Stock Valuation and Risk Analysis Report: Real Estate Industry

Tinghao Liu[1, *], Zhenglin Qi[2] and Siyang Tang[3]

[1]Department of Accounting, Liaoning University, Shenyang, China

[2]Department of Finance, Beijing Normal University, Beijing, China

[3]Department of Accounting, Southwestern University of Finance and Economics, Sichuan, China

*Corresponding author: 20226601604@smail.lnu.edu.cn

Abstract. The real estate industry plays a fundamental role in laying the foundation for China's national economic development. Its contribution to driving economic growth, promoting social employment, and optimizing residents' living environments cannot be underestimated. Therefore, objective evaluation of real estate company value is of utmost importance. Investors typically utilize stock valuation models to assess the value of a company's stock. However, the theoretical valuations derived from these models often differ from the market value. This research focuses on an empirical analysis of stock valuation and actual pricing in the real estate sector, using the stock (code: 02007) issued by Country Garden Holdings as the case study. The average price-to-book ratio method is applied to theoretically value the stock, and the resulting valuation is then compared with the actual pricing. The analysis aims to uncover the reasons behind the differences between the two and identify the risk factors involved. The risk factors contributing to a lower stock valuation than the actual pricing is primarily associated with the overall impact of the real estate industry and Country Garden Group's operational risks. This study provides valuable insights for real estate companies seeking to improve their business operations and enhance their value creation capabilities. It also serves as a significant reference for investors when conducting stock valuations.

Keywords: Real estate; country garden; average price-to-book ratio method; risk side.

1. Introduction

The stock market serves as a marketplace for buying and selling stocks, providing a clear delineation of corporate property relationships and the standardization of corporate ownership organization. It also enhances the influence and cohesion of businesses. Stock valuation helps non-shareholders determine whether to buy stocks of a company, enables existing shareholders to assess whether their stocks are overvalued or undervalued, and supports investors in analyzing potential risks associated with stocks of interest [1-3].

The selected subject of this study is Country Garden Holdings and its stock. Founded in 1992, Country Garden Holdings Limited is a new urbanization residential developer. It adopts a centralized and standardized operating model, with business operations including property development, construction, decoration, property management, property investment, hotel development and management, modern agriculture, robotics, and more. Country Garden Holdings went public on the Main Board of The Stock Exchange of Hong Kong Limited (SEHK) on April 20, 2007. The listing not only provided capital for its long-term healthy development but also marked an important step towards entering the international capital market [4].

Country Garden Holdings gained considerable market recognition after its listing. On September 1, 2007, it became one of the constituents of the Morgan Stanley Capital International (MSCI) Global Standard Index. On September 10, 2007, it was included in the Hang Seng Composite Index and the Hang Seng China-Affiliated Corporations Index. On September 14, 2016, it was added to the FTSE China 50 Index. On June 12, 2017, it became a constituent stock of the Hang Seng China Enterprises Index. On March 5, 2018, it joined the Hang Seng Mainland 100 Index. On June 17, 2019, it was included in the Hang Seng China Enterprises Index. Currently, Country Garden Holdings is a constituent stock of the Hang Seng Index. Its inclusion as a constituent stock signifies the capital market's recognition of Country Garden Holdings as an important part of the Hong Kong stock market and strengthens its position in the international capital market [5, 6]. According to the financial reports of Country Garden Group, its net profits were RMB 61.202 billion, RMB 54.118 billion, RMB 40.982 billion, and RMB 2.962 billion in the years 2019, 2020, 2021, and 2022, respectively. It can be observed that Country Garden Group had stable profitability in previous years but experienced a significant decline in 2022. This is the reason we chose to analyze Country Garden's stock.

2. Stock valuation based on average price to book ratio

This study chooses to use the average price to book ratio method for stock price estimation [7]. The average price-to-book ratio model generally refers to the price-earnings valuation model. It reflects the valuation of the stock price and investment risk of a listed company by multiplying the price-to-book ratio by the value of net assets per share, thereby reflecting the company's value from the perspective of capital profitability. Its core formula is: Stock Price = Price-to-Book Ratio × Net Assets per Share.

In this study, we will select the reasonable price-to-book ratio and net assets per share values of Country Garden Holdings' stock from 2019 to 2022 as two sets of exogenous variables for the average price-to-book ratio valuation model. By combining these values with the core formula of the average price-to-book ratio valuation model, we will calculate the theoretical valuation of the stock market price.The measurement of the reasonable price-to-book ratio requires calculating the net assets per share based on relevant data from the company's annual reports. Then, the reasonable price-to-book ratio is determined based on the price-to-book ratios of similar companies in the industry, the company's operational performance, and its return on net assets. This study will examine the statistical data on price-to-book ratios and dividend yields for the real estate industry in the CSI Index. By combining this information with the annual reports of Country Garden Holdings from 2019 to 2022, we will determine the reasonable price-to-book ratio values for the stock during this period. Using the P/B ratios of Vanke, Greenland Holdings, Poly Development, SUNA, and the real estate industry over the past four years as comparative targets, and taking the average value as the reasonable P/B ratio for estimating the stock price of Country Garden for tabulation and statistics, as shown in Table1. By consulting the annual reports of Country Garden Holdings for the years 2019 to 2022, the net assets per share of Country Garden Holdings during this period can be obtained. The Table 2 presents the data. According to the formula, Stock Price = Price-to-Book Ratio × Net Assets per Share can be estimated and the stock price valuation at three measurement time nodes can be listed in the following Table3.

Table 1. Comparable companies' P/B ratio and reasonable P/B ratio from 2019 to 2022 (unit: times)

	Vanke	Greenland Holdings	Poly Developmen	SUNA	Industry average	Reasonable P/B ratio
2019	1.93	1.12	1.23	1.11	1.38	1.35
2020	1.49	0.84	1.05	0.91	1.15	1.08
2021	0.97	0.62	0.96	0.85	0.87	0.85
2022	0.87	0.46	0.92	0.52	0.80	0.71

Table 2. Net assets per share of Country Garden from 2019 to 2022

Year	2019	2020	2021	2022
Net assets per share (RMB/yuan)	6.95	7.95	8.59	8.53

Table 3. Valuation of Country Garden's stock price from 2019 to 2021

Year	2019	2020	2021	2022
Stock price valuation (RMB/yuan)	9.38	8.58	7.30	6.05

3. Comparison between Model Measurement and Real Stock Prices

This paper collected the actual stock price information of China Vanke Corporation from websites such as Eastmoney.com over the past three years. By averaging the quarterly stock prices, it was found that the average stock prices for the years 2019-2022 were 9.97 yuan per share, 8.88 yuan per share, 8.08 yuan per share, and 3.78 yuan per share, respectively. A comparison between these average prices and the estimated values presented in Fig. 1. It can be seen that the stock price valuation from 2019 to 2021 was lower than the actual stock price, while the stock price valuation from 2022 was higher than the actual stock price.

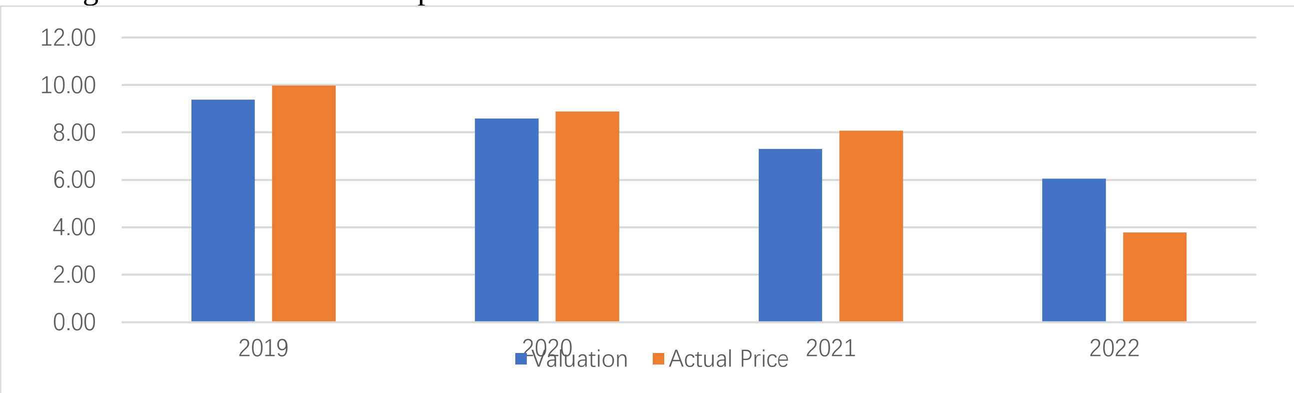

Fig. 1 Valuation and Market Value of Country Garden Stock from 2019 to 2022

4. Risk Factors of Differences in Stock Valuation and Market Value of Country Garden Group

The operating condition of a company is one of the most fundamental factors affecting its stock price, and its ability to face risks and its own risk management are crucial for the development of the enterprise [8, 9]. Over the period of 2019-2021, the stock valuation of China Vanke Group was generally lower than the actual stock price. A lower stock valuation indicates that the market has a more pessimistic expectation of the company's future profitability, reflecting overall market sentiment that is weak and negative towards the company. It also suggests restrictions imposed by government policies and a declining economic environment. Following previous study,we divide the risk factors that cause differences between stock price valuations and actual stock prices into two aspects: one is the factors that affect the entire real estate industry, and the other is the unique operational risk of Country Garden Group. In contrast, in 2022, China Vanke Group's stock valuation was higher than the actual stock price. The reason behind this can be attributed to the sudden financial scandal that significantly decreased its price-to-book ratio compared to the industry average. As a result, the commonly used price-to-book ratio valuation model no longer provided an accurate estimate for China Vanke Group's stock in 2022. Additionally, there were policy adjustments in the real estate sector following the COVID-19 pandemic. The "five restrictions" policy, mainly consisting of purchase restrictions, loan restrictions, price restrictions, sales restrictions, and commercial restrictions, has been relaxed and become mainstream. For instance, on June 20, 2023, the People's Bank of China authorized the National Interbank Funding Center to announce the loan prime rate (LPR) as follows: 1-year LPR at 3.55%, reduced by 10 basis points, and 5-year LPR at 4.20%, equally reduced by 10 basis points. A downward trend in LPR implies a decrease in monthly mortgage payments, leading to a reduction in housing costs. Through LPR adjustments, the interest rates on housing loans can be lowered, relieving the burden on housing consumers and accelerating the pace of homebuyers entering the market. Moreover, recently, the Ministry of Housing and Urban-Rural Development, the People's Bank of China, and the China Banking and Insurance Regulatory Commission jointly issued a notice on optimizing the criteria for determining the number of houses eligible for individual housing loans. This measure aims to implement the policy of "recognizing houses without verifying loans" for first-time homebuyers. When applying for a loan to purchase residential property, as long as none of the family members have owned a complete set of housing in the local area, regardless of whether they have previously utilized loans to purchase housing, banks and financial institutions can apply housing credit policies as if it is the family's first home purchase. The implementation of this policy brings favorable news to a large number of homebuyers, helping to reduce their housing costs and better meet the demands for both primary and upgraded housing. These policy adjustments undoubtedly have a significant impact on the stock prices of real estate companies, leading to an increase in industry price-to-book ratios. Consequently, China Vanke Group's stock valuation based on the industry price-to-book ratio exceeds its actual stock value. Therefore, we will specifically analyze the risk factors that resulted in China Vanke Group's stock valuation being lower than the actual stock price during the three-year period from 2019 to 2021. In order to ensure the scientific nature of the research results, this article selected stocks of companies in the same industry as Vanke and Greenland Holdings in 2020, and used the average price to book ratio valuation method for stock valuation. As shown in Fig.2, it can be seen that the stock price valuation of real estate related industries is generally lower than the actual stock price.

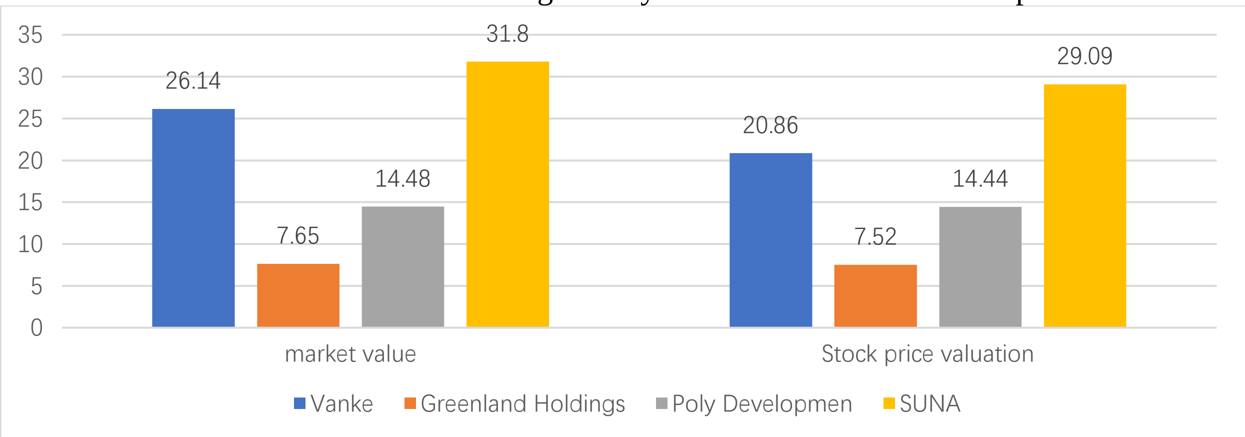

Fig. 2 Valuation of stock prices and actual market prices of related enterprises

Real estate enterprises have a high demand for funds, unstable commodity sales, and slow payment collection speed, which inherently have the conditions to generate high financial risks [10]. Real estate projects require planning, design, and government approval, which can lengthen the sales cycle due to cumbersome procedures and extended timelines. The construction process itself takes time, especially for large-scale projects such as residential communities or commercial complexes. The extension of the construction period directly affects the project's sales timeline. Additionally, market demand fluctuations can result in slower sales velocity, requiring real estate companies to take a longer time to fully sell the projects. Indirectly, this can lead to cash flow constraints and increased costs, thereby creating risks. Since the outbreak of the pandemic, China's GDP growth rate has shown a trend of fluctuating decline and continues to do so today. While the total GDP is still in a state of continuous growth, the slowing growth rate is increasingly evident [10]. During the stagflation phase, as GDP declines, the CPI increases rapidly, and cash provides significantly higher returns than other investment and financial management methods. As a result, stable bonds have become more popular than stocks. More and more people are turning to the bond market and leaving the stock market. The impact of GDP on the real estate industry is also evident. Rapid GDP growth improves the quality of life for the people, increases national income, and dramatically increases purchasing power for real estate. As a result, demand for first-time homes and upgrade housing both increase. However, when the GDP growth rate slows down, people's purchasing power and desire to buy real estate will decrease, leading to the phenomenon of unsold houses due to oversupply.

In recent years, with the rapid development of the real estate economy, although it has made significant contributions to China's economic growth and improvement of residents' housing conditions, at the same time, high housing prices and high leverage have also gathered increasing systemic risks. Once the real estate market collapses, it will bring a fatal blow to the financial system and economy. [11] By carefully reviewing the relevant policies in recent years regarding the real estate industry in China, it can be observed that land policies, tax policies, and financial policies all have varying degrees of impact on the industry. Purchase restrictions and loan limitations inevitably affect the capital flow of real estate enterprises, posing challenges to the stability of their financial chains. Additionally, policy changes in loan interest rates, down payment ratios, and qualification reviews by various financial institutions such as banks not only increase the difficulty for homebuyers to make purchases but also result in unsold inventory, exacerbating cash flow difficulties for real estate companies. For instance, in 2017, the securities exchange and banking institutions further regulated financing methods, channels, and scales in the real estate industry. Stricter qualification audits and financial control measures made it more difficult for real estate enterprises to raise funds. From various regulatory policies, it can be seen that the entire capital chain of real estate companies is easily affected by regional and national policies, whether it is in terms of financing limits, qualifications, or costs. In recent years, various restrictive policies have contributed to the stagnation of the property market and declining stock prices.

Real estate is currently undergoing a reformative period, and the previous "three highs" model characterized by high leverage, high turnover, and high debt is no longer suitable for the present real estate industry. Country Garden Group happens to be one of the representative examples of this "three highs" model [12]. The decline in the value of Country Garden's stock is essentially related to the decrease in real estate sales. If there are fewer houses sold, the debt cannot be repaid Taking short-term solvency as an example, a company's short-term solvency refers to its ability to use current assets to repay current liabilities. Whether a company can repay its due short-term liabilities on time is a primary indicator reflecting its financial health. Financial indicators that reflect a company's short-term solvency mainly include working capital, current ratio, quick ratio, and cash ratio [13]. The quick ratio of Country Garden in the past 5 years has been around 0.5, and the current ratio is also below 1.5. Its short-term debt repayment ability is not optimistic [14].

5. Conclusion

To sum up, Country Garden Group operates by acquiring a large amount of land in third and fourth-tier cities and developing its own large-scale properties around larger cities. However, in the current economic environment, the real estate market in third and fourth-tier cities is sluggish. Many people lack the desire to buy houses, and local governments have implemented strict regulations on sales funds to meet delivery policies. This has resulted in an oversupply of real estate and exacerbated the difficulty of Country Garden Group in collecting sales receipts. Under the influence of frequent declines in Country Garden Group's stock price, its financing channels are gradually diminishing. According to data, in May 2023, Country Garden issued two medium-term notes in the domestic debt market under the guarantee of credit enhancement, with a total amount of only 1.7 billion yuan. This amount covers only about one-tenth of the debt of hundreds of billions of yuan in the third quarter. Financing obtained from overseas has yielded no results. The decrease in financing channels has further accelerated the speed of stock price decline, resulting in a negative cycle.

Author Contribution

All the authors contributed equally and their names were listed in alphabetical order.

References

[1] Cai Y. On the Significance and Strategy of Establishing China's Stock Market. Journal of Heilongjiang University of Finance and Economics, 1993, 4: 29-31.

[2] Lu L. Discussion on the Valuation of Real Estate Enterprises Based on the EVA Valuation Method. Jiangxi University of Finance and Economics, 2020.

[3] Wang Y. Research on Financial Risk Management of Real Estate Enterprises from the Perspective of Capital Chain. Shandong Agricultural University, 2023.

[4] Tan X. Valuation of Real Estate Enterprises Based on the Free Cash Flow Model. Southwestern University of Finance and Economics, 2020.

[5] Yuan M. Comparison of Enterprise Valuation Methods: An Empirical Study Based on China's A-Share Market. Financial and Accounting Communication, 2009, 9: 8-10.

[6] Jin H, Jin X. Valuation of Information Technology Enterprises on China's New Third Board Based on PE/PB. Business Research, 2016, 2: 96-101.

[7] Sun F, Mao X. Some Thoughts on Promoting the Application of Fair Value Valuation Technology in China's Investment Real Estate. Friends of Accounting (Late Edition), 2010, 11: 20-21.

[8] Huang Q. Research on the Issues of Enterprise Valuation Using the Free Cash Flow Model. China Urban Economy, 2011, 17s: 120.

[9] Liu C, Zhang L. Financial Risk Management of Listed Companies Based on Mobile Edge Computing. Mathematical Problems in Engineering, 2022.

[10] He L. Identification and Prevention of Financial Risks in Real Estate Enterprises: A Case Study of Greenland Holdings Group. Hebei Enterprises, 2022, 11: 107-109.

[11] Rao S. Case Analysis of Financial Risks in Real Estate Enterprises. Modern Marketing (Late Edition), 2018, 7: 241-243.

[12] Gao Hs. Research on Enterprise Performance and Issues under High Turnover Mode: A Case Study of Country Garden Real Estate Groups. Journal of Hubei University of Economics (Humanities and Social Sciences Edition), 2023, 20(05): 60-63.

[13] Chen K H, Shimerda T A. An Empirical Analysis of Useful Financial Ratios. Financial Management,2014, 10: 125-134.

[14] Ding Z. Financial Risk Analysis and Prevention of Real Estate Enterprises: A Case Study of Greenland Holdings Group Co., Ltd. Enterprise Science and Technology Development, 2021, 8: 105-107.