

Analysis of Financial Condition of Chinese Listed Real Estate Companies Based on DuPont Analysis Method: A Case Study of China Evergrande Real Estate

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Abstract: This paper utilizes the DuPont analysis method to analyze China Evergrande Estate's financial situation from the perspectives of profitability, debt-paying ability, and operational capability. The results not only provide reference and suggestions for the management of Evergrande Real Estate, but also have certain reference significance for other companies in the same industry. The analysis shows that the company's profitability and quality are not ideal, with a large gap compared to other first-tier real estate companies in the industry. The company's focus on high revenue growth and cost control has led to a lack of control over sales and financial expenses, resulting in lower profits than expected. The company needs to focus on achieving profit growth rather than just scale growth.

1. Introduction

Research on the DuPont analysis system in foreign countries started earlier than in China. The DuPont analysis system was first proposed by DuPont Company in the United States in 1919. Krishna G. Palepu, a professor at Harvard University in the United States, believed that to explore the fundamental reasons for changes in financial indicators, the indicators that need to be analyzed must be studied layer by layer to discover the reasons. By studying the issue, Prague Stephan (2006) found that the growth of sales revenue when a company's cash flow is zero is the standard for judging whether a company can achieve sustainable growth. Zvi Bodie, a professor at Boston University in the United States, introduced factors such as taxes and interest expenses into the five-factor DuPont analysis system, which is: $\text{net profit margin} = (1 - \text{interest burden rate}) \times (1 - \text{tax burden rate}) \times \text{sales return rate} \times \text{asset turnover rate} \times \text{equity multiplier}$. He believed that analyzing this model can help understand the entire capital structure of a company, thereby reducing financial risks and increasing corporate profits.

Shi Yanqing and Li Li (2010) believed that by using the DuPont analysis method to decompose key indicators such as shareholder return on equity, total asset return on investment, and net profit margin, they can conduct in-depth analysis of the profit-making ability of listed companies, identify the main reasons affecting the company's profit-making ability and problems in management, and maximize the company's profit-making ability. Fang Haibo (2018) believed that in the fierce real

estate market environment, the decision-makers in the company must rely on a large amount of different types of data, especially financial data, to analyze the company's financial situation, and then make judgments based on the results of this series of analyses to make correct decisions. Roman Shan, Li Yuanchen, and Huang Xuan (2021) pointed out that real estate companies can only continuously improve their profitability and reduce potential operational risks during the operation process, which can enable them to obtain greater economic benefits and have better development prospects in the future.

Financial analysis in the real estate industry mainly reflects a real estate company's financial situation by comprehensively considering its debt-paying ability, profitability, and operational capability. Analyzing a company's financial situation not only needs to consider the impact of internal factors but also the impact of external factors on the company's financial situation. This paper mainly uses the DuPont analysis method for analysis and research. The study found that the most significant feature of the DuPont model is to organically combine several ratios used to evaluate a company's operating efficiency and financial condition according to their internal connections, form a complete indicator system, and ultimately comprehensively reflect a company's financial situation through return on equity. It can comprehensively reflect the profitability, operational capability, and debt-paying capability of China Evergrande Real Estate, systematically analyzing the reasons for the company's financial fluctuations. At the same time, this paper also found that current research mainly focuses on traditional industrial enterprises, with relatively few studies on the financial situation of the real estate industry. Therefore, this paper takes China Evergrande Real Estate as the research object, conducts detailed and innovative research on its financial situation, establishes a complete financial situation analysis system for real estate projects, and provides valuable references for analyzing the financial situation of the real estate industry in China.

2. Comparative Analysis of Financial Condition between Evergrande Real Estate and Country Garden Group and Vanke Group

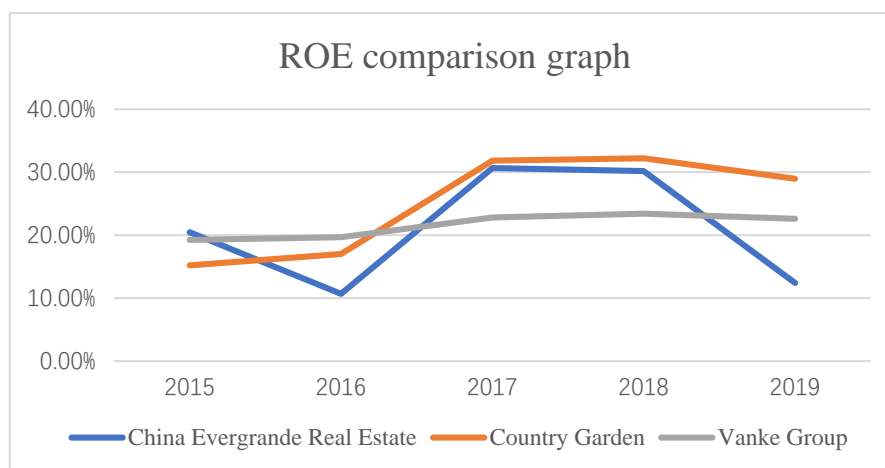


Figure 1: Trend of ROE Indicators for China Evergrande Real Estate, Country Garden and Vanke Group from 2015-2019

The return on equity (ROE) is a metric used to measure how much net profit is generated per unit of asset, and is a useful indicator for evaluating a company's profitability relative to its total asset value. The asset turnover ratio is the percentage of net profit to average shareholder equity, and is the percentage rate obtained by dividing a company's after-tax profit by its net assets. This metric reflects the level of return on shareholder equity and is used to measure the efficiency of a

company's use of its own capital. The higher the value of these indicators, the higher the return on investment.

$$ROE = \frac{Net\ Profit}{Net\ Asset} \quad (1)$$

Based on Figure 1, it can be concluded that Evergrande Real Estate has been unstable in the past five years, indicating that the company's use of its own funds has resulted in unstable returns. Looking at Evergrande's net profit from sales, core profit margin, net operating assets, operating profit margin, and other indicators, it can be seen that Evergrande's profitability and quality are not ideal, and there is still a significant gap compared to other first-tier real estate companies in the industry. Evergrande has been focusing on high revenue growth and cost control, but in recent years, the control over sales and financial expenses has been relaxed, resulting in less inspiring profit data. Therefore, Evergrande needs to pursue high revenue growth while continuously controlling costs and expenses in order to achieve profit growth rather than simply scaling up.

Country Garden Group has been continuously increasing in the past five years, indicating that higher returns have been generated from the company's investments. The rapid increase in Country Garden Group's ROE is due to an increase in debt, expansion of the company's scale, and increased project investment, resulting in short-term increases in net profit. However, if the debt level is not controlled in the long run, there is a risk of eventually being unable to repay the debt.

Vanke Group has maintained stable development in the past five years, remaining at around 20%, indicating that the company's investment returns are relatively stable.

The following sections of this paper will provide a detailed explanation of the reasons for the fluctuation in Evergrande Real Estate's ROE from three aspects: profitability, solvency, and operational capability.

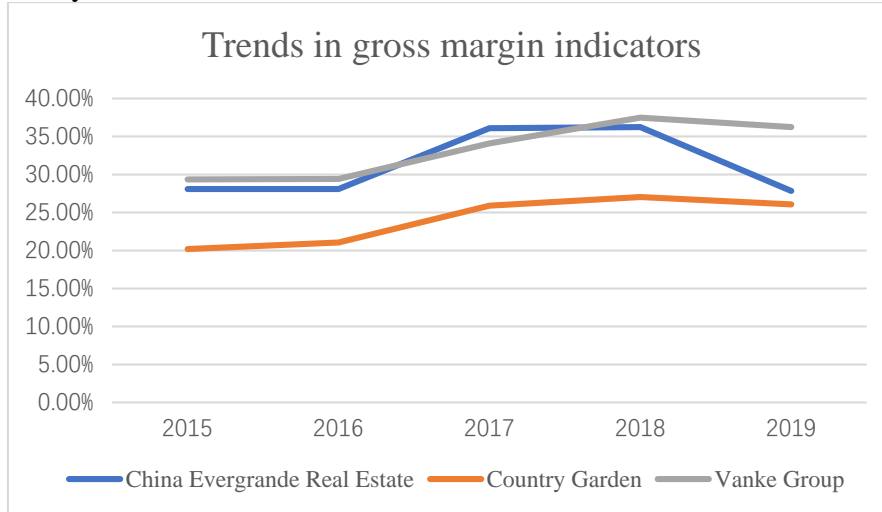


Figure 2: Trend of Gross Margin Indicators of China Evergrande Real Estate, Country Garden and Vanke Group from 2015-2019

2.1 Comparative Analysis of Profitability

Gross profit margin is the percentage of gross profit to sales revenue (or operating revenue), where gross profit is the difference between revenue and the corresponding operating costs, reflecting the portion of value added to a product after production and internal transformation. The greater the value added, the higher the gross profit.

$$Gross\ Profit\ Margin = \frac{Gross\ Profit}{Revenue\ from\ main\ business} \quad (2)$$

According to Figure 2, it shows that Evergrande Real Estate has maintained a gross profit margin of around 28%, ranking second among the three companies and creating a higher gross profit. The main reason is that Evergrande's gross profit has continued to develop steadily in the past five years, with gross profit reaching nearly RMB 170 billion in 2018. Evergrande adopted a scale strategy from 2014 to 2015 and proposed a transformation towards "scale + efficiency" in 2016, not only focusing on final sales revenue but also on profits. Combined with Evergrande's real estate strategic layout in 2016, it can be found that Evergrande is shifting its project layout from third- and fourth-tier cities to first- and second-tier cities. The land prices in first- and second-tier cities have changed significantly compared to those in third- and fourth-tier cities where Evergrande originally laid out, resulting in a significant increase in operating costs, which, however, is somewhat too high compared to the growth rate of operating income. From this, it shows that Evergrande's control over operating costs still needs to be further strengthened in the process of implementing its business strategy. The scale of operating income is determined by price and sales volume. In the past five years, Evergrande's operating income has maintained a high growth rate, showing a state of simultaneous increase in quantity and price, and exhibiting high-speed growth beyond the industry average. Among them, the main operating income, namely the income growth brought by the sale of residential houses developed by real estate development, has contributed greatly to the growth of operating income.

Country Garden's gross profit margin has been on the rise, but it is the weakest among the three, indicating a low gross profit. The main reason is that Country Garden's sales revenue has declined in recent years, while sales costs have increased, leading to a decrease in gross profit margin, which is due to a decrease in housing demand. The highest point in 2018 was due to the increase in gross profit, while the increase in sales revenue was mainly due to the increase in construction volume, the number of construction projects, and contract sales.

Vanke Group's gross profit margin has been on the rise for the past three years and has continued to exceed 35% in the later period, indicating that the company has created a large gross profit. The main reason is that Vanke Group has adopted a cost reduction strategy, which has kept the gross profit at a high level. The decrease in operating total costs is due to the reduction in product costs, business taxes, and investment income, and the increase in main operating income with the increase in sales.

2.2 Comparative Analysis of Solvency

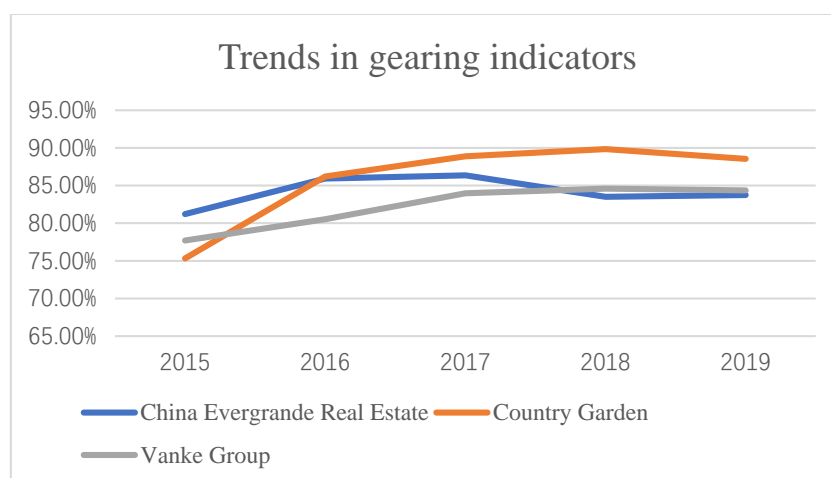


Figure 3: Trend of changes in gearing ratio indicators for China Evergrande Real Estate, Country Garden and Vanke Group from 2015-2019

Solvency refers to the ability of a company to use its assets to repay its debts. Specifically, it is the ability of a company to repay its long-term and short-term debts with its assets and income obtained through operations. Solvency is a key factor reflecting the financial situation and management ability of a company, and is an important indicator of whether a company can sustain its development. The debt-to-asset ratio is the ratio of total liabilities at the end of the period to total assets. The debt-to-asset ratio reflects approximately how much funding is raised through borrowing in total assets, and also reflects the degree to which a company protects the interests of creditors in liquidation.

Due to the high initial investment costs in the real estate industry, the debt-to-asset ratio in this industry is generally higher than in other industries (the appropriate level is usually between 40% and 60%). As shown in Figure 3, in recent years, the debt-to-asset ratio in the real estate industry has been around 82%, which is much higher than the internationally recognized standard of 60%. This shows that the real estate industry in China still faces high solvency risks. For the real estate industry, a too low debt-to-asset ratio may lead to a lack of initiative by operators, while a too high ratio may increase financial risks and cause a shortage of funds. Evergrande Real Estate's ratio fluctuated between 81% and 87% from 2015 to 2019, with a surge in 2016 to 85.93%, mainly due to Evergrande's acquisition of Vanke in 2016, which involved a debt of RMB 817.867 billion in the first three quarters of 2016, making it the largest acquisition case in the history of real estate. Evergrande Real Estate obtained more financial leverage benefits through such a large-scale borrowing, but it also increased the risk of long-term solvency. Evergrande Real Estate has poor long-term solvency and is not suitable for debt financing, otherwise it will bring financial crisis to the company. Country Garden's debt-to-asset ratio increased from the initial 75% to around 90% in 2019, indicating a high ratio. Vanke Group's debt-to-asset ratio has been on the rise, increasing from the initial 75% to around 85%.

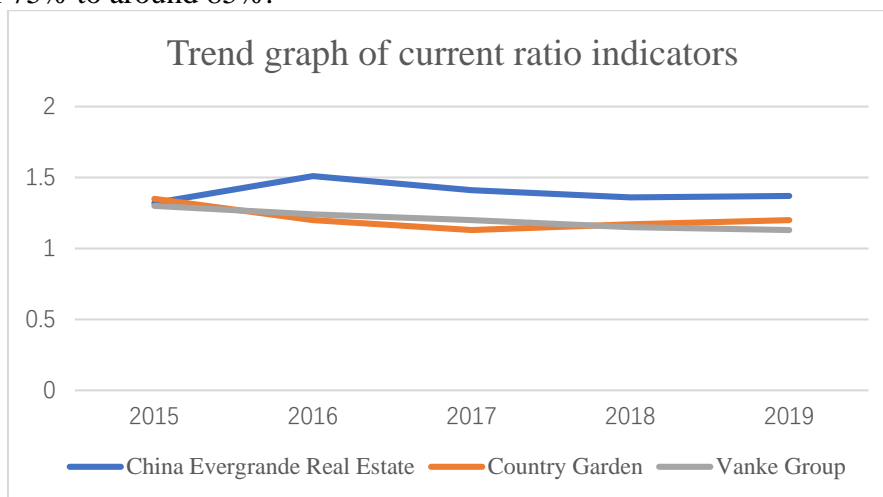


Figure 4: Trend of Current Ratio Indicators of Evergrande Real Estate, Country Garden and Vanke Group from 2015-2019

The current ratio is the ratio of current assets to current liabilities, used to measure a company's ability to convert its current assets into cash to repay its debts before they become due. Generally, the higher the ratio, the stronger the company's ability to realize its assets and its short-term solvency; conversely, the weaker the ratio, the weaker the company's short-term solvency. The current ratio is generally considered to be above 2:1. A current ratio of 2:1 means that current assets are twice as much as current liabilities, even if half of the current assets cannot be realized in the short term, all current liabilities can still be paid off.

As shown in Figure 4, from 2015 to 2019, Evergrande Real Estate's current ratio fluctuated

between 1.32 and 1.51, always within a small range, but never reaching the internationally recognized appropriate ratio of 2. As a real estate industry, Evergrande Real Estate Group itself needs to invest a large amount of funds in land development, but the investment in land development belongs to non-current assets; in addition, the real estate industry has its own characteristics, and the development cycle is generally long, requiring a lot of funds, which reduces the amount of current assets of the company, and the current ratio of the company will be lower. In recent years, Evergrande Real Estate's average current ratio is 1.39, while the average current ratio of listed real estate companies from 2015 to 2019 is 1.57, which is lower than the industry average. The reliability of full debt recovery is low, and it is difficult to guarantee the rights and interests of creditors. As shown in Figure 1-4, the current ratio fluctuated greatly from 2015 to 2017, and Evergrande Real Estate's current ratio has always been below 2, indicating that the liquidity of its assets is relatively low and its short-term solvency is relatively poor. Country Garden's current ratio has been decreasing since 2015 and has been maintained at around 1.2 in the later period, indicating a higher risk. Vanke Group's current ratio is even lower, maintained at around 1.1, indicating a relatively higher risk.

2.3 Comparative Analysis of Operating Capability

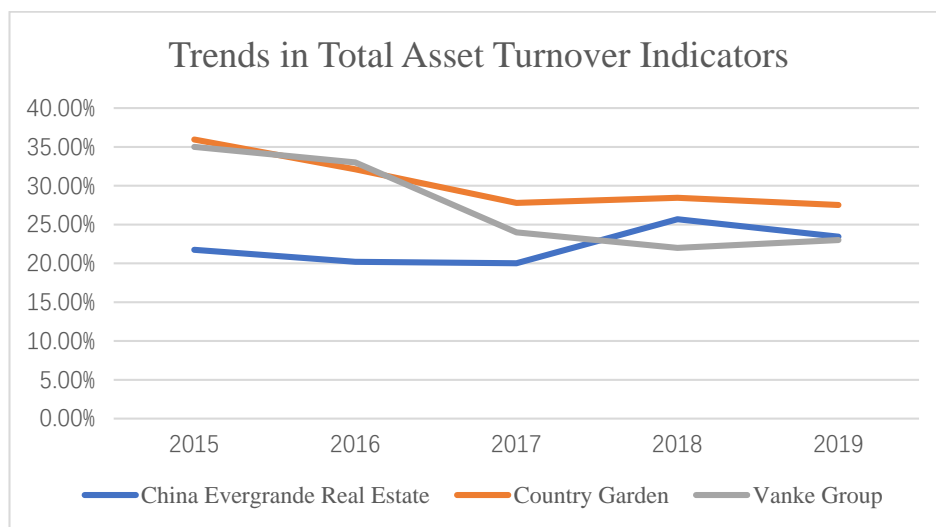


Figure 5: Trend of Total Assets Turnover Ratio Indicators of China Evergrande Real Estate, Country Garden and Vanke Group, 2015-2019

In the DuPont analysis system, companies measure their operating capability level over a certain period of time through the total asset turnover ratio. The total asset turnover ratio, representing the ratio between a company's operating revenue and its average total assets, is a tool that companies use to analyze their own finances. The higher the total asset turnover ratio, the stronger the company's sales capability and the better the efficiency of its asset investment. This data indicator affects the company's profitability and even directly affects the dividend distribution of listed companies.

$$\text{Total Asset Turnover Ratio} = \frac{\text{Net Sales Revenue}}{\text{Average Total Assets}} \quad (3)$$

From Figure 5, it can be seen intuitively that the total asset turnover ratio of Evergrande Real Estate has remained at around 20%, which is relatively weak compared to the other two companies, indicating that the company's utilization of assets is not high. The total asset turnover ratio of Evergrande Real Estate has shown a gradual downward trend. In 2019, the total asset turnover ratio

of the company was 23.44%, indicating that the company did not fully utilize its assets for comprehensive production and operation activities. However, the company is still in the process of investing in production, and it is expected that the frequency of recovering total assets will gradually increase in the later stage.

The total asset turnover ratio of Country Garden has gradually declined in the past five years, but it still ranks at the forefront of the three companies, indicating that the company has strong asset utilization efficiency and good returns on asset investment. The total asset turnover ratio of Vanke Group has gradually declined in the past five years and has remained at around 22% in the later stage, indicating that the company's asset utilization efficiency is relatively weak. This is because Vanke Group did not fully check the feasibility plan when building new projects, and there were many cases of perfunctory behavior among the lower-level implementation personnel in various research data, resulting in low data accuracy and no obvious return on investment in Vanke's total assets.

3. Conclusion

Based on the above analysis of the financial situation of Evergrande Real Estate, the following conclusions can be drawn:

Evergrande Real Estate's profitability and quality are not ideal, and there is a significant gap compared to other first-tier real estate companies in the industry. Although China Evergrande Real Estate has always focused on high revenue growth and cost control, the control of sales and financial expenses has been relaxed in recent years, resulting in profit data that is not as exciting as revenue. Therefore, China Evergrande Real Estate needs to further strengthen cost control to achieve benefit growth rather than simple scale growth.

Evergrande Real Estate's asset-liability ratio fluctuates between 81% and 87%, and its long-term solvency is poor, lacking certain debt-paying ability, and not suitable for debt financing, otherwise it will bring financial crisis to the enterprise. At the same time, China Evergrande Real Estate's current ratio has always fluctuated within a small range and is lower than the industry average, indicating relatively poor short-term solvency and difficulty in protecting the rights and interests of creditors. Therefore, China Evergrande Real Estate needs to further strengthen debt management and reduce financial risks.

Evergrande Real Estate's total asset turnover rate is relatively low, indicating that the company's utilization rate of assets is not high. China Evergrande Real Estate needs to strengthen asset management, improve asset utilization efficiency, and improve the company's profitability and quality.

In summary, Evergrande Real Estate needs to strengthen its business strategy, cost control, debt management, and asset management to improve its profitability and quality, reduce financial risks, and lay a solid foundation for the sustainable development of the company.

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