty disclosed in financial statements pursuant to Financial Interpretation No. 48(FIN 48). Based on the findings of prior analytical and empirical research, we formulate and test hypotheses about the likelihood of voluntary CAP participation and the resulting effect on FIN 48 tax reserves. We find that firms with moderate-sized FIN 48 reserves are more likely to participate in CAP than firms with either small or large reserves, indicating an inverted U-shaped relation between CAP participation rates and firms' tax reserves.

This study examines the effect of horizontal compliance tax on firm value and credit rating.

$$TQ = \beta_0 + \beta_1 YEAR(Faith) + \beta_2 YF + \beta_3 Big4 + \beta_4 TO + \beta_5 Group + \beta_6 Major + \beta_7 Stock + \beta_8 Asset + \beta_9 Debt + \varepsilon \quad (2)$$

## HYPOTHESIS AND RESEARCH METHODS

### Hypothesis

Companies that have signed a tax compliance agreement will be able to resolve tax uncertainties early. It will be evaluated as having a low taxation risk because it is well equipped with an internal tax control system and it is determined in consultation with the Internal Revenue Service in a transparent manner. These assessments are expected to have a positive impact on corporate creditworthiness.

Companies that have signed a tax compliance agreement will be excluded from the regular tax audit if they disclose tax issues in a transparent manner and follow the tax declaration through consultation with the National Tax Service. Therefore, it can be expected that tax avoidance will decrease compared to other firms.

The purpose of this study is to verify whether a company that entered into a contract has a higher credit rating and enterprise value than before the conclusion of the agreement.

To test the theories, this study set up the two hypothesis as follows;

**Hypothesis 1:** Companies that have adopted a compliance tax system will have a higher credit rating after the adoption of the system.

**Hypothesis 2:** Companies that have adopted a compliance tax system will have a higher firm value after the adoption of the system.

## RESEARCH METHODS

### Samples

In this study, the companies which meet the following conditions have been selected as samples.

- 1) Non-financial companies belonging to Companies that adopt a horizontal compliance tax system, which fiscal year ends December 31
- 2) Companies that can extract taxable income data from annotation of audit report
- 3) Companies that capital has not been impaired

360 companies which meet the above conditions has been selected. And three times the sample was selected in response to the selected sample.

### Research model

To test the hypotheses 1 and 2, this study uses the following equations (1) and (2).

$$Credit = \beta_0 + \beta_1 YEAR(Faith) + \beta_2 YF + \beta_3 Big4 + \beta_4 TO + \beta_5 Group + \beta_6 Major + \beta_7 Stock + \beta_8 Asset + \beta_9 Debt + \varepsilon \quad (1)$$

Credit: 11- Credit Rating

TQ= {(number of ordinary shares \* closing price of ordinary share) + (number of preferred shares \* closing price of preferred share) + book value of liabilities} / total asset amount

YEAR=2011~2013 1; Otherwise 0

Faith= Companies that adopt a horizontal compliance tax system 1; Otherwise 0

YF=YEAR\*Faith

Big4: PwC, KPMG, Deloitte, Ernst & Young 1; Otherwise 0

TO: Tax Office in the metropolitan area 1; Otherwise 0

Group: Mutual investment restriction business groups 1; Otherwise 0

Major: Major Company 1; Otherwise 0

Stock: listed company 1: Otherwise 0

Asset: Company size (log (total assets))

Debt: Debt ratio (total debt / total capital)

Credit, The dependent variable, is company's Credit rating. And TQ, The dependent variable, is Tobin's Q as a proxy variable for firm value, and Tobin's Q is the ratio of the market value of equity to the replacement cost of the asset. The major interest variable is the tax carry-over loss (NOL), and in order to grasp it, NOL data collected from the annotations of audit reports manually. Controlled variables are major accounting firm or not (Big4), Tax Office in the metropolitan area or not (TO), Mutual investment restriction business groups or not (Group), major company or not (Major), listed company or not (Stock), size of company (Asset), debt to equity ratio (Debt) have been used.

## RESULTS OF ANALYSIS

### Descriptive statistics values

Panel A in Table 1 shows descriptive statistics values. The average and median values of Credit were 6.603 and 7.000. TobinQ was 0.902 and median 0.567, while credit was 6.603 and median 7.000. Panel B is a table showing the descriptive statistics of the respondent firms. TobinQ has an average of 0.723 and median 0.520, while the average of credit is 5.682 and median 6.000.

It can be inferred that companies adopting a horizontal compliance are superior companies with higher corporate value and credit rating than those without sincere tax payment system, but with a small size but a large size and low debt ratio.

**Table 1.** Descriptive statistics values

Panel A : Analysis sample (N : 360)

Variable	Average	standard deviation	p25	median	p75
Credit	6.603	1.805	6.000	7.000	8.000
TQ	0.902	0.950	0.467	0.567	0.978
Big4	0.547	0.498	0.000	1.000	1.000
TO	0.417	0.494	0.000	0.000	1.000
Group	0.167	0.373	0.000	0.000	0.000
Major	0.933	0.250	1.000	1.000	1.000
Stock	0.500	0.501	0.000	0.500	1.000
Asset	26.018	0.793	25.508	26.016	26.566
Debt	0.491	0.277	0.254	0.461	0.661

Panel B : A corresponding sample (N : 1121)

Variable	average	standard deviation	p25	median	p75
Credit	6.603	1.805	6.000	7.000	8.000
TQ	0.902	0.950	0.467	0.567	0.978
Big4	0.547	0.498	0.000	1.000	1.000
TO	0.417	0.494	0.000	0.000	1.000
Group	0.167	0.373	0.000	0.000	0.000
Major	0.933	0.250	1.000	1.000	1.000
Stock	0.500	0.501	0.000	0.500	1.000
Asset	26.018	0.793	25.508	26.016	26.566
Debt	0.491	0.277	0.254	0.461	0.661

**Correlation analysis**

Table 2 is the result of Pearson's correlation analysis. There is a statistically significant positive correlation between Credit (credit rating), TQ( the proxy value of firm value) and YF(the proxy value of effect the adopting horizontal compliance) . From the analysis, it is confirmed that there is a measurement effect that Companies of a horizontal compliance have higher credit ratings and corporate value.

For Credit, Faith observed a positive (+) relationship within a statistically significant 1% range, while YF, the cross between Year and Faith, also observed a positive (+) relationship within a statistically significant 1% range. For the control variables, a significant positive (+) relationship was observed within the statistically significant 1% range, while a significant positive (+) relationship was observed within the statistically significant 5% range. A negative relationship between Select and Debt was observed within a statistically significant 1% range. For TobinQ, Faith observed a positive (+) relationship within a statistically significant 1% range, and YF, the cross between Year and Faith, within a statistically significant 5% range. In addition, Big4 and Major observed a positive (+) relationship within a statistically significant 5% range, while Stock and Asset observed a positive (+) relationship within a statistically significant 1% range. Through this analysis, the enterprise value and the faithful tax payment system adopted by the single variable analysis have positive inertia, and even after the adoption of the faithful tax system, a statistically significant positive correlation was observed.

**Table 2.** Pearson correlation

	TQ	Credit	Year	Faith	YF	Big4	TO	Group	Major	Stock	Asset
Year	0.017	0.010									
	0.507	0.698									
Faith	0.103	0.196	0.000								
	<.0001	<.0001	0.988								
YF	0.051	0.118	0.372	0.656							
	0.052	<.0001	<.0001	<.0001							
Big4	0.065	0.116	0.018	-0.046	-0.024						
	0.012	<.0001	0.479	0.075	0.354						
TO	0.039	-0.076	-0.001	0.042	0.027	-0.012					
	0.135	0.003	0.984	0.108	0.291	0.639					
Group	0.011	0.097	0.002	0.035	0.023	0.264	0.008				
	0.685	0.000	0.950	0.184	0.383	<.0001	0.747				
Major	0.057	0.250	0.000	0.014	0.009	0.150	-0.037	0.116			
	0.029	<.0001	0.994	0.600	0.731	<.0001	0.158	<.0001			
Stock	0.375	0.066	-0.001	0.154	0.101	-0.048	0.023	-0.053	0.117		
	<.0001	0.011	0.984	<.0001	<.0001	0.067	0.371	0.043	<.0001		
Asset	0.152	0.157	0.175	0.054	0.121	0.213	-0.045	0.193	0.335	0.286	
	<.0001	<.0001	<.0001	0.037	<.0001	<.0001	0.085	<.0001	<.0001	<.0001	<.0001
Debt	0.012	-0.678	-0.071	-0.136	-0.122	-0.071	0.056	-0.035	-0.214	-0.215	-0.201
	0.633	<.0001	0.006	<.0001	<.0001	0.006	0.033	0.183	<.0001	<.0001	<.0001

**Results of multivariate analysis**

Table 3 shows the results of the research hypothesis 1 & 2. This is the result of analyzing the effect of horizontal compliance tax on firm value and credit rating. YEAR variable (a period 2011–13) negative (-) correlation was observed within the range of 1% of statistical significance for a credit rating variable, but no statistical significance was observed for TQ (firm value) variable. As a result, coefficient and T values were -0.257 and -3.13, respectively.

On the other hand, for the YF variable, a positive correlation was observed within 1% of the statistical significance for the credit rating variable, but no statistical significance was observed for the firm value variable, coefficient and T values were 0.429 and 3.43, respectively.

The analysis results of other variables are as follows. A statistically significant positive (+) correlation was observed between Big 4 and Credit at the 5% range. The coefficient and

the T value were 0.159 and 1.96, respectively. Also for TQ, were observed at the 1% range. This means that the capital market has a positive assessment of the entities that are audited by a large accounting firm.

The statistically significant positive (+) correlation between the major company and the enterprise value were observed at the range of 1%. The coefficient and T values were 0.815 and 5.22, respectively. While, a statistically significant negative (-) correlation was observed between Stock (a listed company) credit ratings. And the debt ratio also showed a statistically significant negative correlation with the enterprise value at the 1% range. The coefficient values and T values were -4.883 and -33.85, respectively. Through multivariate analysis, adoption of horizontal tax was observed to have a positive effect on the credit rating of the entity, and hypothesis 1 was found to be supported. However, no results were observed on whether the entity adopting the horizontal tax had high corporate value.

**Table 3.** Analysis of the effect of a horizontal compliance tax on firm value and credit rating

Variables	Credit		TobinQ	
	Coeff.	T-value	Coeff.	T-value
<i>Intercept</i>	8.097	5.83 ***	-0.716	-1.09
<i>Year</i>	-0.257	-3.13 ***	0.016	0.41
<i>Year*Faith</i>	0.429	3.43 ***	0.039	0.67
<i>Big4</i>	0.159	1.96 **	0.123	3.21 ***
<i>To</i>	-0.147	-1.89 *	0.040	1.09
<i>Group</i>	0.264	2.35 **	0.009	0.17
<i>Major</i>	0.815	5.22 ***	0.029	0.39
<i>Stock</i>	-0.382	-4.56 ***	0.600	15.12 ***
<i>Asset</i>	-0.003	-0.06	0.037	1.42
<i>Debt</i>	-4.883	-33.85 ***	0.308	4.51 ***
<i>R<sup>2</sup></i>	48.76		15.63	

\*, \*\*, \*\*\* is statistically significant within the range of 10%, 5% and 1%, respectively

Table 4 shows the results of additional analyses to verify robustness of the previous analysis results. Dependent variables used change variables in credit rating and corporate value. As a result, It has been observed that the results of the previous analysis and the credit rating of the entity adopting the horizontal tax have a positive effect. In addition, the coefficients and T values were increased over the previous results. A statistically significant positive (+) correlation was observed between YF and Delta\_Credit were observed at the 1% range, and coefficient and T value were 5.315 and 11.83, respectively. And unlike the previous analysis results, this analysis shows that the adoption of a horizontal tax has a positive effect on the value change of the entity. A statistically significant positive (+) correlation was observed between YF and Delta\_TobinQ were observed at the 1% range, and coefficient and T value were 0.616 and 10.95, respectively. And A statistically significant negative (-) correlation was

observed between YEAR (for year 2011~2013) and Delta\_Credit(also Delta\_TobinQ) were observed at the 1% range. It's mean that the change in credit rating and corporate value decreased during the 2011-2013 period, but the change in companies adopting the faithful tax increased. And only Asset variable of the control variables was observed a statistically significant positive correlation with the change of credit rating and firm value.

As a result, the adoption of a horizontal compliance tax system resulted in positive results such as eliminating tax uncertainties, strengthening communication with tax authorities, and reducing the cost of tax cooperation. These results indicate that the firm's future corporate value can change very steadily, and if the future corporate value is evaluated positively, the credit rating will also be adjusted upward.

**Table 4.** Analysis of the effect of a horizontal compliance tax on firm value and credit rating : Additional analysis

Variables	Delta_Credit			Delta_TobinQ		
	Coeff.	T-value		Coeff.	T-value	
<i>Intercept</i>	-14.747	-3.74	***	-1.505	-3.05	***
<i>Year</i>	-2.200	-7.07	***	-0.256	-6.57	***
<i>Year*Faith</i>	5.315	11.83	***	0.616	10.95	***
<i>Big4</i>	-0.034	-0.15		0.000	-0.01	
<i>To</i>	0.020	0.09		0.005	0.17	
<i>Group</i>	-0.259	-0.81		-0.034	-0.84	
<i>Major</i>	-0.431	-0.97		-0.073	-1.32	
<i>Stock</i>	-0.305	-1.27		0.027	0.91	
<i>Asset</i>	0.595	3.82	***	0.061	3.13	***
<i>Debt</i>	-0.183	-0.44		-0.002	-0.03	
<i>R<sup>2</sup></i>	11.72			10.03		

\*, \*\*, \*\*\* is statistically significant within the range of 10%, 5% and 1%, respectively

## CONCLUSION

Companies adopting a horizontal compliance tax payment system may be able to faithfully report tax and infer that it has a hedge tendency compared to a non-conventional entity. Considering the nature of such an entity, the Board decided that it would have a positive effect on the credit rating or the value of the entity in the arrangement if the results of the arrangement and implementation could be obtained from the capital market. However, it was expected that it would be very difficult to affect external changes, such as credit ratings and corporate value, since the taxation authorities made it a rule not to disclose the list of companies in the agreement. Also, in order to be selected as an agreement company, certain sales conditions and internal tax control standards should be established.

However, since the reasons for the application are the rise of external image, reduction of tax cooperation costs, early resolution of tax uncertainties, and exclusion of tax audits through sincere taxation agreements, I wanted to examine the changes of the companies by comparing the period before and after the introduction of the taxation system. The purpose of this study is to analyze the effect of adopting companies of a horizontal compliance. The results of the analysis are as follows.

First, companies that adopted the sincere tax agreement were upgraded in credit ratings compared to other companies. On the other hand, entrepreneurship was observed not to increase.

Second, during the 2011-2013 period, other companies' changes in credit ratings and firm value decreased, but the contracting companies increased that change in their credit ratings and corporate value.

The results of these analyses show that the government expects the improvement of corporate tax performance and implementation of advanced taxation by mutual trust and cooperation through the horizontal compliance taxation

system, and that it is possible to predict the stability of tax administration and future changes in the business environment. That is, the stability of the future tax expense of a company adopting a horizontal compliance tax system will enable it to enhance the credit rating and corporate value of the entity in the future.

However, the analysis due to limit was not carried out. This is a limitation of this study and it is necessary to supplement the empirical analysis with additional data collection.

## AUTHOR BIOGRAPHIES

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