

Study on the Influence of Female Executives on Corporate Diversified M & A Decision

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Abstract

This paper conducts a study on the relationship between female executives and diversified Mergers and Acquisitions (M & A) decision, with Chinese A-share companies from 2009 to 2019 as a sample. The results show that the proportion of female executives and their age are significantly negatively correlated with corporate diversified M & A decision, and female executives' academic qualifications are significantly positively correlated with diversified M & A decision. The negative effect of female executive participation on diversified M & A decision is partially caused by managers' risk aversion.

Keywords

Female Executive, Diversified M & A, Social Identity Theory

1. Introduction

As the economic development becomes a new normal in China, the government has issued a series of favorable policies encouraging mergers and reorganizations to promote economic development. Many traditional companies carried out cross-industry mergers and acquisitions one after another to seeing new profitable points, which has attracted many scholars to conduct research. At present, there are relatively few documents that directly conduct detailed research on the relationship between the gender characteristics of the executive team and corporate mergers and acquisitions, and there are very few studies involving cross-border mergers and acquisitions. Research by Sirower (1997) has shown that female managers tend to inhibit mergers and acquisitions and debt financing. When making merger and acquisition decisions, they usually go through more evalua-

tions rather than blindly overconfidence. Therefore, female managers' announcement effect of the acquisition is about 2% higher than that of men. For the subsequent M & A performance, the proportion of female executives is also positively correlated with it (Li & Huang, 2014).

Many current studies focus on the relationship between female executives and corporate over-investment, and believe that compared with men, female executives are less overconfident. Based on this prudent and steady investment attitude, the increase in the proportion of women in the executive team will be restrain enterprises' excessive investment behavior (Li, 2013). Corporate M & A is essentially an investment behavior, and cross-border M & A is an important type of foreign investment behavior. However, according to the relevant M & A data of listed companies, my country's corporate M & A has not brought about performance improvement in general, but has damaged corporate value (Montgomery & Wernerfelt, 1988). In this sense, it is conceivable that female executives will also take a more cautious attitude towards corporate mergers and acquisitions, especially cross-border mergers and acquisitions. In fact, not only in my country, but many foreign scholars have also noticed the fact that it is contrary to traditional mergers and acquisitions theories to improve corporate performance. They believe that mergers cannot bring the expected wealth to shareholders (Villalonga, 2004), nor can they play the role emphasized by traditional theories.

However, there are relatively few studies on the influence of executives' personal characteristics (especially gender) on M & A, and there are fewer studies linking female executives with diversified M & A, though gender, as one of the important manifestations of heterogeneity in top management team, will have an impact on enterprise decision-making (Bengtsson et al., 2005). Therefore, it is of great significance to study the influence of female executives on the diversified M & A decision under the continuous M & A boom.

2. Theoretical Analysis and Hypothesis

As an important resource of an enterprise, senior executives apply a profound impact on the development of an enterprise. Gender differences lead to different handling styles, so we should pay attention to the role of female managers, including their influence on corporate M & A decisions. According to the social identity theory, an individual knows that he/she belongs to a specific social group, and the membership he/she obtains will give it a certain emotional and value meaning. In other words, individuals tend to have in-group preferences, that is to improve their self-esteem by identifying with the group they are in. Therefore, females identify more with the value norms of female group. Guo & Zhao (2017) believed that when making financial decisions, male managers tend to be radical, while female managers tend to be calm and make correct decisions. Chen (2019) believed that there are psychological differences between men and women. Female executives are less confident and risk-averse, so they usually

adopt more cautious investment and financing behaviors. Therefore, based on the social identity theory, when female executives identify more with female group, their behavior will be more in line with the group rules of female group, leading to differences in decision-making among executives of different genders. Yang (2012) found that women are relatively conservative when facing risky decisions, while men are more likely to choose complex and risky behaviors like diversified M & A. Based on the above analysis, the following hypotheses are proposed:

H1: Female executives inhibit diversified M & A decision.

H1a: Female executives have a significant negative impact on the intention of diversified M & A.

H1b: The larger the proportion of female executives, the smaller the scale of diversified M & A.

The behavior of managers with different backgrounds is bound to be different. In terms of academic qualifications, people who have received higher education tend to be more knowledgeable and able to make more sensible decisions. Gu (2019) held that managers with high academic qualifications are often able to take on a more comprehensive and strategic role and promote the implementation of corporate target. Song (2020) also believes that senior management teams with a high level of education are better able to is more capable of giving full play to the role of knowledge, seizing investment opportunities, and increasing corporate investment. Wang (2019) argued that the education level of executives affects the ability to recognize and identify opportunities. The higher the level of education, the more willing they are to take risks. Based on the above analysis, the following hypotheses are proposed:

H2: The educational background of female executives applies a positive impact on the diversified M & A decision.

H2a: The higher the educational background of female executives, the more likely they are to choose diversified M & A.

H2b: The higher the educational background of female executives, the larger the scale of diversified M & A.

Wang (2019) pointed out that younger managers are more likely to accept cutting-edge ideas and make high-risk strategies, while older executives prefer stable strategies. He (2012) found that managers of different ages have different risk tolerance. Young managers are at the beginning of their careers and need more opportunities to show themselves, so they sometimes prefer to take risks. Carlsson and Karlsson (1970) believed that older managers would avoid high-risk diversified M & A to avoid failures as they have accumulated a good reputation in their careers. Based on the above analysis, the following hypotheses are proposed:

H3: The increase in the age of female executives has a negative impact on the diversified M & A decision.

H3a: The older the female executives, the more reluctant they are to conduct diversified M & A activities.

H3b: The older the female executives, the smaller the scale of diversified M & A.

3. Study Design

1) Sample selection and data sources

Considering that the completion of M & A transactions takes a long time and the transaction may fail, this paper selects the main parties of successful M & A events from 2009 to 2019 as the initial sample to study the influence and mechanism of female executives on the corporate diversified M & A decision. At the same time, we follow the following principles to screen the samples: 1) The acquiring parties are listed companies in China's Shanghai and Shenzhen stock exchanges; 2) The non-ST stocks of the buyer's company are excluded from samples; 3) In view of the particularity of the financial statements of the financial industry, the financial industry samples are excluded; 4) Samples with missing data are eliminated. Eventually, the annual observation value of 607 listed companies is obtained. The financial data of the M & A samples and listed companies is from the CSMAR database. The goodwill data, executive information and other data come from the Wind database and the CSMAR database. The internal control quality data comes from the "Internal Control Index of Chinese Listed Companies" issued by the internal control index research group of Xiamen University. The regional marketization degree index data comes from Wang Xiaolu, The "Report on China's Provincial Marketization Index (2018)" written and released by Fan Gang and others.

2) Model design

In order to verify the above three hypotheses, this paper sets the benchmark regression model as follows:

$$Y_{i,t} = \beta_0 + \beta_1 X_{i,t} + \sum_{i=1}^n \gamma_i D_{i,t} + \varepsilon_{i,t} \quad (\text{Model I})$$

Y represents whether there is diversified M & A (Divd) and the scale of diversified M & A (Divv), which can be discussed in different models. This paper establishes a logistic regression model with diversified M & A (Divd) as the dependent variable and a panel regression model with diversified M & A scale (Divv) as the dependent variable.

3) Variable measurement

a) Dependent variable

The dependent variable Y is diversified M & A decisions. This paper sets two indexes: whether there is diversified M & A (Divd) and the scale of diversified M & A (Divv). Regarding the definition of diversified M & A, this paper adopts the definition method, that is to define it according to whether the main business of the CSRC-categorized industry of the acquirer and the main business of target company are in the same industry category.

b) Independent variable

With reference to previous scholars' studies on executives, the following indexes are selected as independent variable X: whether there are female executives (Female), the proportion of female executives (Female_Rate), the average age of female executives (FTMage), and the average educational level of female executives (FTMedu).

c) Control variable

Female executives (Ferate): The measurement methods for female executives mainly include the dummy variable method and the proportional method. In the robustness test, the Blau index of female executives is constructed as an alternative measure of female executives.

Internal control quality (Icq): Refer to the method of [Zhang et al. \(2018\)](#) and use the "Internal Control Index of Chinese Listed Companies" divided by 100 to measure the internal control quality of a company.

Marketization process (Market): adopts the marketization index of each province in the "Report on Marketization Index by Provinces in China (2018)" written and released by Wang Xiaolu, Fan Gang, and Hu Lipeng.

D is the control variable, which mainly includes other variables that affect the choice of companies' cross-border mergers and acquisitions and are related to the gender composition of the senior management team and the personal characteristics of the senior management. Including: 1) Total asset turnover rate (Tatr), companies with higher asset turnover rate are more capable of promoting cross-border mergers and acquisitions, and may have a lower proportion of female executives; 2) Total asset growth rate (Tagr), Faster-growing companies are in the growth stage, and the tendency of cross-border mergers and acquisitions is greater, but this rapid growth may also be brought about by the personality characteristics of male executives, so this variable needs to be controlled; 3) cash flow The ratio (Cash_Rate), the cash flow ratio affects the company's choice of cross-border mergers and acquisitions, and also measures the company's risk appetite. The latter is related to the personality characteristics of the executives, so this variable needs to be controlled; 4) company size (Size), Different company sizes have different tendency to cross-border mergers and acquisitions, and the composition of companies of different company sizes may also have significant differences; 5) profitability (ROA); 6) debt-to-asset ratio (Lev); 7) proportion of independent directors independent, in order to measure the variables of corporate governance, corporate governance has an important influence on the selection of cross-border mergers and acquisitions, and it is also related to the gender composition of executives, so it needs to be controlled); 8) whether the CEO is female (CEO_Gender); 9) chairman Whether or not it is female (Chair_Gender), the chairman is the most corporate legal person, and gender determines the influence of female executives on the company's cross-border mergers and acquisitions. 10) The number of female CFOs (Fe_CEO). This article believes that modern corporate decisions are mostly made in the form of senior management teams, and many scholars also adopt the gender characteristics of senior management teams, that is, the proportion of female senior man-

agers in the number of senior management teams As a measurement indicator, this indicator highlights the gender diversity of the executive team more than individual executives.

The definitions of all variables of model I are shown in **Table 1**.

4. Empirical Analysis and Results

1) Descriptive statistics

Table 2 shows the descriptive statistical results of main variables. The mean value of whether there is diversified M & A (Divd) is 0.123, the standard deviation is 0.328, the minimum value is 0, and the maximum value is 1. The mean value of the diversified M & A size (Divv) is 299,000,000, the standard deviation is 2,060,000,000, the minimum value is 0, and the maximum value is 79,700,000,000, indicating that there are obvious differences between the explained variables of different samples. The mean value of the proportion of female executives (Female_rate) is 18.6%. Overall, the number and proportion of female executives in listed companies in which M & A occur is obviously low in China.

2) Correlation analysis

Table 3 shows that whether there are female executives (Female) and proportion of female executives (Female_rate) are negatively correlated with the scale of diversified M & A (Divv), and the correlation coefficients are -0.016 and -0.003 , respectively.

3) Hausman test

$$\text{chi2}(11) = (b - B)' \left[(V_b - V_B)^{-1} \right] (b - B) = 19.97$$

Prob > chi2 = 0.0457

The hausman test shows that, in model I, the null hypothesis is rejected and fixed effects panel analysis should be used because the P value is lower than the significance level (5%).

4) Regression result analysis

a) The influence of female executives on whether there is M & A

Table 4 shows the regression results of the influence of proportion of female executives, female education background, and female age on whether there is diversified M & A (Divd). Whether there are female executives (Female) is significantly negatively correlated with corporate diversified M & A at the significance level lower than 5%. The change of proportion of female executives (Female_rate) is significantly negatively correlated with whether there is diversified M & A at the significance level lower than 5%. Therefore, Hypothesis 1a holds. The education background of female executives (FTMedu) significantly affects diversified M & A at the significance level lower than 5%, and the coefficient is positive. The age of female executives (FTMage) is significantly negatively correlated with whether there is diversified M & A at the significance level lower than 5%. Therefore, Hypothesis 2a and 3a hold.

Table 1. Definition of variables in regression model.

Types of variables	Variable symbol	Variable name	Variable meaning
Dependent variable	<i>Divdi,t</i>	Whether there is diversified M & A	If in the tth, company i has diversified M & A, then $Divi, t = 1$, otherwise $Divi, t = 0$
	<i>Divvi,t</i>	Scale of diversified M & A	The total amount of diversified M & A in a year (logarithm)
Explanatory variable	<i>Female</i>	Whether there are female executives	If there are female executives in the company, the value is 1, otherwise it is 0
	<i>Female_Rate</i>	Proportion of female executives	The percentage of women in the total number of directors, supervisors and senior executives of the company
	<i>FTMage</i>	Average age of female executives	Average age of female executives
	<i>FTMedu</i>	Average educational level of female executives	Total score of executives/total number of executives. Technical secondary school and below = 1; college = 2; undergraduate = 3; master = 4; doctoral degree and above = 5.
Control variable	<i>Cash_Ratio</i>	Cash flow ratio	Net cash flow from operating activities/year-end current liabilities
	<i>Size</i>	Company size	The natural logarithm of the book value of total assets at the end of the year before the diversified M & A transaction
	<i>ROA</i>	Profitability	The ratio of the net profit to the total asset balance at the end of the year before the diversified M & A transaction
	<i>ROE</i>	Return on equity	Profit after tax/average shareholders' equity (owners' equity)
	<i>Lev</i>	Debt-to-asset ratio	The ratio of the book value of liabilities to the book value of total assets at the end of the year before the diversified M & A transaction
	<i>Indp</i>	Independent director proportion	Number of independent directors/number of directors
	<i>CEO_Gender</i>	whether the CEO is female	If the company's CEO is a female, the value is 1, otherwise it is 0
	<i>Chair_Gender</i>	whether the chairman is female	If the company's chairman is a female, the value is 1, otherwise it is 0
	<i>Fe_CEO</i>	The number of female CEO	Number of female financial executives
	<i>Tagr</i>	Total assets growth rate	(Total assets at the end of the year – total assets at the beginning of the year)/Total assets at the beginning of the year
	<i>Tatr</i>	Total asset turnover rate	Total sales revenue/average total assets
	<i>Year</i>	Year	Year dummy variable
	<i>Industry</i>	Industry	Industry dummy variable

Data source: Cathay pacific database.

Table 2. Descriptive statistical analysis of main variables.

Variable	Obs	Mean	Std. Dev.	Min	Max
Divd	6677	0.123	0.328	0	1
Divv	6677	299,000,000	2,060,000,000	0	7.97E+10
Female	6677	0.997	0.059	0	1
Female_rate	6677	0.186	0.100	0	1
FTMedu	6677	3.294	0.649	1	5
FTMage	6677	46.786	5.535	26	69
Cash_Ratio	6677	0.079	7.268	-591.618	7.501
Tagr	6677	0.737	16.265	-0.917	1100.448
Lev	6677	0.579	2.555	0.002	142.718
Size	6677	22.217	1.423	10.842	27.572
ROA	6677	3.550	287.712	-51.947	23,509.77
Indp	6677	0.373	0.060	0	0.8
ROE	6676	0.058	2.489	-165.892	51.454
Tatr	6677	35.325	2865.873	-500.501	234,178
CEO_Gender	6677	0.070	0.256	0	1
Chair_Gender	6677	0.065	0.247	0	1
Fe_CFO	6677	0.348	0.514	0	3

Data source: Cathay pacific database.

Table 3. Correlation test of main variables.

Variable											
Divv	1.000										
Female_rate	-0.016	1.000									
Female	-0.003	0.109*	1.000								
Cash_Ratio	-0.015	-0.030*	-0.003	1.000							
Tagr	0.000	0.010	-0.000	-0.018	1.000						
Lev	0.012	-0.009	0.002	0.001	0.016	1.000					
Size	0.061*	-0.167*	-0.012	0.031*	-0.123*	-0.144*	1.000				
ROA	0.016	-0.013	0.001	-0.000	-0.000	0.679*	-0.098*	1.000			
Indp	-0.001	-0.029*	-0.012	0.001	-0.005	-0.014	0.038*	-0.008	1.000		
ROE	-0.014	0.019	0.000	0.001	-0.002	-0.554*	0.074*	-0.816*	0.021	1.000	
Tatr	-0.002	-0.002	0.001	-0.000	-0.001	-0.000	-0.002	-0.000	-0.008	-0.000	1.000

Note: *means significant at the 10% level, **means significant at the 5% level, ***means significant at the 1% level. Data source: Cathay Pacific database.

Table 4. Regression results of the influence of female executives on whether there is diversified M & A.

VARIABLES	(1)	(2)	(3)	(4)
	A1	A2	A3	A4
	Divd	Divd	Divd	Divd
Female	-0.35** (-6.471)			
Female_rate		-0.0296** (-8.0745)		
FTMedu			0.176*** (3.031)	
FTMage				-0.0142** (-2.070)
Fe_CFO	0.0654 (0.887)	0.0671 (0.885)	-0.0604 (-0.820)	-0.0600 (-0.815)
Chair_Gender	-0.0583 (-0.387)	-0.0578 (-0.381)	0.0614 (0.408)	0.0510 (0.339)
CEO_Gender	0.0186 (0.126)	0.0191 (0.128)	-0.00472 (-0.0319)	-0.00686 (-0.0465)
Tatr	4.74e-05 (0.0198)	4.96e-05 (0.0176)	-3.88e-05 (-0.0398)	-0.000209 (-0.0471)
ROE	0.0138 (0.549)	0.0138 (0.550)	-0.0142 (-0.559)	-0.0138 (-0.544)
Indp	-0.103 (-0.166)	-0.101 (-0.162)	0.110 (0.178)	0.0805 (0.130)
ROA	0.238 (0.848)	0.238 (0.848)	-0.235 (-0.832)	-0.233 (-0.843)
Size	0.0314 (1.128)	0.0313 (1.112)	-0.0409 (-1.487)	-0.0316 (-1.137)
Lev	0.106 (1.028)	0.106 (1.027)	-0.106 (-1.028)	-0.103 (-1.018)
Tagr	0.00474 (0.614)	0.00476 (0.616)	-0.00490 (-0.631)	-0.00492 (-0.628)
Cash_Ratio	-0.00629 (-0.230)	-0.00616 (-0.234)	0.00591 (0.233)	0.00619 (0.258)
Industry	control	control	control	control

Continued

Year	control	control	control	control
Costant	-1.470	-1.129	1.601**	0.551
	(-1.423)	(-1.544)	(2.382)	(0.803)
Pseudo/R2	0.0042	0.0042	0.0032	0.0022
N	607	607	607	607

Note: *means significant at the 10% level, **means significant at the 5% level, ***means significant at the 1% level. Data source: Cathay Pacific database.

b) The influence of female executives on the scale of diversified M & A

Table 5 further uses panel regression to analyze the influence of female executives on the scale of diversified M & A. Whether there are female executives (Female) and the scale of corporate diversified M & A are negatively correlated at the level 5%. Proportion of female executives (Feamle_rate) is significantly negatively correlated with the scale of diversified M & A. Therefore, Hypothesis 1b holds. The education background of female executive (FTMedu) significantly affects the scale of diversified M & A (Divv), and the coefficient is positive. The age of female executives (FTMage) has a negative impact on the scale of diversified M & A. The results verified Hypothesis 2b, 3b.

5) The influencing mechanism of female executives ratio on diversified M & A decision

The analysis above shows that with the increase of the proportion of female executives, the frequent diversified M & A behavior of the management can be effectively reduced. Then, what is the influencing mechanism of the proportion of female executives on corporate diversified M & A decisions?

Based on the question, the manager's risk aversion coefficient was used as an intermediary variable to study the influencing mechanism of the proportion of female executives on corporate diversified M & A. Then following mediating effect model was established:

$$Rai_{i,t} = \beta_0 + \beta_1 femal_rate_{i,t} + \sum_{i=1}^n \gamma_i D_{i,t} + \varepsilon_{i,t} \quad (\text{Model II})$$

$$\ln(Divv_{i,t}) = \beta_0 + \beta_1 Rai_{i,t} + \sum_{i=1}^n \gamma_i D_{i,t} + \varepsilon_{i,t} \quad (\text{Model III})$$

The expression of the manager's risk aversion coefficient is as follows:

Manager's risk aversion coefficient = (rank value of salary change rate + rank value of inventory change rate)/kN

Wherein, k is the dimension of the risk aversion coefficient, k = 2.

Table 6 shows the regression results of models II and III. The female_rate coefficient in column (1) is significantly positive, indicating that as the proportion of female executives increases, the risk aversion coefficient increases. The coefficient of Rai in column (2) is significantly negative, indicating that the

Table 5. Regression results of the influence of female executives on the scale of diversified M & A.

VARIABLES	(1)	(2)	(3)	(4)
	fe	fe2	fe3	fe4
	Divv	Divv	Divv	Divv
Female	-36,820,000** (-5.0811)			
Female_rate		-3.985e+07* (-0.149)		
FTMedu			6.906e+07* (4.957)	
FTMage				-396,005** (-9.0533)
Cash_Ratio	-5.152e+06 (-1.402)	-4.961e+06 (-1.429)	-5.164e+06 (-1.406)	-5.152e+06 (-1.402)
Tagr	-129,764 (-0.0775)	953,355 (0.610)	-138,310 (-0.0826)	-128,648 (-0.0768)
Lev	-130,618 (-0.00880)	8.430e+06 (0.623)	-52,419 (-0.00353)	-142,227 (-0.00959)
Size	-9.102e+06 (-0.269)	9.315e+07*** (5.082)	-8.381e+06 (-0.248)	-9.041e+06 (-0.268)
ROA	56,207 (0.315)	103,711 (0.603)	56,731 (0.318)	56,103 (0.315)
Indp	-2.478e+08 (-0.555)	-1.117e+08 (-0.266)	-2.426e+08 (-0.544)	-2.481e+08 (-0.556)
ROE	-9.285e+06 (-0.502)	-384,088 (-0.0219)	-9.224e+06 (-0.499)	-9.300e+06 (-0.503)
Tatr	-565.0 (-0.0608)	-1,098 (-0.125)	-849.5 (-0.0914)	-565.8 (-0.0609)
CEO_Gender	-8.047e+07 (-0.548)	-7.464e+07 (-0.740)	-7.802e+07 (-0.532)	-8.089e+07 (-0.551)
Chair_Gender	1.566e+08 (0.947)	3.541e+07 (0.339)	1.588e+08 (0.960)	1.565e+08 (0.947)
Fe_CFO	-7.098e+07 (-0.828)	-4.118e+07 (-0.811)	-7.172e+07 (-0.837)	-7.088e+07 (-0.827)

Continued

Constant	6.514e+08	-1.710e+09***	3.691e+08	6.320e+08
	(0.726)	(-3.849)	(0.460)	(0.752)
R-squared	0.0032	0.0739	0.0047	0.0035
N	607	607	607	607

Note: *means significant at the 10% level, **means significant at the 5% level, ***means significant at the 1% level. Data source: Cathay Pacific database.

Table 6. The proportion of female executives affects the scale of the company's diversified M & A by enhancing managers' risk aversion.

VARIABLES	(1)	(2)
	model1	model2
	Rai	lnDivv
Rai		-0.974** (-2.182)
Female_rate	0.0475** (1.962)	0.456 (0.517)
Cash_Ratio	9.72e-05 (0.294)	-0.0320*** (-2.654)
Tagr	-0.000197 (-1.330)	-0.00632 (-1.173)
Lev	-0.000263 (-0.279)	0.0348 (1.014)
Industry	control	control
Year	control	control
Constant	-0.145 (-0.0944)	-649.1*** (-11.64)
N	607	607
R-squared	0.001	0.022

Note: *means significant at the 10% level, **means significant at the 5% level, ***means significant at the 1% level. Data source: Cathay Pacific database.

higher the risk aversion coefficient of managers, the smaller the scale of diversified M & A. Therefore, female executives have a higher risk aversion and tend to decrease the scale of diversified M & A. The risk aversion coefficient can be used as a good intermediary variable and control measure.

6) Robustness test

In order to test the reliability of the results, the explained variable of regres-

sion is replaced. We use the result of cumulative number of mergers and acquisitions in the year diversified M & A occurred/the number of years of being listed before the diversified M & A occurred to measure the frequency of diversified M & A and regress the data again. The regression results are shown in **Table 7**. The proportion of female executives is still significantly negatively correlated with the diversified M & A frequency, which is consistent with the original results.

In addition, 10% - 90% of the scale of diversified M & A (*_Divv*) of the above regression was selected in this paper, and the regression was performed again after the extreme value was removed. The regression results are shown in **Table 8**. As can be seen from **Table 8**, the influence of the ratio of female executives on

Table 7. The robustness test results of replaced explained variables of the diversified M & A decision.

VARIABLES	(1)
	Frequency
Female_rate	-0.00475** (-4.728)
Tagr	-2.93e-05 (-0.739)
Lev	-0.000389* (-2.131)
Size	-0.000974** (-2.086)
ROA	2.91e-07 (0.0666)
Indp	-0.00562* (-1.527)
ROE	-0.000135 (-0.304)
Tatr	-5.96e-08 (-0.267)
Industry	control
Year	control
Constant	-0.980** (-2.403)
N	607
R-squared	0.002

Data source: Cathay Pacific database. Note: *means significant at the 10% level, **means significant at the 5% level, ***means significant at the 1% level.

Table 8. The robustness test results of 10% - 90% of the scale of diversified M & A.

VARIABLES	(1)
	LnDivv
Female_rate	-2.8528*** (-15.62)
Tagr	-8.91e-07 (-0.24)
Lev	-0.0074336 (-1.25)
Size	-0.0182872 (-1.35)
ROA	-0.000363 (-0.51)
Indp	-0.0995287 (-0.55)
ROE	-0.0062506 (-0.84)
Tatr	-8.91e-07 (-0.24)
Industry	control
Year	control
Constant	22.05381*** (71.60)
N	607
R-squared	0.0394

Data source: Cathay Pacific database. Note: *means significant at the 10% level, **means significant at the 5% level, ***means significant at the 1% level.

the size of diversified M & A is still significantly negative. The results of robustness test are consistent with the original empirical results.

5. Conclusion and Enlightenment

The findings of the paper is as follows: 1) The higher the proportion of female executives, the more likely it is to inhibit the occurrence of diversified M & A and reduce the scale of diversified M & A. 2) With the increase of education level, female executives have stronger learning ability and have a better grasp of the timing of diversified M & A, thus increasing the scale of diversified M & A. 3) The age of female executives has an inhibitory effect on diversified M & A beha-

rior. 4) The proportion of female executives significantly reduces the scale of cooperate diversified M & A by increasing the degree of risk aversion.

Combining the above theoretical hypotheses and empirical analysis, this article contains the following policy recommendations:

First, although my country's foreign investment has made great progress in recent years, there are a large number of irrational mergers and acquisitions, and even the transfer of assets. In order to promote the rationalization of cross-border mergers and acquisitions and improve the efficiency of cross-border mergers and acquisitions, it is necessary to start from the personal characteristics of managers to find the correct way to solve the problem. Specifically, referring to the research in this article, we must be wary of the agency costs caused by the personal moral factors of executives and the interference of "overconfidence" and other characteristics on the company's strategic goals and investment decisions. Gender is an important factor that brings about differences in managerial characteristics, but it is not only the only factor. The influence of managerial characteristics reflected by gender differences on M & A selection can also be extended to other characteristics of managers, which is irrational in governance. The choice of cross-border mergers and acquisitions has important reference significance.

Second, enterprises should provide women with equal employment opportunity for women and give full play to the role of female managers in corporate governance and strategy. The empirical analysis in this article proves that, compared with men, female managers have excellent characteristics such as higher moral standards and lower overconfidence. These excellent characteristics help companies maintain lower agency costs in daily corporate governance and increase the company's Performance, in major strategic decisions, more restrains inefficient or inefficient decisions such as excessive investment by enterprises, especially female executives with functional backgrounds in finance and law. This type of career oriented to reduce corporate risks makes them more sensitive to the potential risks of corporate decision-making. Therefore, important strategic decisions of enterprises should be Fully refer to the opinions of female executives, avoid setting up a "glass ceiling" for female executives' employment, enhance the gender diversity of the company's executive decision-making team, and provide women with equal job opportunities and promotion channels.

Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

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