

# *Financing Decisions of Property Enterprises under Deflation—A Case Study of 7 Hong Kong Stock Companies*

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**Abstract:** At present, the real estate industry, as a pillar industry concerning the national economy and people's livelihood, has a greater impact on the national economic development, especially in recent years, economic development has been affected in many ways, and the financing redevelopment of the real estate industry has also been focused on, so it is necessary to carry out a focused research work on the study of the financing decision of the real estate industry in order to guarantee the sustainable and healthy development of the real estate industry. Scholars have conducted a large number of studies on the financing decisions of real estate enterprises in different periods, but the financing decisions under the specific background of deflation have not yet formed a targeted guiding theory, therefore, it is important to have a theoretical guiding significance to effectively predict the financing strategy of the later development through data analysis and mining. This paper collects the financial data of seven property companies in the past ten years, and applies the DCF valuation method and perpetual growth model to predict the future value of the enterprises in the next five years. It is found that the calculation results of the future value of the enterprises appear to be very different due to the different operating conditions of the enterprises. By comparing the changes in the future value of the company under the typical WACC, it is concluded that the company should focus on the impact of WACC on the company's future value. Based on the valuation results, combined with the national policy and the actual situation of different enterprises, this paper provides professional analysis on the financing decision of real estate enterprises based on the changes in the financing structure of the real estate industry in recent years, and puts forward scientific suggestions for financing decisions.

## 1. Introduction

In recent years, China is in the high-speed development to high-quality development of the transitional period superimposed on the impact of the epidemic, the economic growth rate has declined, and residents' willingness to purchase homes has declined, leading to an overall slump in the demand side of the real estate market. As the country has successively introduced a series of

policies and regulations to regulate the behaviour of real estate in terms of housing land use system, real estate financial system and development of real estate industry policy, due to the real estate industry's own characteristics, most of the real estate enterprises have taken the mode of operating with debt. National tightening of all kinds of financing policies, resulting in real estate enterprises to increase the difficulty of financing, when the market demand, financing changes in the bad situation, it is easy to lead to the enterprise capital chain rupture, resulting in the risk of debt crisis. Most of the real estate enterprises need to seek new financing channels under the predicament of tight capital and debt pressure. In 2022, Qiu and Li take the debt crisis of Evergrande Group as an example to study the debt risk problem of real estate enterprises. The study shows that due to the influence of national policies, such highly indebted property enterprises as Evergrande Group are difficult to get financial support from commercial loans, and when encountering long-term large debt maturity events, they will face the crisis of being unable to repay high debts [1]. In the current ever-changing policy environment, real estate enterprises need to have the ability to flexibly respond to market challenges and make scientific financing decisions. In 2015 Oujii in his article introduces the financing methods of China's real estate enterprises in the new period, the problems that occur when corporate financing, and the innovative analysis of the financing decisions of real estate enterprises under the new situation [2]. In 2017, Lin and Zeng based on the perspective of financing constraints Resource allocation analysis of the transmission effect of real estate enterprises, the study shows that real estate price fluctuations have a transmission effect on the financing and investment behaviour of China's real estate enterprises [3]. In 2019, the work of Zhang, et al. analysed the effect of credit crunches and equity financing regulations on capital structure adjustments made by Chinese listed real estate companies between 2001 and 2012 [4]. In 2022, Zhao analysed the financing status quo of the real estate industry under the new situation and put forward the corresponding strategy of innovative financing mode [5]. In 2023, Yang put forward the response strategy of improving the efficiency of capital turnover and enhancing the enterprise's ability of investment and financing management from the three aspects of the mechanism of investment decision-making, financing channels, and the integration of investment and financing management [6]. The financing of real estate has always been of great concern. These studies aim to enhance the financing efficiency and risk management ability of real estate enterprises and provide useful ideas and suggestions for policy makers, enterprise managers and market participants. In recent years, with the policy changes in the real estate industry, domestic and foreign scholars have conducted extensive research on the financing of real estate. However, there are still some gaps in the research on property financing policies for specific situations-deflationary social context. How real estate enterprises make reasonable and correct financing decisions in the context of deflation is of positive practical significance for the future development of real estate enterprises.

Using company valuation methodology, this paper examines listed real estate companies as an example. Based on the financial data of seven Hong Kong real estate companies, the valuation model is used to calculate the company's future value in the next five years, and according to the requirements of the national strategic development, the company's diversified or specialized investment decisions and other factors are professionally analysed, so as to put forward a scientific financing decision.

## **2. Research Method**

According to the requirements of the data and variables selected for this study, the main variables used are the financial data of net profit after tax, depreciation and amortization of seven real estate enterprises, including Poly Property Group, from 2013 to 2023. Based on the results of 2023 real estate development enterprises' comprehensive strength measurement, excluding enterprises with

long stock suspension, abnormal and incomplete disclosure of financial information, or major restructuring matters from 2013-2023, seven real estate enterprises ranked in the top 20 in terms of comprehensive strength were finally selected - Poly Property Group, R&F Group, China Resources Group, Longfor Group, Shimao Group, Sino-Ocean Group and China Jinmao. Based on the financial data of the past ten years, the valuation of the company for the next five years is carried out. These seven real estate companies, as leading companies in the real estate industry, can be regarded as seven nationally representative samples, reflecting the overall development trend of China's real estate industry, which is of representative significance for the study of corporate financing decisions in the context of deflation. In this paper, we choose the discounted cash flow model (DCF valuation method) and perpetual growth model, which are frequently used in practice, to predict the future cash flow and calculate the future value of the enterprise. This paper starts from the actual profitability of the enterprise, combined with the concept of the time value of money to assess the future value created by the enterprise, and then concludes the corresponding financing decisions.

## **2.1. Importance of the Future Value of the Enterprise**

Future value is an important indicator for projecting future cash flows. Generally speaking, future value represents the present value of future cash flows, with the growth rate as the general perpetuity rate. Calculating the future value of an enterprise can convert the future value into the present value, accurately predict the direction of the market. By calculating the economic benefits that may be brought to the property enterprise in the next five years, they can help the enterprise to scientifically and systematically assess the economic value of the enterprise. And then they can help enterprise to carry out scientific financial planning and risk management, which has guiding significance for the financing decisions of the enterprise in the present time.

## **2.2. Calculation of Future Value**

There are usually two methods for calculating the future value of an enterprise: the perpetuity method and the multiplier method. In the assessment of enterprise value, the discounted value of perpetual cash flows accounts for about 50 per cent of the overall discounted value, and therefore the perpetual growth model and the determination of its parameters have a significant impact on the outcome of enterprise valuation. The core of the perpetual growth method lies in estimating the present value of future cash flows based on a stable and perpetual growth rate, so as to determine the value of the enterprise or assets. In this paper, the perpetual method is chosen to calculate the future value of the enterprise. In 2019, Li and Wang through the analysis of the perpetual growth model, put forward the main factors driving the growth of cash flow, and put forward the relevant suggestions for how to choose the perpetual valuation model and how to determine the growth rate of the perpetual period for the enterprise [7]. In 2020, Li supported the reasonableness of the application of perpetual growth rate in the financial and value assessment of the enterprise by a large amount of data [8]. Under the perpetual growth model it is necessary to calculate the future value of three data: perpetual cash flow, weighted average cost of capital (WACC) and perpetual growth rate ( $g$ ). The weighted average cost of capital (WACC), is a price measure of how expensive it is for a firm to raise capital. The calculation of WACC is based on a firm's capital structure and is derived from the weighted average of the cost of debt and the cost of equity. The cost of debt reflects the interest paid by the firm through intervening funds, while the cost of equity reflects the return that investors expect on their equity investments. It reflects not only the opportunity cost of the risk that investors bear in investing in a company, but also the return on investment expected by all investors, and WACC plays an important role in evaluating the day-to-day operations of a company [9]. This paper uses the annual report data of seven companies in the past ten years, according to the framework of H-type two-stage

corporate cash flow discounting theory, and use relevant software to carry out quantitative analysis of various indicators, and speculate on the company's operating status and intrinsic value in the next five years through the data calculation results, and draw relevant conclusions.

### 3. Empirical Analysis

Based on ten years' financial data of real estate enterprises, this paper calculates the growth rate of free cash flow of enterprises, and averages the growth rate of seven enterprises, to get the average growth rate of 0.207869. And then we can calculate the free cash flow of enterprises at the end of the period, and get the future value of enterprises according to the model of perpetual growth. As shown in Figure 1, the future value is calculated for the seven companies for the next five years when the value of WACC is 5%.

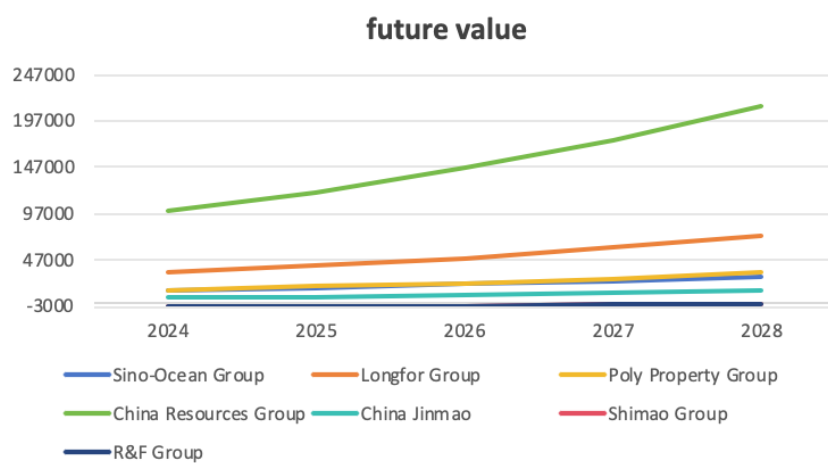


Figure 1: 2024-2028 changes in company future value.

As the trend of the projected changes in the future values of China Resources Group, Sino-Ocean Group, Longfor Group, Poly Property Group and China Jinmao is increases year-on-year, which is also in line with the current actual operating conditions. These five companies have been operating well for the last ten years. While R&F Group and Shimao Group are expected to have a negative future value of the company in 2024-2028. According to the data released by the Paper, the current capital flow of R&F Group is not optimistic, and R&F Group has 30,727,400 yuan of overdue commercial paper, and the total amount of the executed amount is more than 8.2 billion [10]. The research in China Real Estate in 2018 (Mid-Decade) shows that R&F Group has been adopting a more aggressive land bank strategy, accumulating a large number of third and fourth tier land bank, and is facing a certain amount of sales pressure, with a serious weakening of the ability to return funds [11]. In 2020, Zhang analysed the debt situation of R&F Group, and found that in 2017 R&F Group acquired 77 hotel assets, and until 2019, hotel business of R&F Group has been in the red for seven consecutive years, dragging down the cash flow of the enterprise, The current forecast of the company's future value is negative [12]. Shimao Group's debt ratio has continued to increase in recent years, and its capital situation is not optimistic. According to the data released by Eastmoney, as of the end of 2022, Shimao Group's solvency continues to weaken, with total liabilities of 536.7 billion yuan, and at the end of June 2023, Shimao Group's net gearing ratio is about 372.5% [13]. Therefore, when the company's future value is negative, it indicates that the enterprise's operating condition is poor and the risk of bankruptcy increases. Some scholars based on the theory of enterprise development life cycle, believe that the vast majority of enterprises in negative growth will go from prosperity to decline or even rapid demise in a few years, so they believe that the perpetual growth rate is not applicable to enterprises with negative growth and the use of perpetual growth model is

not scientific. Li Xuehua through the study shows that the long-term development of enterprise value by the perpetual growth rate (g), return on investment (ROI) and the weighted average cost of capital (WACC), confirming the perpetual growth rate in theory and practice of the scientific nature, cannot be based on the special case of certain enterprises to deny the use of perpetual growth model value [8]. Thus, when real estate firms get into trouble with debt, it can usually be traced to a range of problems, including difficulties in specific business segments, aggressive strategies and management. Real estate firms with negative future values may have encountered problems in certain business segments, putting greater pressure on their funds due to operating losses in some projects, poor investment decisions and declining market demand, etc. Real estate enterprise may have adopted aggressive strategies such as high leverage, over-expansion, etc. While these aggressive strategies can bring high returns in the short term, they are also accompanied by high risks. The quality of corporate management may also affect the future value. Inappropriate management decisions and resource allocation may lead to a firm falling into debt default. Therefore, Real estate enterprises should conduct effective risk management, formulate and implement scientific corporate strategies to enhance the future value of their businesses.

According to the formula of the perpetual growth model:  $\text{future value} = \text{free cash flow at the end of the period} * (1 + \text{perpetual growth rate}) / (\text{WACC} - \text{perpetual growth rate})$ , when changing the value of weighted average cost of capital (WACC), the result of the enterprise's future value also changed greatly. Moreover, WACC and the firm's future value change inversely. As shown in Figure 2, this future value is a calculation of the future value of the seven firms for the next five years when the average growth rate is fixed and the value of WACC is 15 per cent.

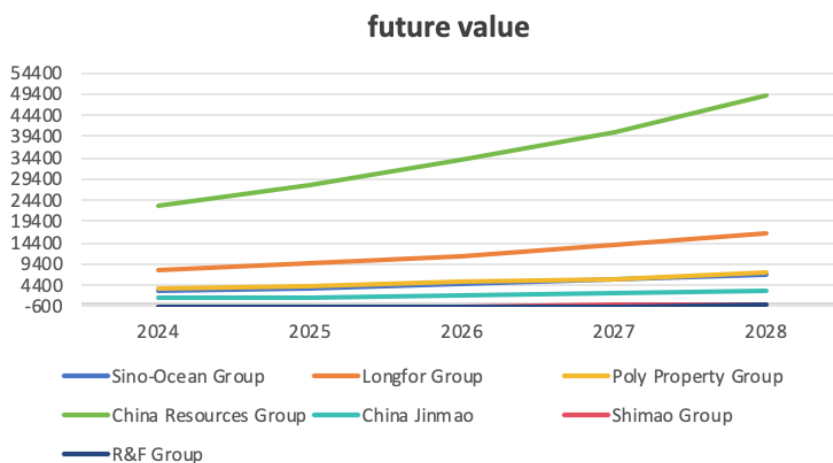


Figure 2: 2024-2028 changes in company future value.

It can be seen that WACC is more of a reflection of a firm's global capital. According to the formula of the perpetual growth model, as the WACC value increases, the future value of the firm decreases. It may lead to increase the financial risk of the company and reduce the compensation received by the investors. When the WACC value is 15%, the prediction of the future value of the seven companies is not optimistic, and at this time, the economic condition of the whole real estate industry is also relatively in a negative state. In 2000, Chen pointed out that the root cause of China's second type of deflation is the structural contradiction. The real estate industry, as a pillar industry in the national economy, also brings deflationary pressure to the Chinese economy when GDP declines [14]. Therefore, listed companies should find a reasonable operation mode to reduce the value of WACC within the safe range of their debt risk to minimize WACC in order to achieve the goal of maximizing shareholder value.

In 2023, Zhang analyses the current state of the real estate market and the industry in four aspects:

project uncertainty, irrational capital cost structure, low capital turnover and policy risk in the context of the current macro-policy regulation [15]. In recent years, Chinese urbanization process has become slower and the population growth rate has been slow, leading to an oversupply in the real estate market. According to the data released by the National Bureau of Statistics (NBS), the growth rate of national real estate development investment has shown a downward trend from 2013 to 2023, and by 2022, the national real estate development investment has shown negative growth. The contraction of real estate development is influenced by a number of factors.

### National real estate investment and development growth rate



Figure 3: 2013-2023 changes in growth rate of national property development investment.

As shown in Figure 3, the decline in the growth rate of real estate investment and development means that the real estate market has made certain adjustments, and it is also a signal that the current pressure on corporate development and investment has become greater. In recent years, the state has introduced a series of policies to rectify and regulate the real estate industry. Due to the real estate investment is too fast, the property vacancy rate is too high, the property price rises too fast, the fund-raising is overly dependent on bank credit and other factors, resulting in the real estate industry enterprise financial risk is high, in the deflationary cycle of the real estate industry is very easy to cause the risk of exposure of financial weaknesses [16]. Based on this, real estate enterprises how to make scientific financing decisions in the context of the era of deflation, the enterprise or even the whole real estate industry is particularly important. In view of the value and characteristics of real estate enterprise financing management and the current real estate enterprise financing channels are less, the capital chain management level is low, the impact of the external environment caused by the reality of the problem, real estate enterprises should take scientific and reasonable measures to deal with financing problems.

## 4. Recommendations

### 4.1. Enhancement of the Cash-to-Short-Debt Ratio

The financing methods of enterprises include debt financing and equity financing, and in general, the financing methods of enterprises are bank loans, stock financing, debt financing and so on. Xu pointed out through his research that the scale of equity financing in China is relatively small, and the financial structure dominated by credit indirect financing is an important root cause of the high debt ratio of enterprises [17]. The state released the real estate three red line policy on 1 January 2021, the "three red lines" include: real estate enterprises excluding advance receipts after the gearing ratio shall

not be greater than 70%; Real estate enterprises net debt ratio shall not be greater than 100%; Real estate enterprises cash-to-short-debt ratio is less than 1. After the announcement of the "three red lines" indicators, the real estate companies have a high debt ratio, which is the most important source of the high debt ratio. After the announcement of the "three red lines" indicators, real estate enterprises began to reduce their own debt ratio, but in recent years there are still a number of enterprises stepped on the line, caught in the debt default predicament. Research shows that a cash-to-short-debt ratio of  $>1$ , i.e.  $>100\%$ , is considered safe, and when the cash-to-short-debt ratio is  $< 1$ , the company's solvency, as well as its cash flow position, is considered to be poor. 2020 R&F Group had a cash-to-short-debt ratio of  $0.64 < 1$ , and Shimao Group's debt ratio continued to rise. As of the end of June 2023, Shimao Group's cash-to-short-debt ratio is  $0.03$ , and its capital position is not optimistic [18]. Therefore, property enterprises should steadily improve their cash-to-short-debt ratios, especially for enterprises with negative future value calculations or debt defaults, they should reduce their cash-to-short-debt ratios to reach a safe state.

#### 4.2. Adoption of Diversified Financing Methods

According to the annual results of R&F Group and Shimao Group in 2022, it can be seen that bank loans account for more than 40% of corporate liabilities in both companies, and an excessive proportion of debt financing will lead to poor liquidity and reduced risk resistance. The financing structure of enterprises is usually divided into endogenous financing and external financing, and property companies should choose the appropriate financing method according to their own situation. In 2023, Stokes and Cox by calculating lending cap rate, calculated the maximum loan amount for commercial property financing, based on the property valuation [19]. Eng Teck Yong Suggested management and strategies for the real estate industry and real estate companies industry in the next decade by analysing the current situation of real estate industry and real estate companies' funding [20]. Dr. G. Rajendran's paper, he mentioned the profit and risk issues related to the financing portfolio, highlighting the importance of liquid assets in financing [21].

Taking the seven Hong Kong stock companies selected in this paper as an example, most of the liabilities of real estate enterprises are mainly long-term debts, accounting for up to 50%, due to the high-debt mode of operation of the real estate industry, the characteristics of the larger cash flow, long-term debts will increase the pressure on the profitability of the company in the future, which has a greater financial risk. Coupled with the national tightening of financing policies, it is easy to cause the credit rating of the real estate industry to decline, triggering the risk of debt crisis. It can be seen that real estate, as a traditional cyclical industry, uses debt financing as the main financing channel, and the funds of the real estate industry rely too much on bank loans, which will weaken the debt-servicing ability, capital liquidity and profitability of the enterprise. The debt ratio of the real estate industry in 2007 was 62.9%, and it has risen to 79.2% in 2021, and China's real estate industry is in the high-debt operation mode supported by bank loans. The real estate industry in China is in a highly indebted business mode supported by bank loans. When the market policy changes, high leverage, high debt, high turnover enterprises are difficult to adjust their business strategy in time according to the national policy, which will bring risks to the overall operation of real estate enterprises. Therefore, real estate enterprises should change the development mode of high leverage, adjust the financing structure of the company and reduce the proportion of debt financing. These enterprises can choose other companies with higher security to participate in other companies as well as more dynamic investment in other fields, reduce the value of WACC through emerging capital, and gradually solve the problem of high indebtedness of real estate enterprises. Innovative financing methods, actively expanding real estate trust, bonds, funds and other diversified financing modes, to enhance the liquidity of real estate enterprises and reduce debt risk.

### 4.3. Keeping up with National Policies and Optimising Business Segments

Against the background of deflation, the purchasing power of the currency has increased, aggravating the debt burden of enterprises. According to the future value results, real estate enterprises should actively pay attention to the policy changes of the country, timely adjust their own financing methods and financing scale, broaden the communication channels of the capital market, diversify the financial risks through innovative financial instruments. Enterprises cannot carry out unrealistic expansion and introduce a large amount of external capital to reduce the stability of the funds. Real estate enterprises can reduce the information asymmetry between them and their creditors by establishing a mechanism for external creditors to participate in corporate governance, thus optimizing corporate governance and stimulating the innovative vitality of enterprises. Currently, metropolitan areas and city clusters have become the mainstream trend of China's urban development, and have brought significant development opportunities for the healthy development of the real estate industry. Therefore, real estate enterprises should grasp the layout of urban development, dynamically optimize the structure of land bank policies according to the urbanization process, land bank development policies, adhere to the policy of urban policy, precise policy, one city, one policy and carry out regional diversification and strategic development in order to look for new growth points in performance.

### 5. Conclusion

This paper uses the DCF valuation method and the perpetual growth model to value property companies in the context of deflation. The perpetual growth model shows that the value of WACC is inversely related to the future value of the enterprise, and property enterprises should make scientific financing decisions to reduce the value of the weighted average cost of capital (WACC) based on the valuation results and within the tolerance range of their debt risk. In the case of deflation, the debt burden of enterprises is increased, the liquidity and profitability of funds are poorer, and the real estate enterprises need to adopt the dynamic financing method even more. The research in this paper to a certain extent bridges the gap in the research on the valuation of real estate enterprises in the specific context of deflation, and by calculating the future value of the enterprise in the next five years, predicts the future value of the enterprise, and puts forward an innovative solution to the real estate enterprise for the relevant financing decisions. However, by reviewing and collating the financing structure of the real estate industry in recent years as well as the research on the financing of real estate enterprises, it can be seen that a large amount of relevant literature has taken listed companies as samples, and its fruitfulness is of limited significance in guiding the whole real estate industry. When choosing samples in future research, we can consider including small and medium-sized enterprises in the industry into the research scope for holistic analysis. For listed companies, the stock price also represents the value of the company to a large extent. Therefore, the value assessment of both stock and future value can be used to value the enterprise more accurately. To address the shortcomings of this study, future directions are proposed: (1) Expanding the number of property companies selected from the real estate industry and expanding the sample capacity for a more precise study. (2) The stock market, as a key component of the financial market, needs to assess the value of real estate stocks and predict the future development trend and financial status of enterprises through fundamental analysis. In the future, the selection of valuation methods can be further refined as described above to facilitate in-depth research on this topic.

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