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Correlation Studies on Corporate Governance, Financial Structure, and Merger and Acquisition Premium in Ecological Enterprises

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Abstract

Under the competitive era nowadays, mergers and acquisitions become frequent among enterprises globally. Enterprises start to expand the market size with mergers and acquisitions. Although mergers and acquisitions could help enterprises develop the synergy, enhance the adjustment according to the environment, and accelerate the business transformation, acquirers have to pay a large sum for it. An ecological enterprise overpaying for mergers and acquisitions might result in the acquirer hard to recovering the costs and cause merger and acquisition failure. Chinese ecological enterprises' mergers and acquisitions of European ecological enterprises with equity transfer and assets agreement in 2012-2016 are selected as the initial samples in this study. The research results show 1. partially significant correlations between corporate governance and financial structure, 2. remarkable correlations between financial structure and merger and acquisition premium, and 3. notable correlations between corporate governance and merger and acquisition premium. Suggestions, according to the results, are eventually proposed, expecting to further help ecological enterprises, through factors, be close to the practical market for successful mergers and acquisitions.

Keywords: corporate governance, financial structure, merger and acquisition premium

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INTRODUCTION

Following the development and changes of global economy, mergers and acquisitions among ecological enterprises are getting frequent under the competitive era nowadays. Especially, mergers and acquisitions could help most ecological enterprises promote the firm competitiveness and enhance the capability to create ecological enterprise value. In this case, ecological enterprises, following the development trend of globalization and technology, start to expand the market size with mergers and acquisitions. Mergers and acquisitions or vertical integration are common for ecological enterprises expanding the domain in the globalization era. Although mergers and acquisitions could help ecological enterprises develop the synergy, enhance the adjustment according to the environment, and accelerate the business transformation, acquirers have to pay a large sum for it. An acquirer could hardly merge and acquire a subject company with general market prices. However, there is a fine line between real premiums and the manipulation of security price; controversy and defense therefore appear. The control premium difference among merger and acquisition cases is multiplied. Such a difference is closely related to the prospect, governance, and management of an acquired company. From past merger and acquisition data, when an ecological enterprise overpaying for mergers and acquisitions might result in the acquirer hardly recovering the costs and cause the merger and acquisition failure. For this reason, an ecological enterprise being willing to pay more for mergers and acquisitions presents that the ecological enterprise is optimistic about the market potential behind the merger and acquisition case. There are many factors in premiums and a lot of domestic research has discussed such factors. This study therefore intends to discuss the correlations among corporate governance, financial structure, and merger and acquisition premium, expecting to further assist ecological enterprises, through factors, in being close to the practical market for successful mergers and acquisitions.

LITERATURE AND HYPOTHESIS

Corporate Governance

Sun (2014) divided the function of corporate governance into to promote what is beneficial and to abolish what is harmful. In regard to promoting what is beneficial, it could reinforce the strategic management performance and ensure the company strategies being

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practiced at correct directions. Regarding abolishing what is harmful, listed companies should present independent directors of board and supervisors to supervise managers, through transparent real-time information, and to ensure the remuneration of unaffiliated shareholders and creditors. Furthermore, corporate governance should guarantee the legal rights and interests of other stakeholders, including employees and suppliers. Champagne and Coggins (2012) considered that variables for measuring corporate governance could be divided into national level and corporate level. National level corporate governance involved in the protection of investors (minority shareholders and creditors) from The Company Act and securities regulations as well as the execution effectiveness of such regulations. Corporate level corporate governance, on the other hand, aimed at the cash flow rights of the major shareholder, the independence of board of directors, and information transparency. Hillman (2015) explained the thinking direction of corporate governance as "how to ensure the investment of capital providers acquiring deserved remuneration". In this case, corporate governance aimed to prevent company value from being damaged by managers and reinforce firm competitiveness and management effectiveness so as to guarantee the rights and interests of capital providers and other stakeholders. There are some common principles existed in corporate governance. For instance, the corporate governance principles of Organization for Economic Co-operation and Development (OECD) contain shareholder rights, equitable treatment of shareholders, shareholders' equity, information disclosure and transparency, and board of directors' responsibility. Alexandridis et al. (2013) argued that distinct legislation, control, economy, culture, and political environment had the healthy corporate governance mechanism present certain degree of differences in various countries. Corporate governance is closely related to the degree of stock dispersion. When the stocks of a company are extremely dispersed, a definite major stakeholder is lack and the management of the company is basically controlled by administrative managers. Fisher III and Oberholzer-Gee (2013) indicated that the key of corporate governance was to design a system for unaffiliated shareholders being able to supervise company managers, i.e. to design a director of board electoral system in order to elect independent directors of board to supervise managers' administrative performance and outcome. On the other hand, under ownership concentration, the ownership concentrates on major shareholders with control, and the top management of the company is undertaken by major shareholders or the employed managers. In this case, the key of corporate governance is to avoid major shareholders merely taking care of personal benefits or even proceeding tunneling with the authority to damage general minority shareholders' rights and interests. Referring to Cao et al. (2015), corporate governance in this study contains the following dimensions.

Manager holdings

Shivdasani and Song (2011) indicated that a company with the shares concentrating on managers might have the managers' decision making tend to the maximization of shareholders' wealth.

Unaffiliated shareholders

Kleimeier and Chaudhry (2015) presented two different opinions. One was "efficient monitoring hypothesis" which considered that institution investors showed more professional knowledge and skills than minority shareholders on supervising managers and the supervision cost was lower. The increase of institution investors therefore could effectively reduce agent problems, enhance corporate management performance, and reveal positive intention on mergers and acquisitions beneficial to the ecological enterprise.

Board of directors size

Regarding the size of board of directors, Orsi et al. (2015) indicated that the smaller board of directors could more effectively supervise the action of CEOs.

Financial Structure

Grimpe and Hussinger (2014) referred financial structure to the financing acquisition of the total assets of an enterprise, i.e. the corresponding projects to the total assets of an enterprise. It referred to the composition of all projects in the balance sheet and the percentage among them; capital structure was closely related to the financial structure of an enterprise. Referring to Chen et al. (2012), the following dimensions are utilized for financial structure in this study.

(1) Debit ratio: Aulakh et al. (2013) stated that the debt-asset ratio was used for analyzing the debt ratio in a company's assets. The higher ratio revealed the unhealthy financial structure of the company, which had to pay more interests every year and bore large pressure on the cash flow (Vu et al. 2015). (2) Fixed asset ratio: Ishii and Xuan (2014) indicated that the ratio of long-term funds in fixed assets was used for evaluating the balance between "fixed assets" and "long-term funds" of an enterprise. When the long-term funds

appeared higher ratio on fixed assets, the company did not have the problem of supporting the long-term investment with short-term funds that the financial system was comparatively stable. On the contrary, when the ratio was too low, the company's fixed assets were supported by short-term debts. (3) Profitability: Lin et al. (2012) indicated that net income or loss would affect the capability of a company acquiring debts and equity capital financing as well as influence the flow condition and the capability growth of the company. Accordingly, creditors and investors were interested in evaluating the surplus capability-profitability. Profitability is often used as the final test of the operation of management authority as well as the indicator to measure a company's net income or success business within specific period, including return on assets (ROA), return on equity (ROE), net profit margin, earnings per share (EPS), and the net asset value of each share (Willoughby 2013).

Merger and Acquisition Premium

Carson and John (2013) mentioned that merger and acquisition premium was the price difference resulted from the purchase price higher than the asset price of the target enterprise in the merger and acquisition. Past research on merger and acquisition premium showed that there was space for merger and acquisition premium in mergers and acquisitions. Zhu (2013) classified the motivation of mergers and acquisitions into the maximization of shareholders' wealth and agent problems. From the prospective of the maximization of shareholders' wealth, the merger and acquisition of a company aimed to create the operation efficiency, such as developing the effects of economy of scale and economy of scope (Bosch and Steffen 2011), reducing transaction costs, and enhancing management efficiency (Miller et al. 2015), or to create the financial synergy, e.g. risk spreading and tax effect (Hawkins et al. 2012) and decreasing financing costs to enhance the debt space (Rivas 2012). Jo et al. (2016) stated that most investors would regard merger and acquisition premium as the expected earnings of the merger and acquisition company from the target company. In other words, according to the theory of merger and acquisition premium magnitude, the larger merger and acquisition premium might create more expected earnings. Nevertheless, when the merger and acquisition price exceeds the achievable benefits from the merger and acquisition transaction, the excess return might turn to debts (overpayment hypothesis). From past research, the merger and acquisition premium effect indeed existed among ecological enterprises. In addition to the management condition of the company, non-financial factors could result in corporate merger and acquisition premium. However, past research mainly chose either net worth method or market price method to measure the merger and acquisition premium. Referring to Chung et al. (2013), market price method is utilized in this study for measuring the merger and acquisition premium of each merger and acquisition company.

Corporate Governance and Financial Structure

Hillman (2015) explained the role of external agency with efficiency increase hypothesis and efficiency decrease hypothesis. External institution investors, based on the professional judgment and information advantages, would choose to invest in blue chip stocks that the merger and acquisition company invested by external agency was an indicator of the good performance. Moreover, the engagement of institution investors had them be willing to supervise the company that the financial structure became better. It was consistent with Pound efficient monitoring hypothesis. On the contrary, an external agency with passiveness and short-sightedness, conflict of interests, and legislation restriction would not present the function of supervision that the company value would drop to worsen the financial structure (Vu et al. 2015). Sun (2014) considered that the small percentage of major stakeholders in the total number of directors would appear lower interference and intervention on the stock market that the development of the market mechanism could positively affect the financial structure of the company. Based on above deduction, the following hypothesis is proposed in this study.

H1: Corporate governance presents significant correlations with financial structure.

Financial Structure and Merger and Acquisition Premium

Taking US banks within 1989-1998 as the research samples, Ishii Xuan (2014) discovered that the projects of return on assets, price-earnings ratio, financial leverage ratio, and completion of transaction presented positive correlations with a target company's merger premium. Rivas (2012) proved that companies with higher profitability and better financial quality, in either financial or non-financial industry, would have higher merger and acquisition premium, and vice versa. Since not all target companies were listed companies, Kleimeier and Chaudhry (2015) measured finance companies' premiums and revealed that the merger and acquisition premium in financial industry could be affected by financial structure. Aulakh et al. (2013) proposed that the better asset quality of a bank would present higher premiums for the target bank. Accordingly, the following hypothesis is proposed in this study.

H2: Financial structure shows remarkable correlations with merger and acquisition premium.

Corporate Governance and Merger and Acquisition Premium

Zhu (2013) deeply discussed the relationship between CEOs' remuneration allowance and the mergers of banks. The research result showed that mergers appeared positive effects on CEOs' remuneration, and CEOs' remuneration would increase even when the share price of the merger bank dropped. Jo et al. (2016) discussed the effect of corporate governance on the mergers of banks and revealed the positive correlations between the shareholding ratio of external independent directors of board, the shareholding ratio of internal directors of board and merger premiums. Chung et al. (2013) pointed out the positive correlations between ownership concentration and company value that the mergers and acquisitions of companies with more concentrated ownership would show the higher merger and acquisition premiums. Lin et al. (2012) discussed the factors in the merger and acquisition premium of investment banks. The results showed that internal teams and agent problems in corporate governance of the target company would affect the merger and acquisition premium; and, when the merger and acquisition premium exceeded the estimated value, it would influence the performance after the merger and acquisition (Willoughby 2013).

Based on above deduction, the hypothesis is further proposed in this study.

H3: Corporate governance reveals notable correlations with merger and acquisition premium.

METHODOLOGY AND SAMPLE

Research Sample

Chinese ecological enterprises' mergers and acquisitions of European ecological enterprises with equity transfer and assets agreement in 2012-2016 are selected as the initial samples in this study. The initial samples are selected with the following process: samples with mergers and acquisitions in 2012-2016 are acquired from CCER China Economic and Financial Research Database, and total 268 listed companies are acquired.

Analysis

Regression Analysis is applied to understand the correlations among corporate governance, financial structure, and merger and acquisition premium.

ANALYSIS AND RESULT

Regression Analysis of Corporate Governance and Financial Structure

Regression Analysis is utilized in this study for testing the hypothesis and theoretical structure. The first regression tests the effect of corporate governance on debit ratio. The result shows the positive effects of manager holdings and board of directors size on debit ratio (Beta=0.186, p=0.032; Beta=0.254, p=0.000). The second regression tests the effect of corporate governance on fixed asset ratio. The result reveals the positively significant effects of manager holdings, unaffiliated shareholders, and board of directors size on fixed asset ratio (Beta=0.233, p=0.003; Beta=0.257, p=0.000; Beta=0.196, p=0.021). The third regression tests the effect of corporate governance on profitability. The result presents the positively remarkable effects of manager holdings, unaffiliated shareholders, and board of directors size on profitability (Beta=0.261, p=0.000; Beta=0.216, p=0.008; Beta=0.276, p=0.000) (**Table 1**). Hypothesis 1 therefore is partially supported.

Table 1. Regression Analysis of corporate governance and financial structure

Dependent variable → / Independent variable ↓	Financial structure					
	Debit ratio		Fixed asset ratio		Profitability	
Corporate governance	**Beta**	***P***	**Beta**	***P***	**Beta**	***P***
Manager holdings	0.186	0.032	0.233	0.003	0.261	0.000
Unaffiliated shareholders	0.166	0.061	0.257	0.000	0.216	0.008
Board of directors size	0.254	0.000	0.196	0.021	0.276	0.000
F	23.175		28.662		23.522	
R^2	0.211		0.237		0.245	
Adjusted R^2	0.187		0.212		0.221	
$^*p<0.05$ $^{**}p<0.01$						

Data source: Self-organized in this study

Table 2. Regression Analysis of profitability and merger and acquisition premium

Dependent variable → / Independent variable ↓	Merger and acquisition premium	
	Beta	***P***
Debit ratio	-0.262	0.000
Fixed asset ratio	0.297	0.000
Profitability	0.316	0.000
F	31.415	
R^2	0.322	
Adjusted R^2	0.294	
$^*p<0.05$ $^{**}p<0.01$		

Data source: Self-organized in this study

Table 3. Regression Analysis of corporate governance and merger and acquisition premium

Dependent variable → / Independent variable ↓	Merger and acquisition premium	
	Beta	***P***
Manager holdings	0.233	0.000
Unaffiliated shareholders	0.251	0.000
Board of directors size	0.242	0.000
F	34.523	
R^2	0.281	
Adjusted R^2	0.258	
$^*p<0.05$ $^{**}p<0.01$		

Data source: Self-organized in this study

Regression Analysis of Financial Structure and Merger and Acquisition Premium

Regression Analysis is applied to test the hypothesis and the theoretical structure. The regression tests the effect of financial structure on merger and acquisition premium, and the result shows the negative effect of debit ratio on merger and acquisition premium (Beta= -0.262, p=0.000) and the positive effects of fixed asset ratio and profitability on merger and acquisition premium (Beta=0.297, p=0.000; Beta=0.316) (**Table 2**). Hypothesis 2 therefore is supported.

Regression Analysis of Corporate Governance and Merger and Acquisition Premium

Using Regression Analysis for testing the hypothesis and the theoretical structure, the regression tests the effect of corporate governance on merger and acquisition premium. The result reveals positive effects of manager holdings, unaffiliated shareholders, and board of directors size on merger and acquisition premium (Beta=0.233, p=0.000; Beta=0.251, p= 0.000; Beta=0.242, p=0.000) (**Table 3**). Accordingly, hypothesis 3 is supported.

CONCLUSIONS

From the research results, it is understood that the merger and acquisition cases are increasing under the global trend of mergers and acquisitions. Nonetheless, a merger company has to pay a large sum for the management or control of the acquired company. Such a price is normally higher than the market price, as the merger and acquisition premium. Variables of financial structure, shareholdings and corporate governance, and merger and acquisition would affect the control premium. The debt ratio appears negative effects, showing that the merger company would not pay high price for the merger and acquisition when the acquired company presents bad quality and unhealthy finance. Unaffiliated shareholders and board of director size show positive effects, revealing that the merger company would be willing to pay higher merger and acquisition premiums for the acquired company with good corporate governance. In practice, the research results could help understand the factors in domestic merger and acquisition cases for the reference of future pricing for merger and acquisition cases. Academically, the control premium being calculated with market price method and the proposal of the share price of the acquired company not being the closing price a day before the announcement in this study could assist in future research.

RECOMMENDATIONS

The important results and findings are concluded in this chapter, and practical suggestions aiming at the research results are proposed as followings.

1. Domestic ownership concentration is generally high that the function of major stakeholders in the corporate governance structure should be concerned. Especially, an ecological enterprise, where the first major stakeholder has higher shareholdings, should focus the internal governance on the behavior norm of major stakeholders and the relationship with minority shareholders so as to effectively inhibit major stakeholders' "hollowing" behavior in the offer price decision-making and maximize the major stakeholders' "supporting" effect as well as protect minority shareholders' benefits.

2. The merger and acquisition price is normally set between the M&A company and the target company before the merger and acquisition that the price is acceptable by both parties. The M&A company therefore could not deeply calculate the real value of the target company. An excessively high merger and acquisition premium would affect the M&A company's cash flow and result in the long-term wealth loss after the merger and acquisition. It is necessary to alert the risks of dropping performance and financial dilemma after mergers and acquisitions caused by blindly paying excessively high transaction prices. For this reason, listed companies in China should establish a healthy offer price decision-making mechanism and reinforce ecological enterprise supervision and information disclosure systems to reduce high premiums caused by major stakeholders.

3. A larger size of an organization would have a relatively complete company structure. An ecological enterprise could enhance the integration speed after mergers and acquisitions, but might encounter the problems of corporate culture and corporate governance. In this case, it is suggested that ecological enterprises with the intention of mergers and acquisitions should reinforce the corporate culture and corporate governance to enhance the integration speed after the mergers and acquisitions and promote the business size and the competitiveness.

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