

Do Differences in Corporate Governance Make a Discrepancy in Firm Value? The Case of the Shipping and Shipbuilding Industry

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ABSTRACT

As Korea's core industries, the shipping and shipbuilding industry have global competitiveness and mutually related. After the Global Financial Crisis in 2008, both industries fall into financial depression, thus progress financial restructuring forced by the Korean government. In the process of restructuring, government policy loans concentrated on the shipbuilding industry rather than the shipping industry.

Based on these facts, this study examines the impact of corporate governance on firm value in the shipping and shipbuilding industry. This study develops its research question by comparing the firm value between ownership structure and board structure using panel data set during a sixteen-year period (2000-2015).

This study finds that government ownership decreases firm value in the shipbuilding industry while it positively affects firm value in the shipping industry. Specifically government ownership in the shipbuilding industry is four times higher than that of the shipping industry. This result suggests that excessive governmental ownership rather decreases firm value; Board composition in the shipping industry operates more efficiently than board composition in the shipbuilding industry. Therefore, in order to rebuild Korea's shipping and shipbuilding industries, a systematic government policy considering the industrial value chain is required, and the function of board structure must be strengthened.

Key Words: Board Structure; Corporate Governance; Firm Value; Ownership Structure; Shipping and Shipbuilding Industry

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1. Introduction

In the view of business value chains, the shipping and shipbuilding industries are considered as having a strict cooperative relationship. Based on these strong forward and backward effects between two industries, Korea's shipping and shipbuilding industries have been recognized as major leading industries of the Korean economy since 1970's. As a result, the volume of the shipping industry is ranked 5th in the world while that of the shipbuilding industry is ranked 1st in the world for past twenty years.

However, both industries have been under serious financial risk since the Global Financial Crisis in 2008, thus, a number of major shipping companies of Korea have since gone bankrupt. In addition, the shipbuilding industry of Korea has suffered severe financial depression due to a rapid decrease in the backlog of orders. The financial risk of both industries reached its peak from late 2016 to early 2017 so that Hanjin Shipping, the world's 7th biggest container company as of 2015, was forcibly liquidated while Daewoo Shipbuilding & Marine Engineering (DSEM), the world's 2nd largest shipbuilder as of 2018, was carrying out a large-scale restructuring by the Korean government.

Meanwhile, a governmental research institute's report in 2017¹ argues that the restructuring process of the shipping industry was discriminated against by the Korean government. The government predominantly focuses its support on the shipbuilding industry, despite both shipping and shipbuilding firms facing financial problems after the 2008 global financial crisis. For example, the volume of policy loans for DSEM was 4.2 trillion KRW (US\$ 4 billion) whereas Hanjin shipping just received 1.2 trillion KRW (US\$ 1 billion) including a short-term Primary CBO (P-CBO). This biased supply of policy loans is considered to be a result of heavy government ownership of the shipbuilding industry in comparison to that of the shipping industry. More specifically, government ownership of DSME was reported to be 58.2 per cent while that of Hanjin Shipping was 5 per cent lower as of 2015. Namely, the intensive support for the shipbuilding industry resulted from differences of corporate governance, thus it might be considered that the Korean government's strategy was to avoid huge losses in governmental investment.

Reflecting these arguments, this study examines the impact of corporate governance on firm value of the Korean shipping and shipbuilding industries and compares how ownership structure and a firm's board structure affects firm value across the shipping and shipbuilding industries.

This study is expected to contribute to the literature and practices within the shipping and shipbuilding industries in several ways. First, this study

¹ The Korean Maritime Institute (2017), "why re-structuring and governmental policy loan are not effective for shipping industry?", Trend Analysis Issue No.5

investigates ownership structure as participants in the corporate governance mechanism of Korean shipping and shipbuilding industries. Thus, this study provides empirical evidence regarding how fragmented ownership structure differently affects firm value between two industries by classifying ownership structures into five categories. Second, few previous research examines (Nam and Sohn, 2015a and b) the relationship between board structure and firm value within the shipping and shipbuilding industry. However, this study examines the influence of board structure and board characteristics on firm value of shipping and shipbuilding firms listed on the Korean Stock Exchange (KRX) for sixteen years (2000 to 2015). Therefore, this study provides comprehensive results of corporate governance for Korean shipping and shipbuilding industry. Finally, this study proposes the implication of the government's role and board characteristics within Korean shipping and shipbuilding industry. Both industries account for a tremendous portion of the Korean economy. Despite there being discriminated policy loan supply for the shipbuilding industry, the financial distress of DSME is still progressing while the biggest shipping firm in Korea has finally been disintegrated. Thus, this study provides the role of the government and the importance of corporate governance.

The remainder of this paper is organized as follows: Chapter 2 outlines previous researches and proposes a number of research questions. In Chapter 3, sample selection procedure and research methodology will be explained. The empirical results are presented in Chapter 4. The summary of the research and suggestions for further research appear in Chapter 5.

2. Literature Review

Corporate governance is the system by which corporations are directed and managed. It specifies the relationship and distribution of rights and responsibilities among the providers of capital, the board, managers and other stakeholders (employees, consumer, the community and the state) of the corporation (OECD 1999). Standard and Poor's (2000, p.1) define corporate governance as "*encompassing the interactions between a firm's management, its board of directors, and its financial stakeholders (e.g. shareholders and creditors)*". Rezaee (2002) defines corporate governance as the mechanism by which a firm is managed and monitored, and thus effective and balanced corporate governance can improve the integrity of financial reporting quality and firm value.

Lopez-de-Silanes (2002) argues that firms with better corporate governance might show greater financial reporting quality in terms of lower level of earnings management, greater earnings persistence, and higher stock market returns. Thus, corporate governance plays a crucial role in improving the firm value.

At present, there is only a few previous research on the relationship between corporate governance and firm value in the shipping and shipbuilding industry. Yeo (2012) examines how corporate governance affects Merger and Acquisitions (M&A) strategy of shipping firms. The shipping industry has a highly concentrated ownership structure with family, institutions and board of director's mechanism playing an important role in alliance and M&A strategy. Nam and Sohn (2015a) investigate whether managerial ownership and foreign ownership have an impact on firm value, using a sample of shipping and logistics firms. They found that managerial ownership and foreign ownership can protect shareholders by positively affecting firm values. Another research carried out by Nam and Sohn (2015b) tests whether board members and board size are effective monitors using a sample of shipping and logistic firms. In their research, board size positively affected firm value whereas interlocking board members decreased firm value.

In summary, ownership structure and board structure are important factors of corporate governance and are significantly associated with firm value. Thus, the impact of ownership structure and board structure varies in its effects on firm value following their attributes.

3. Research Methodology

3.1 Data

This study uses shipping and shipbuilding firms listed on the Korean Stock Exchange (KRX) for sixteen years (2000-2015). Ownership and corporate governance data is obtained from *DART* and financial statements and stock information data are acquired from KIS-VALUE database respectively. The final sample includes 95 firm-year observations of shipping firms and 78 firm-year observations of shipbuilding firms over a sixteen-year period.

3.2 Measurement of Variables

3.2.1 Firm Value

There are numerous measures of firm value. This study uses market performance of a firm (Tobin's Q) as proxy of firm value. Tobin's Q calculated by a firm's market value of equity at the end of fiscal year divided by book value of equity at the end of fiscal year, according to Jung and Kwon (2002).

3.2.2 Ownership Structure Variables

In order to test the impact of fragmented ownership structure on firm value, five different types of ownership structure variables are used: 1) government shareholders (GOV), 2) institutional shareholders (INST), 3) large internal shareholders (LARGE), 4) foreign shareholders (FOR) and 5) individual shareholders (ANT).

3.2.3 Board Structure Variables

The board variables consist of internal directors (BOD), outside directors (OUTB), defined as independent directors without any relationship of firm. In addition, this study tests the association between board quality and firm value. Board quality variables are decomposed into board activities (ACT) defined as a frequency of board meetings and outside directors' professional backgrounds: 1) professor (PRF), 2) entrepreneur (ENT), 3) lawyer (LAW) and 4) banker (BANK).

3.2.4 Control Variables

Two control variables may affect firm value. Firm size (SIZE) is employed to control size effects and calculated as the natural logarithm of book value of total assets. Leverage ratio (LEV) is the ratio of total debts to total assets.

3.3 Empirical Model

In order to examine the impact of ownership structure and board structure on firm value as measured by Tobin's Q, a linear regression model between corporate governance variables and Tobin's Q is employed using the formula as follows:

$$FirmValue = \alpha_0 + \beta_1 GOV + \beta_2 INST + \beta_3 LAR + \beta_4 FOR + \beta_5 ANT + \beta_6 SIZE + \beta_7 LEV + \varepsilon$$

.....Equation (1)

$$FirmValue = \alpha_0 + \beta_1 BOD + \beta_2 OUTB + \beta_3 ACT + \beta_4 PRF + \beta_5 ENT + \beta_6 LAW + \beta_7 BANK + \beta_8 SIZE + \beta_9 LEV + \varepsilon$$

.....Equation (2)

where, for firm i and period t

$Firm\ Value =$ Tobin's Q

$GOV =$ the percentage of equity shares owned by the government including all governmental financial institutes

$INST =$ the percentage of equity shares owned by institutions excluding the government and governmental financial institutes

LAR = the percentage of equity shares owned by internal owners and affiliated firms under the control of internal owners
FOR = the percentage of equity shares owned by foreign shareholders
ANT = the percentage of equity shares owned by individual shareholders
BOD = the number of internal directors on board
OUTB = the number of outside directors on board
PRF = the number of professors out of outside directors on board
ENT = the number of entrepreneurs out of outside directors on board
LAW = the number of lawyers out of outside directors on board
BANK = the number of bankers out of outside directors on board
ACT = a frequency of board meetings
SIZE = natural log of total assets
LEV = book value of debt to book value of equity

As this study uses panel data, a panel data methodology should be employed.

After conducting the Hausman test, I find the random effects model is more suitable than the fixed effects model and pooled-OLS estimation. The generalized least square (GLS) random-effects models provide corrections for the presence of autocorrelation and heteroscedasticity in pooled time-series data. Hsiao (1995) suggests that the GLS model can examine variations among cross-sectional units, simultaneous with variations within individual units over time. Zhou (2001) also argues that random effects model in panel data is appropriate because ownership-firm value relationship is likely to be a cross-sectional phenomenon. Thus, random effects model is utilized in this study.

4. Empirical Results

4.1 Descriptive Statistics

Table 1 presents descriptive statistics of firm value, ownership and board structure and other control variables. First of all, the mean of Tobin's Q is 7.656 (shipping) and 13.082 (shipbuilding), respectively. Firm value of the shipping industry is relatively lower than that of the shipbuilding industry. It suggests that financial risk arising from the Global Financial Crisis have a more significant impact on the shipping industry than the shipbuilding industry.

One outstanding feature of ownership structure is that the mean value of government ownership for the shipbuilding industry (17.327) is four times higher than that of the shipping industry (4.275). It proves that the government's

supports have been concentrated to the shipbuilding industry. Foreign ownership is also much more concentrated on the shipbuilding industry (17.035) than on the shipping industry (3.637). This can be explained as that foreign shareholders prefer large firms with good performance (An, 2015) since the mean value of Tobin's Q of the shipbuilding industry is higher than that of the shipping industry.

Furthermore, financial leverage ratio (LEV) of Korean shipping and shipbuilding industry also provides interesting results. The mean value of leverage ratio of the shipping industry stands at 1.864 while the shipbuilding industry's mean value of leverage is 3.463. It means that Korean shipbuilding industry has a significantly high level of dependence on debt, compared with the shipping industry. High leverage ratio of Korean shipbuilding industry can be explained by significant decreasing new orders of offshore plants due to low oil price. Major Korean shipbuilders have focused on manufacturing offshore plants following the period of high oil prices after 2009. However, sluggish global economy and shale energy have fetched down oil price, thereby, new orders in offshore plants were drastically reduced as well as the existing contracts were cancelled. In addition, shrinking number of new ship orders due to the recession of shipping businesses after the Global Financial Crisis in 2008 has intensified high leverage ratio of the shipbuilding industry.

Table 1. Descriptive Statistics of Variables

Shipping Industry					
	Mean	Median	Max	Min	Std Dev
<i>Tobin's Q</i>	7.656	4.200	35.200	0.485	9.850
<i>GOV</i>	4.275	2.005	23.060	0.000	5.584
<i>INST</i>	9.730	5.740	33.270	0.160	11.238
<i>LAR</i>	29.715	18.760	76.240	9.45	12.893
<i>FOR</i>	3.637	0.565	64.840	0.130	7.651
<i>ANT</i>	32.813	41.075	72.870	16.920	19.861
<i>BOD</i>	2.333	3.000	5.000	1.000	1.351
<i>OUTB</i>	2.552	2.000	5.000	1.000	1.978
<i>ACT</i>	9.854	9.500	26.000	1.000	8.168
<i>PRF</i>	0.542	0.000	2.000	0.000	0.630
<i>ENT</i>	1.135	1.000	4.000	0.000	1.287
<i>LAW</i>	0.864	1.000	2.000	0.000	0.658
<i>BANK</i>	0.552	0.000	2.000	0.000	0.633
<i>SIZE</i>	28.196	28.023	30.047	25.727	1.401
<i>LEV</i>	1.864	1.251	2.579	0.147	0.659
Shipbuilding Industry					
	Mean	Median	Max	Min	Std.Dev
<i>Tobin's Q</i>	13.082	6.350	86.600	0.774	17.359
<i>GOV</i>	17.327	5.060	76.690	0.010	23.989
<i>INST</i>	6.673	5.300	51.070	0.280	8.668
<i>LAR</i>	34.684	19.09	59.760	0.020	2.634
<i>FOR</i>	17.035	21.815	36.200	3.040	14.799
<i>ANT</i>	40.577	43.685	71.320	10.340	17.918
<i>BOD</i>	2.152	2.000	5.000	1.000	1.272

<i>OUTB</i>	3.275	3.000	5.000	1.000	0.981
<i>ACT</i>	8.848	10.000	28.000	4.000	5.449
<i>PRF</i>	0.925	1.000	4.000	0.000	1.099
<i>ENT</i>	0.113	0.000	2.000	0.000	0.389
<i>LAW</i>	0.712	1.000	3.000	0.000	0.783
<i>BANK</i>	1.525	2.000	4.000	0.000	1.006
<i>SIZE</i>	29.341	29.682	31.609	26.901	1.499
<i>LEV</i>	3.463	2.875	42.658	1.216	4.663

4.2 Correlation

Table 2a shows the Pearson Correlation among ownership structure, firm value and other control variables. An outstanding correlation is between government ownership and firm value (Tobin's Q). In the shipping industry, government ownership is positively correlated while government ownership of the shipbuilding industry is negatively correlated. It suggests that excessive government ownership is likely to reduce firm value. Like government ownership, firm size presents opposite results between both industries. It seems that different degrees of financial depression between both industries were caused by biased supply of government policy loans.

Table 2a. Pearson Correlation of Ownership Structure

Ownership Structure Correlation of Shipping Industry								
	<i>TQ</i>	<i>GOV</i>	<i>INST</i>	<i>FIRM</i>	<i>FOR</i>	<i>ANT</i>	<i>SIZE</i>	<i>LEV</i>
<i>TQ</i>	1							
<i>GOV</i>	0.544***	1						
<i>INST</i>	0.481**	0.253	1					
<i>FIRM</i>	0.160	0.318	0.172***	1				
<i>FOR</i>	-0.186	-0.298	0.091	-0.105***	1			
<i>ANT</i>	-0.231***	0.212***	0.136*	0.097	-0.089**	1		
<i>SIZE</i>	-0.090***	0.249***	-0.149***	0.561	0.080***	-0.053	1	
<i>LEV</i>	-0.056***	-0.029	-0.026	-0.011***	-0.065	-0.044***	0.101**	1
Ownership Structure Correlation of Shipbuilding Industry								
	<i>TQ</i>	<i>GOV</i>	<i>INST</i>	<i>FIRM</i>	<i>FOR</i>	<i>ANT</i>	<i>SIZE</i>	<i>LEV</i>
<i>TQ</i>	1							
<i>GOV</i>	-0.156***	1						
<i>INST</i>	-0.478	0.215***	1					
<i>FIRM</i>	-0.141	-0.875	0.103**	1				
<i>FOR</i>	0.170***	0.501	0.244	-0.238***	1			
<i>ANT</i>	-0.424***	-0.061**	0.482	0.406	0.693	1		
<i>SIZE</i>	0.201***	0.351***	0.421*	-0.069*	0.895***	0.818***	1	
<i>LEV</i>	-0.149***	0.226***	-0.009	-0.168**	0.214	0.031***	0.222***	1

Note: *p<0.10, **p<0.05, ***p<0.01

Table 2b presents correlation of board structure with firm value and two control variables. Internal boards are negatively correlated with firm value in both industries at 0.01 levels. Interestingly, outside directors on board in the shipping industry shows a negative correlation with firm value at 0.05 levels. Hence, it seems that board structures in both industries are not properly operated.

In the view of board characteristics, outside directors from bankers are significantly correlated to firm size and leverage ratio in both industries. Moreover, outside directors from lawyers has a significant correlation with firm size in both industries and leverage ratio with the shipping industry. This correlation implies that both industries prefer to appoint financial experts to mitigate their financial depression. In the shipping industry, outside directors from lawyers might be appointed to protect the company from potential lawsuits against bankruptcy.

Table 2b. Pearson Correlation of Board Structure

Board Structure Correlation of Shipping Industry										
	<i>TQ</i>	<i>BOD</i>	<i>OUTB</i>	<i>ACT</i>	<i>PRF</i>	<i>ENT</i>	<i>LAW</i>	<i>BANK</i>	<i>SIZE</i>	<i>LEV</i>
<i>TQ</i>	1									
<i>BOD</i>	-0.422***	1								
<i>OUTB</i>	-0.108**	0.338	1							
<i>ACT</i>	-0.149	0.278	0.247	1						
<i>PRF</i>	-0.082	0.187	0.488	0.338	1					
<i>ENT</i>	-0.136**	0.417	0.633***	-0.142	-0.041	1				
<i>LAW</i>	0.133	-0.061	0.489*	0.173	0.605	0.121	1			
<i>BANK</i>	0.374***	-0.165	0.161***	0.209**	0.240	-0.277	0.429	1		
<i>SIZE</i>	-0.090***	0.130**	0.744***	0.124*	0.393*	0.514*	0.614**	0.285***	1	
<i>LEV</i>	-0.056	0.043	0.065	0.096	0.045	0.012	0.096**	0.075***	0.101***	1
Board Structure Correlation of Shipbuilding Industry										
	<i>TQ</i>	<i>BOD</i>	<i>OUTB</i>	<i>ACT</i>	<i>PRF</i>	<i>ENT</i>	<i>LAW</i>	<i>BANK</i>	<i>SIZE</i>	<i>LEV</i>
<i>TQ</i>	1									
<i>BOD</i>	-0.015***	1								
<i>OUTB</i>	0.173	0.596	1							
<i>ACT</i>	0.051	0.533	0.562***	1						
<i>PRF</i>	0.088	0.201	0.608	0.367	1					
<i>ENT</i>	-0.149	0.335	0.286	0.168	0.103	1				
<i>LAW</i>	0.553	0.022	0.279***	0.163	-0.001	-0.192	1			
<i>BANK</i>	-0.438	0.171	0.127***	0.041	-0.163	0.104	-0.606	1		
<i>SIZE</i>	0.422***	0.579**	0.776***	0.627***	0.578*	0.107*	0.527**	-0.237***	1	
<i>LEV</i>	-0.146*	0.008*	0.251	0.138***	0.254	-0.027	-0.010	0.209***	0.111	1

Note: *p<0.10, **p<0.05, ***p<0.01

4.3 Empirical Results

Table 3 provides the random-effect results of how ownership structure affects the firm value within both industries. In the shipping industry, government ownership is positively related to Tobin's Q whereas government ownership in the shipbuilding industry is negatively associated with Tobin's Q at 0.01 levels. As show in the Table 1, government ownership of the shipbuilding industry is four times higher than that of the shipping industry. Thus, this result implies that excessive government ownership rather decreases firm value.

Institutional ownership only positively affects firm value in the shipping industry. Thus, positive influence of institutional ownership in the shipping industry on firm value means that institutional shareholders have the resource, expertise and the power to effectively monitor the actions of the management and to maximize firm value for the shareholders (Chung, Firth and Kim, 2002).

The impact of individual shareholders (ANT) on firm value is significantly negative for both industries at 0.01 levels. It can be explained as that these individual shareholders are transient investors without significant incentives to monitor a firm's management and tend to sell the stock in the absence of current profits (Graves 1988).

The relationship between firm size and firm value shows contrary results between the two industries. Negative coefficient of firm size in the shipping industry reflects financial distress of large scaled shipping firms while positive coefficient of the shipbuilding industry shows bankruptcy of mid-and small-sized shipbuilders. Thus, this result directly presents recent restructuring process by the Korean government.

Table 3. Effect of Ownership Structure on Firm Value

The Influence of Ownership Structure (The GLS Random Effect Estimation)		
	Shipping Industry	Shipbuilding Industry
Variables	<i>Tobin's Q</i>	<i>Tobin's Q</i>
<i>GOV</i>	1.014** (7.274)	-0.868** (-2.853)
<i>INST</i>	0.298** (4.526)	-0.024 (-0.486)
<i>LAR</i>	0.062 (1.243)	-0.049 (-0.648)
<i>FOR</i>	-0.025 (-0.263)	0.065 (1.443)
<i>ANT</i>	-0.209** (-6.061)	-0.155** (-4.534)

<i>SIZE</i>	-1.868*** (-3.038)	1.567*** (3.312)
<i>LEV</i>	-0.009 (-0.334)	-0.098** (-2.372)
<i>Constant</i>	58.822*** (3.460)	-32.806** (-2.519)
<i>Adj R²</i>	0.587***	0.544***
<i>F-Stat</i>	20.061	9.338
<i>Hausman Test</i>	3.01	6.34

Note: *p<0.10, **p<0.05, ***p<0.01

In addition, this study examines the impact of board structure on firm value. Board structure consists of the existence of internal board and outside directors on board, the activity of board and the characteristics of outside directors on board.

The coefficients of internal board (BOD) on Tobin's Q are -3.086 (shipping) and -4.342 (shipbuilding), statistically significant at 0.01 and 0.05 levels, respectively. This result shows that internal board members of both industries do not rather negatively affect firm's management. This result implies that internal board members would be dominated by firm's top management or controlling shareholders. As shown in Table 1, the largest shareholders in both industries are internal owners and affiliated firms under the control of internal owners (LAR). Specifically, in the shipbuilding industry, government ownership is also a major controlling shareholder to affect firm's management.

Outside directors on board (OUTB) do not affect firm value in both industries. No impact of outside directors on board in both industries suggests that the role of independent directors is not effectively operated, thus fail to increase firm's management efficiency. Similar to the result of outside directors on board, board activity (ACT) does not affect firm value in both industries. Overall, board structure in both industries seems not to be efficiently operated to increase firm value and firm's management.

In regards to characteristics of outside directors in the shipping industry, outside directors from entrepreneurs and bankers are positively significant with firm value (3.134 and 7.822) at 0.01 levels. Xie et al. (2003) and An (2017) find that outside directors who are financial experts such as bankers or CPAs as well as entrepreneurs increase firm value due to their strong financial skills and knowledge of the industry. Hence, I can conclude that outside directors in the shipping industry are properly composed. Unlike the evidence of the shipping industry, no characteristics of outside directors affect firm value in the shipbuilding industry. It implies that the shipbuilding industry consider re-organizing board structure to increase firm value.

Finally, firm size (SIZE) shows different results between the shipping industry and the shipbuilding industry. The negative effect of firm size on firm

value in the shipping industry shows financial depression of big companies such as Hanjin and Hyundai Merchant Marine in recent years. In contrast to the shipping industry, the shipbuilding industry has a positive relationship between firm size effect and firm value. It can be explained as that the shipbuilding industry is so called ‘too big to fail’ due to heavily concentrated government ownership.

Table 4. Effect of Board Structure on Firm Value

The Influence of Board Structure (The GLS Random Effect Estimation)		
	Shipping Industry	Shipbuilding Industry
Variables	<i>Tobin's Q</i>	<i>Tobin's Q</i>
<i>BOD</i>	-3.086*** (-3.810)	-4.342** (-2.014)
<i>OUTB</i>	-0.217 (-0.239)	3.230 (0.763)
<i>ACT</i>	-0.047 (-0.376)	-0.584 (-1.481)
<i>PRF</i>	0.358 (0.165)	5.197 (1.575)
<i>ENT</i>	3.134** (2.324)	-4.128 (-0.858)
<i>LAW</i>	1.933 (0.933)	-0.745 (-0.143)
<i>BANK</i>	7.822*** (4.458)	4.599 (1.420)
<i>SIZE</i>	-3.062*** (2.861)	8.573*** (3.108)
<i>LEV</i>	-0.018 (-0.493)	-0.412 (-1.103)
<i>Constant</i>	92.478*** (3.247)	-32.806** (-3.029)
<i>Adj R²</i>	0.310***	0.366***
<i>F-Stat</i>	5.693	5.945
<i>Hausman Test</i>	7.68	8.82

Note: *p<0.10, **p<0.05, ***p<0.01

5. Conclusion

This study examines the impact of corporate governance on firm value in the shipping and shipbuilding industry. This study develops the research question by comparing variations in firm value between ownership structure and board

structure using panel data set during a 16-year period (2000-2015). This study finds that ownership structure varies in its effects on firm value in both industries. Specifically, excessive governmental ownership negatively affects firm value shown in the case of the shipbuilding industry. Institutional ownership such as private financial institutions are only positively related to firm value of the shipping industry. It means that private financial support would be more efficient when it comes to increasing firm value than that of the government.

In addition, this study tests board structure influence on firm value in both industries. The results support the idea that an internal board is likely to decrease firm value because of dominated internal ownership and governmental ownership. Outside directors on board and board activity have no relationship with firm value in both industries. Thus, the role of board to increase firm value is very weak.

Finally, in regards to board characteristics, outside directors from entrepreneurs and bankers in the shipping industry are positively significant when it comes to firm value whereas I do not find any evidence of that in the shipbuilding industry. Therefore, it seems that board composition in the shipping industry is more efficient than that of the shipbuilding industry.

On the whole, this study contributes to the literature regarding this subject matter, providing important evidence for testing the impact of corporate governance on firm value in Korean shipping and shipbuilding industry.

In regards to practice, this study provides implications for government policy makers. The general conclusion reached in this study is that it is inefficient for the government to run businesses. The government injects governmental equity into the shipping and shipbuilding industries just for restructuring but did not intentionally operate shipping and shipbuilding companies. It seems natural that the governance structure of the shipping industry is more efficient than that of the shipbuilding industry, as the government's stake has been invested in most of the shipbuilding companies. Thus, in the process of restructuring, it is necessary to increase not only the government's equity or governmental policy loans, but also improve corporate governance and strategical support, befitting industry characteristics. Accordingly, systematic government policy should be required to rehabilitate Korean shipping and shipbuilding industry as one of the leading industries of the Korean economy.

Finally, there are several related issues which require further studies. First, testing of government intervention can be employed by various factors but not only governmental ownership. In further studies, various governmental intervention measures should be considered. Second, although this study attempts to corporate governance factors affecting firm value, there may still be some omitted variables that have not been controlled.

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