

Investment Decision under Cross-border Mergers and Acquisitions

-- Taking Real Estate Industry

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Abstract

In recent years, more and more companies have tried to achieve extensive growth through cross-border Mergers and Acquisitions(M&A). However, the practical effects of cross-border M&A have been debated, and the question of what factors would change its financial performance has attracted the attention of senior regulators. Before and after cross-border M&A, in order to combine the influence of different factors, how enterprise managers make investment decisions has become an increasingly concern for enterprises. Based on this, this article takes the real estate industry as an example, uses the data of A-share listed companies from 2009 to 2019, and adopts a stepwise regression method to explore the factors affecting financial performance under cross-border M&A and proposes strategies for how to invest.

Keywords

Cross-border M&A, Financial performance, Strategies, Real estate industry.

1. Introduction

Since 2018, China's real estate long-term regulation mechanism has been advancing at a high speed and continuously improving. More Chinese companies have their eyes on the world. However, due to the impact of the new crown epidemic in the first half of 2020, Chinese companies' cross-border investment continues to decline. To reduce the impact of the objective environment on the financial performance of enterprises and to increase the opportunities for enterprises to invest abroad, it is becoming more and more important to pay attention to the factors that affect financial performance under cross-border M&A. Using the classic theories of institutional factors and organizational learning, based on institutional constraints and international experience, a series of hypotheses have been put forward on how Chinese companies choose cross-border mergers and acquisitions and joint ventures to establish two international direct investment models, and through the implementation of cross-border mergers and acquisitions by Chinese companies since 2000. Logistic regression analysis was performed on the sample of newly-built joint ventures, and the hypothesis was verified, and it was concluded that the stronger the institutional constraints faced by Chinese enterprises, the more inclined to joint ventures in FDI, and the more international experience of enterprises, the more inclined to mergers and acquisitions in FDI. At the same time, it also reveals a series of specific factors that affect the macro and micro levels of enterprises' choice of mergers and acquisitions and joint ventures in the context of institutional transformation and accelerated internationalization. With the continuous strengthening of China's foreign direct investment strength and the increasing scale, the issue of corporate overseas mergers and acquisitions has become a hot issue in international business research. Since 2004, the number of overseas M&A transactions by Chinese companies has increased significantly. The areas of mergers and acquisitions involve mining, manufacturing, power production and supply, professional

technical services, financial services, etc.; moreover, the subjects of Chinese cross-border mergers and acquisitions are no longer limited to state-owned enterprises, central enterprises, and large enterprise groups. Private enterprises have also begun to pass overseas mergers and acquisitions have achieved international development [1]. Taking the cross-border M&A transactions initiated by listed companies in Shanghai and Shenzhen from 2000 to 2008 as the research object, it analyzes the factors affecting the performance of Chinese companies' cross-border M&A. The results show that the more imperfect the host country's institutional environment, the smaller the cultural differences between the parties to the merger, the larger the scale of the company, and the larger the scale of M&A, the better the performance of Chinese companies' cross-border mergers and acquisitions; on the contrary, the worse the performance of mergers and acquisitions [2]. In addition to the above factors, corporate financial risks and corporate age also have an impact on cross-border M&A performance, but the impact is relatively small [3]. Another study used 103 companies that successfully conducted cross-border mergers and acquisitions on China's Shanghai and Shenzhen Stock Exchanges from 2005 to 2010 as a research sample, and used a multiple regression model to conduct empirical tests on the factors affecting the performance of Chinese companies' cross-border mergers and acquisitions. The research results show that the cash payment method, the shareholding ratio of the largest shareholder, and the cultural heterogeneity of both parties to the acquisition are significantly positively related to the acquisition performance of the acquiring company; the government connection of the acquiring company is positively related to its short-term performance after the acquisition, and its long-term performance is significantly negatively correlated; the size of the acquired company is significantly negatively correlated with its short-term performance after the merger, and its long-term performance is significantly positively correlated [4]. To study the influencing factors more effectively, mediation and regulation are introduced. Taking 60 cross-border M&A cases successfully implemented by Chinese listed companies as the research sample, taking the change in the return on total assets of the sample companies in the two years before and after the M&A event as the dependent variable, and analyzing the different levels of institutional distance and the international experience and knowledge absorption capacity of the parent company of the merger. The intermediary role of the system clarifies the path and mechanism through which the different dimensions of institutional distance affect the performance of cross-border mergers and acquisitions [5]. Based on the above research results, there are many studies on the financial performance of cross-border mergers and acquisitions, but there are no studies taking the real estate industry as an example. This article takes the real estate industry as an example using stepwise regression analysis to study the influencing factors of financial performance under cross-border M&A, and further proposes the internationalization strategies to improve China's international competitiveness.

2. Empirical Study on the Factors Affecting the Financial Performance

2.1. Sample Selection and Data Sources

All the financial data in this article are from the WIND database and the annual reports issued by the listed companies.

This article selects cross-border M&A cases of 2009-2019 A-share real estate listed companies. Studying the financial performance of the year before and the two years after the M&A, denoted as [T-1,T+2]).

Table 1. Regression variable description

Variables	Description
Return On Equity(ROE)	Evaluates the profitability of a company
Price to Earnings ratio(PE)	Evaluate whether the stock price level is reasonable
Accounts Receivable Turnover Ratio(ARTR)	Measure the flow of accounts receivable
Capital reserve per share(CR)	Expand the company's production and operation activities and increase the registered capital of the company
Cash flow from financing activities(CFFF)	Activities that lead to changes in the size and structure of corporate capital and debt
Net Profit Growth Rate(NPGR)	Measure the performance of assets operation and management, as well as the growth status and development ability
Ownership Type	State-owned or state-controlled=1, Private=0 Type of M&A (diversified M&A=1, related M&A=0)

2.2. Establish Stepwise Regression Model

Assume that the seven factors of PE, ARTR, CR, CFFF, NPGR, Ownership and Type are in the year before the cross-border M&A (T_{-1} Period), the year of the cross-border M&A (T_0 Period), the first year after the cross-border M&A (T_{+1} Period) and the second year after the cross-border M&A (T_{+2} Period) will have varying degrees of impact on the financial performance of the real estate industry. After using the stepwise regression analysis method, the four-period regression result model is obtained: such as Table 2, Table 3, Table 4 and Table 5.

Table 2. T_{-1} Period regression analysis for independent and dependent variables

Predictors Variable	Dependent Variable	B	standardization β	t	R2	$\Delta R2$	F	VIF
(Constant)	ROE	0.098		10.853***				
NPGR		0.114	0.862	5.366***	.742	.716	28.792***	1.000

Table 3. T_0 Period regression analysis for independent and dependent variables

Predictors Variable	Dependent Variable	B	standardization β	t	R2	$\Delta R2$	F	VIF
(Constant)	ROE	0.128		25.492***				
ARTR		0.000	0.476	10.978***				1.556
CR		-0.016	-0.336	-8.817***	.992	.986	164.135***	1.199
CFFF		2.184E-6	0.330	8.422***				1.271
Ownership		-0.033	-0.253	-6.642***				1.202
NPGR		0.026	0.176	4.263**				1.414

Table 4. T_{+1} Period regression analysis for independent and dependent variables

Predictors Variable	Dependent Variable	B	standardization β	t	R2	$\Delta R2$	F	VIF
(Constant)	ROE	0.247		9.342***				
PE		-0.008	-0.875	-10.277***	.950	.931	50.757***	1.162
ARTR		0.000	0.275	3.315**				1.106
CR		-0.021	-0.191	-2.355**				1.054

Table 5. T₊₂ Period regression analysis for independent and dependent variables

Predictors Variable	Dependent Variable	B	standardizationβ	t	R2	ΔR2	F	VIF
(Constant)		0.078		4.490**				
PE	ROE	-0.001	-0.517	-3.044*	.849	.784	13.084**	1.333
Type		0.051	0.434	2.949*				
NPGR		0.050	0.416	2.451*				

Source: Compiled by author on the basis of the WIND database using SPSS 26.0 software.

* significant at the 0.05 level.**significant at the 0.01 level.*** significant at the 0.001 level.

2.3. Results and Discussion

2.3.1. The Goodness of Fit Test of the Regression Equation

It can be seen from Table 2 that R²=0.742, adjusting R²=0.716, which proves that the goodness of fit of the regression equation during the T₋₁ period is good; It can be seen from Table 3 that R²=0.992, adjusting R²=0.986, which proves that the goodness of fit of the regression equation during the T₀ period is excellent; It can be seen from Table 4 that R²=0.950, adjusting R²=0.931, which proves that the goodness of fit of the regression equation during the T₊₁ period is excellent; It can be seen from Table 5 that R²=0.849, adjusting R²=0.784, which proves that the goodness of fit of the regression equation during the T₊₂ period is good;

2.3.2. Significance Test of Regression Equation

It can be seen from Table 2 that F-test statistics F= 28.792 (p<0.001), so the regression effect of this model during the T₋₁ period is completely significant; It can be seen from Table 3 that F-test statistics F= 164.135 (p<0.001), so the regression effect of this model during the T₀ period is completely significant; It can be seen from Table 4 that F-test statistics F=50.757 (p<0.001), so the regression effect of this model during the T₊₁ period is completely significant; It can be seen from Table 5 that F-test statistics F= 13.084 (p<0.01), so the regression effect of this model during the T₊₂ period is completely significant.

2.3.3. Multicollinearity Test of Regression Equation

The variance inflation factor (VIF) is an important indicator to judge whether there is multicollinearity. Generally speaking, when VIF≥10, it means that this variable has strong multicollinearity with other variables. From the results of the above table, we can see that in different periods, the VIF values of all independent variables are less than 10. This shows that: multicollinearity can be tolerated, that is, there is no multicollinearity between independent variables.

2.3.4. Stepwise Regression Equation Results and Discussion

According to the data in the above table, the regression equation for the four periods are:

(1) During the T₋₁ period:

$$ROE = 0.098 + 0.862NPGR \quad (1)$$

It can be seen from Table 2 that using stepwise regression analysis, the t-test statistics of constants and independent variables are t=10.853 (p<0.001) and t=5.366 (p<0.001), indicating that the independent variable NPGR is significant during T₋₁ period. That is: the impact of NPGR on financial performance was positive one year before the cross-border M&A. This shows that the increase in NPGR will improve the financial performance of the real estate industry.

(2) During the T₀ period:

$$ROE = 0.128 + 0.476ARTR - 0.336CR + 0.330CFFF - 0.253Ownership + 0.176NPGR \quad (2)$$

It can be seen from Table 3 that using stepwise regression analysis, the t-test statistics for constants and independent variables are $t=25.492$ ($p<0.001$), $t=10.978$ ($p<0.001$), $t=-8.817$ ($p<0.001$), $t=8.422$ ($p<0.001$), $t=-6.642$ ($p<0.001$) and $t=4.263$ ($p<0.05$), indicating that the independent variables ARTR, CR, CFFF, Ownership and NPGR are significant during T_0 period. That is: the influence of ARTR, CFFF and NPGR on financial performance is positive in the year of the cross-border M&A, which shows that: the increase of ARTR, CFFF and NPGR will improve the financial performance of the real estate industry; the influence of CR and Ownership on financial performance is negative in the year of the cross-border M&A. This shows that the increase in CR and Ownership will inhibit the financial performance of the real estate industry.

(3) During the T_{+1} period:

$$ROE = 0.247 - 0.875PE + 0.275ARTR - 0.191CR \quad (3)$$

It can be seen from Table 4 that using stepwise regression analysis, the t-test statistics for constants and independent variables are $t=9.342$ ($p<0.001$), $t=-10.277$ ($p<0.001$), $t=3.315$ ($p<0.001$) and $t=2.355$ ($p<0.05$), indicating the independent variables PE, ARTR and CR are significant during T_{+1} period. That is: the influence of ARTR on financial performance is positive in the first year after the cross-border M&A, which shows that the increase of ARTR will improve the financial performance of the real estate industry; the influence of PE and CR on financial performance is negative in the first year after the cross-border M&A. This shows that the increase in PE and CR will inhibit the financial performance of the real estate industry.

(4) During the T_{+2} period:

$$ROE = 0.078 - 0.517PE + 0.434Type + 0.416NPGR \quad (4)$$

It can be seen from Table 5 that using stepwise regression analysis, the t-test statistics for constants and independent variables are $t=4.490$ ($p<0.01$), $t=-3.044$ ($p<0.05$), $t=2.949$ ($p<0.05$), and $t=2.451$ ($p<0.05$), indicating that the independent variables PE, Type and NPGR are significant during T_{+2} period. That is: the impact of Type and NPGR on financial performance is positive in the second year after the cross-border M&A, which shows that the increase of Type and NPGR will improve the financial performance of the real estate industry; the impact of PE on financial performance is negative in the second year after the cross-border M&A. This shows that the increase in PE will inhibit the financial performance of the real estate industry. In short, the NPGR factor has the greatest impact and has a positive impact on financial performance. At the same time, the impact before and after the cross-border M&A first decreases and then rises ($0.862 \rightarrow 0.176 \rightarrow 0.416$); secondly, ARTR ($0.476 \rightarrow 0.275$) and PE ($-0.875 \rightarrow -0.517$) Factors have positive and negative effects on financial performance respectively; After then, CR ($-0.336 \rightarrow -0.191$) and CFFF (0.330) have different effects on financial performance; Last but not the least, two dummy variables (Ownership and Type) have an impact on financial performance in different periods. This conclusion reflects from the side: the management of a listed company decides which method of cross-border M&A will have a great impact on the company's financial performance. In comparison, diversified M&A is significant negative effect (-0.253), related M&A is not significant. In cross-border M&A, the nature of listed companies will also indirectly affect the financial performance of companies, especially for state-owned or state-controlled listed companies (0.434).

3. Conclusion

This article uses stepwise regression analysis to analyze the impact of five economic variables and two dummy variables on the ROE variable that measures financial performance during different periods. Finally, it was found that NPGR has a significant positive effect on ROE during the T₋₁, T₀, and T₊₂ period; ARTR has a significant positive effect on ROE during the T₀ and T₊₁ period; CFFF has a significant positive impact on ROE during the T₀ period; Dummy variable Type has a significant positive impact on ROE during T₊₂ period; CR has a significant negative impact on ROE during T₀ and T₊₁ periods; PE has a significant negative impact on ROE during T₊₁ and T₊₂ periods ; Dummy variable Ownership has a significant negative impact on ROE during the T₀ period. According to the regression results, combined with the current economic environment and China's national conditions, if Chinese companies want to improve financial performance, choose the best investment plan, increase their international influence and achieve internationalization through cross-border M&A, they must understand government M&A policies and make corporate investment decisions, change the sales business structure and enhance corporate crisis awareness, improve the corporate credit system and control the signing of transaction contracts.

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