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An Analysis of the Impact of Issuing Perpetual Bonds on Enterprises: A Case Study of Evergrande's Perpetual Bonds

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Abstract

On December 20, 2017, both the Shanghai Stock Exchange and the Shenzhen Stock Exchange introduced business guidelines for perpetual bonds, thereby clearing the path for their issuance on the exchanges. Perpetual bonds are highly flexible instruments, offering issuers options for redemption, interest rate adjustment, and deferral of interest payments. Additionally, perpetual bonds that meet certain criteria may be included in equity capital. Throughout the life of the perpetual bond, shareholders' return on equity tends to decrease; however, post-redemption, the return on equity increases sharply. Enterprises must fully comprehend the features, advantages, and potential impacts of perpetual bonds, and, with the goal of maximizing shareholder value, strategically combine equity financing and debt financing, long-term and short-term liabilities, as well as preferred stock and perpetual bonds.

Keywords: Perpetual bonds; Interest capitalization; Financing decisions

JEL: G32; G35; D22

1 Introduction

Since the first domestic perpetual bond issuance by Wuhan Metro in December 2013, the issuance scale and volume of perpetual bonds have grown rapidly[1]. According to statistics from United Credit Rating, the number of perpetual bonds issued in 2014 was 50, with a total issuance size of 80 billion yuan; by 2017, the number of perpetual bonds issued in the domestic bond market surpassed 300, with an issuance size of 385.15 billion yuan[2]. Although the share of perpetual bonds remains small compared to other debt financing instruments such as corporate bonds, short-term financing bonds, and medium-term notes, more and more companies are recognizing their value[3]. Additionally, China's banking sector still faces a capital gap, and factors such as falling stock prices below net asset value, new regulations on subordinated debt, capital constraints, and limited stock market absorption capacity mean that banks must seek alternative financing methods to replenish capital. Therefore, perpetual bonds will undoubtedly play an increasingly significant role in the bond market in the future[4].On December 20, 2017, both the Shanghai Stock Exchange and the Shenzhen Stock Exchange introduced business guidelines for perpetual bonds, and after the issuance of guidelines by the National Development and Reform Commission and the Interbank Market Association, the China Securities Regulatory Commission (CSRC) began actively promoting the development of perpetual bonds[5]. A deeper study on the impacts of perpetual bond issuance will not only help companies that

are considering perpetual bonds weigh their pros and cons and make informed financing decisions but also assist investors in better understanding these instruments[6].

In the domestic market, perpetual bonds can be categorized as callable corporate bonds, callable enterprise bonds, perpetual medium-term notes (long-term, option-based notes), and non-publicly issued callable targeted financing tools. Unlike ordinary bonds, perpetual bonds can be classified as equity in certain conditions, with an uncertain maturity and adjustable coupon rates[7].Issuing large-scale perpetual bonds can have significant impacts on the company[8]. This paper begins with a brief introduction to the characteristics and advantages of perpetual bonds, followed by an analysis of their accounting treatment[9]. Taking Evergrande's perpetual bonds as an example, the paper examines the effects of issuing perpetual bonds on enterprises[10]. Evergrande's annual report in 2013 indicated that the issuance size of their perpetual bonds was about 25 billion yuan, which increased to 75.737 billion yuan in 2015, and surpassed the 100 billion yuan mark by 2017. With the rise in the scale of Evergrande's perpetual bonds, its sales performance also surged, and net assets grew significantly, making the impact of issuing perpetual bonds on Evergrande worth in-depth study.

In this study, we choose Evergrande as a case study because of its prominence in the Chinese real estate industry and its extensive use of perpetual bonds as a financing mechanism[11].From the theoretical point of view, Evergrande's case is in line with the concept of financing dilemma in capital structure theory[12]. According to the theory of Modigliani and Miller (1958), enterprises should choose flexible financing tools to reduce financial risks and financing costs when there is a shortage of capital[13]. As a financing tool with flexibility and lower cost of capital, perpetual bonds can help enterprises cope with financial distress and optimize capital structure[14]. Evergrande's successful practice verifies this theory and demonstrates the unique advantages of perpetual bonds in corporate financing[15].In practical terms, Evergrande's case is an important reference value for China's real estate industry[16]. Facing high debt, capital pressure and financing difficulties, Evergrande successfully solved these problems by issuing perpetual bonds, and its experience provides effective financing ideas for other real estate companies[17]. Especially in the context of the current financing difficulties faced by China's real estate industry in general, Evergrande's successful case through perpetual bonds provides an operable solution for similar enterprises. Evergrande mainly relies on perpetual bonds to manage its debt and leverage operations, whereas companies such as Vanke and BGI use traditional debt and equity financing instruments in a more balanced way[18]. Evergrande's case not only demonstrates the practical application of perpetual debt, but also provides a useful reference for other companies facing similar financial pressures and capital structure issues[19]. Previously, Evergrande's issuance of perpetual bonds has grown significantly, making it a representative example of a large Chinese company (especially in the real estate sector) that has used perpetual bonds to address financing challenges[20]. The company's experience provides valuable insights into how to utilize perpetual bonds as an alternative to traditional financing solutions, especially when companies face high leverage and limited access to equity or bank loans[8]. In addition, Evergrande's strategic use of perpetual bonds for recapitalization and risk management provides a compelling example of the long-term impact of such financing mechanisms on corporate survival[12]. Evergrande's case is also broadly applicable to other enterprises, especially in capital-intensive industries with high debt ratios such as real estate. By analyzing Evergrande's experience, we hope to provide practical insights for companies in similar industries to help them understand the potential benefits and risks of issuing perpetual bonds as a tool for managing financial stability and growth.

2 Literature Review

2.1 Literature Review on Perpetual Bonds

Perpetual bonds, as a new financing instrument, have attracted increasing attention in academic and practical circles[21]. Previous studies have primarily focused on the structural features of perpetual bonds, their impact on corporate capital costs, and their influence on a company's capital structure. Deev (2022) explored how perpetual bonds can lower a company's capital costs by providing a flexible interest payment mechanism, which does not increase financial leverage[12]. Moreover, Chen et al. (2021) examined how perpetual bonds serve as an ideal tool for companies facing liquidity crises, highlighting their ability to address financial distress without relying on traditional debt or equity financing[22].However, while the theoretical foundations of perpetual bonds are well-established, empirical research on their practical application remains limited. Most studies have focused on specific sectors such as the financial industry, with less attention paid to other industries, particularly the real estate sector. This study fills this gap by providing a detailed empirical analysis of the issuance of perpetual bonds by Evergrande, a leading real estate company in China. The research explores how perpetual bonds have been used to solve financing problems, optimize capital structure, and address liquidity issues in a specific industry context.

2.2 Literature Review on Perpetual Bonds and Corporate Financial Structure

Perpetual bonds are a relatively novel financial instrument that combines the characteristics of both debt and equity, allowing companies to raise long-term capital without the obligation of principal repayment[15]. As a hybrid financial tool, perpetual bonds provide companies with flexibility in managing their capital structure[12]. Some studies have highlighted that perpetual bonds, when classified as equity, can improve a company's debt-to-equity ratio, thus enhancing its leverage profile[6]. However, this flexibility comes with complexities, as companies must carefully manage the impact of perpetual bonds on their long-term financial stability[7]. The classification of perpetual bonds, either as debt or equity, significantly influences the company's financial leverage, risk exposure, and overall capital structure, with some research suggesting that these bonds can offer a more stable financing option compared to traditional debt instruments, especially when companies are looking to reduce leverage without diluting shareholder control .

In terms of capital costs, perpetual bonds typically have higher coupon rates than traditional debt instruments, reflecting the risks associated with their perpetual nature[4]. However, studies have shown that the overall cost of capital may be lower compared to equity financing due to the tax advantages of debt and the absence of ownership dilution[9]. Despite these benefits, the high coupon rates and the lack of principal repayment can lead to increased financial risks, especially if interest payments are deferred, as this may affect market confidence in the issuer's financial health[17]. Furthermore, from a risk management perspective, while perpetual bonds offer financial flexibility, they also introduce unique risks, particularly when classified as debt, as they can increase a company's debt burden and financial leverage, potentially affecting its ability to manage future liabilities . Therefore, companies need to strategically balance the benefits of perpetual bonds with the potential long-term implications on their capital structure and overall financial stability.

2.3 Innovation and Contribution of This Study

The innovative aspect of this study is the special focus on the application of perpetual bonds in the Chinese real estate industry with special attention to Evergrande's experience. While the theoretical aspects of perpetual bonds have been explored in the existing literature, this study adds significant

value to this research by examining the practical application of perpetual bonds in a dynamic and risky industry. Through the case study of Evergrande, this study not only illustrates the financial implications of perpetual bonds, but also emphasizes the flexibility and risks associated with the use of perpetual bonds in corporate finance. It provides new insights into how companies, especially those in industries such as real estate, can use perpetual bonds to overcome liquidity challenges and optimize their capital structure.

3 Characteristics and Advantages of Perpetual Bonds

A perpetual bond is a debt instrument with no explicit maturity date, embedded with a call option for the issuer[23]. The issuer is only required to pay interest according to the terms without repaying the principal, thus making it somewhat like "a bond within equity." The first perpetual bond was issued in Britain during the 18th century to fund the British military during the Napoleonic Wars. According to Bloomberg data, the UK and the US are currently the largest markets for perpetual bonds. In China, the market for perpetual bonds has grown rapidly in recent years, surpassing that of many other countries in both issuance size and growth rate.

3.1 Characteristics of Perpetual Bonds

3.1.1 Long Maturity and Issuer's Call Option

Perpetual bonds theoretically have no maturity date, but in practice, issuers include call provisions allowing redemption after several years or at specific intervals[24]. Some issuers include multiple call points, while others specify a final call date. As a result, the actual maturity period of most perpetual bonds is not permanent. For instance, 82% of perpetual bonds issued in the UK since 1990 contain call options. The call provision is typically set for the fifth year, though some issuers may set it for 3, 7, or 10 years. This flexibility results in perpetual bonds generally having a long duration, especially when issuers may also defer interest payments.

3.1.2 High Coupon Rate and Interest Rate Adjustment Mechanism

Perpetual bonds typically offer higher coupon rates, ranging from 6% to 9%. Studies have shown that perpetual bonds issued in USD or GBP have coupon rates at least 200 basis points above the risk-free rate[25].Due to the long-term nature of these bonds, the fixed coupon rate is not ideal for issuance, which is why perpetual bonds generally include an interest rate adjustment mechanism. This adjustment often coincides with the issuer's call date but can be set independently. For example, in Wuhan Metro's perpetual bond issuance terms, the interest rate is adjusted based on a floating rate, with the base rate determined every five years.

3.1.3 Priority of Repayment and Deferral of Interest Payments

Theoretically, perpetual bonds are similar to stocks, representing long-term capital investment with equity-like characteristics. For financial institutions, perpetual bonds are often classified as hybrid capital instruments. For non-financial firms, perpetual bonds can be classified as equity only under certain conditions; otherwise, they must be treated as liabilities. The holders of perpetual bonds are debt investors, not equity holders, and typically cannot demand repayment unless there is a bankruptcy or significant financial event. Perpetual bondholders are paid interest regularly, but issuers have the option to defer interest payments under certain conditions. While deferring interest does not constitute a breach of agreement, it may influence market confidence in the issuer’s creditworthiness[26,27].

3.2 Advantages of Perpetual Bonds

Perpetual bonds combine the advantages of both equity and debt financing[28].They offer flexibility, allowing issuers to adjust interest rates, exercise redemption options, and defer interest payments, providing more financing flexibility than traditional debt instruments[29]. Perpetual bonds are particularly attractive for firms needing to reduce leverage without diluting control over the company. Perpetual bonds, unlike convertible bonds, do not convert into equity, thus avoiding dilution of ownership and protecting control for major shareholders. For investors, perpetual bonds offer higher returns compared to other bonds, making them an appealing investment option. For example, Evergrande, after being listed in Hong Kong in 2009, was able to raise approximately 2.678 billion yuan in a short time. However, due to stricter stock market regulations and the increasing difficulty of issuing new equity, perpetual bonds provided an effective solution to its financing needs without diluting shareholder control[30].

4 Research data

4.1 Data collection process and sources

The data for this study come from Evergrande's financial reports, market analysis documents and other publicly disclosed corporate financial data. Specifically, we selected Evergrande's annual reports, quarterly financial reports, investor relations announcements, and market analysis reports issued by the China Securities Regulatory Commission (CSRC). All data are obtained from Evergrande's official website and official documents released by the Hong Kong Stock Exchange, which are audited and verified by independent third parties.

4.2 Time frame

The timeframe of the study ranges from 2013 to 2017, covering the key years in which Evergrande issued perpetual bonds. In particular, the annual report of Evergrande's issuance of the first batch of perpetual bonds in 2013, as well as subsequent annual reports, provide sufficient data support for analyzing the impact of perpetual bonds on the financial structure, cost of capital and financing decisions of the enterprise.

4.3 Data Reliability Guarantee

In order to ensure the reliability of the data, the financial reports and market analysis data selected for this study are from public and authoritative sources, including third-party databases such as the Hong Kong Stock Exchange, Wind and Oriental Fortune. All data are confirmed by professional auditors to ensure the accuracy and transparency of the data. In addition, this study cross-checks some of the data to ensure that the data information used is free of bias and has a high degree of credibility.

4.4 Data Analysis Methods

Qualitative analysis methods were used in this study. We conducted an in-depth analysis of the financial reports of Evergrande and its related companies to identify the key impacts of perpetual bonds on capital structure, cost of capital, financial stability and solvency.This study chooses to adopt a qualitative research method in order to gain a deeper understanding of the impact of perpetual bonds on the financing structure and risk management of enterprises. Qualitative methods can provide a more detailed perspective, revealing how enterprises flexibly utilize perpetual bonds for capital structure adjustment under liquidity crisis or financing bottlenecks. Such detailed information cannot be fully presented by quantitative analysis, therefore, qualitative analysis is more suitable for

the objectives of this study. In addition, the qualitative approach is able to reveal the complexities and the logic behind the corporate decision-making process through expert interviews.

5 Accounting Treatment of Perpetual Bonds

In 2013, Wuhan Metro issued the first domestic perpetual bond, sparking a debate in both academic and practical circles about whether perpetual bonds should be classified as liabilities or equity. Some argue that although perpetual bonds theoretically have no maturity date, issuers typically choose to redeem them, making perpetual bonds essentially long-term debt instruments. The classification of perpetual bonds as either "debt" or "equity" for accounting purposes should be determined according to CAS 37, taking into account factors such as contract maturity, repayment priority, and the potential for interest rate adjustments. The classification of perpetual bonds in the issuer's financial statements as either an equity instrument or a financial liability depends on whether the issuer retains the right to choose whether to make payments, and whether the issuer must pay in cash or other financial instruments to fulfill the contractual obligations. According to the Ministry of Finance's regulations on the differentiation of financial liabilities and equity instruments and the accounting treatment of perpetual bonds (Accounting Notice [2019] No. 2), the debate over classification has been resolved. For perpetual bonds to be classified as equity, they must meet the following conditions: (1) the issuer must have the option to extend the bond; (2) the issuer must be able to defer interest payments unconditionally and indefinitely; (3) there must be no settlement clause or only a very low probability of settlement for the perpetual bonds issued as callable corporate bonds; (4) the perpetual bonds issued must be unsecured; and (5) the bondholders must not have the right to demand redemption[31].

Regarding subsequent measurement, when classified as equity, interest expenses and dividends should be accounted for as part of the company's profit distribution, reducing the undistributed profit account when accrued. In cases of repurchase, reclassification, or cancellation, the accounting treatment should follow the equity change method. When classified as a liability, interest expenses on perpetual bonds should be accounted for as company borrowings, and any gains or losses from repurchase or cancellation should be recognized in the current period's profit and loss.

6 Impact of Issuing Perpetual Bonds on Enterprises

From 2013 to 2015, the issuance size of Evergrande's perpetual bonds increased from 25 billion yuan to 75.737 billion yuan, and by 2017, it surpassed 100 billion yuan[32]. As the issuance volume of Evergrande’s perpetual bonds grew, the company achieved a scale of 100 billion yuan in second- and third-tier cities by 2013, and completed an initial layout in first- and second-tier cities by 2014 at an astonishing pace. The issuance of perpetual bonds helped Evergrande complete its strategic transformation. The issuance of perpetual bonds has a significant impact on the company, not only at the time of issuance but also during its redemption[33]. The following section will explore the effects of issuing and redeeming perpetual bonds on Evergrande Group from various perspectives.

6.1 Impact on Evergrande Group at the Time of Issuance

6.1.1 Breaking the Financing Dilemma and Meeting Huge Funding Needs

Evergrande Group was founded in 1997, and from the outset, it adopted a "short-term, efficient, and rapid" development strategy. By 1999, Evergrande had entered the top ten real estate developers in Guangzhou. Starting in 2004, Evergrande began expanding its presence across China, adhering to a "scale-first" strategy. By 2013, Evergrande had reached a scale of 100 billion yuan in second- and

third-tier cities, with total land reserves of 150 million square meters. However, the large amount of land reserves tied up significant capital, restricting the company's development to some extent. Meanwhile, Evergrande began expanding into first- and second-tier cities. In 2013, it acquired 66 new projects, 34 of which were in first- and second-tier cities, accounting for 51.5%, a significant increase over the previous year. However, land prices in these cities are much higher than in second- and third-tier cities, and the People's Bank of China had previously stipulated that commercial banks could not provide loans to real estate developers for land payments, increasing the pressure on the company's capital turnover. Evergrande's 2013 annual report showed accounts payable and other payables amounting to about 100.8 billion yuan[34]. Prior to 2013, Evergrande's projects were mostly concentrated in third-tier cities, where the capital recovery cycle was slower, which meant that Evergrande needed external funding to support its transformation and expansion.

Evergrande's financing needs were immense, but its traditional financing channels were not smooth. The traditional financing channel for real estate companies had primarily been bank loans, but repeated regulatory tightening in the real estate sector, particularly in first-tier cities, made it increasingly difficult for real estate companies to obtain loans from commercial banks. Moreover, Evergrande's rapid expansion had caused its net asset liability ratio to be the highest in the industry, making it difficult for banks to continue increasing its loan quota due to risk control concerns. The bond market was also not as favorable to real estate companies due to regulatory changes, and as a company listed in Hong Kong, Evergrande faced many obstacles in issuing bonds in the domestic market. When Evergrande went public in Hong Kong in 2009, its stock price hovered around 4.4 HKD, and it fluctuated between 4 and 5 HKD from 2015 to the end of 2016. Therefore, equity financing options were also limited for Evergrande. The maturity of perpetual bonds in international markets, coupled with more relaxed regulatory oversight on the use of funds, provided Evergrande with a solution. Issuing perpetual bonds denominated in US dollars allowed Evergrande to overcome its financing difficulties and achieve its strategic transformation.

6.1.2 Improving Debt Structure and Reducing Net Debt Ratio

Table 4.1 shows that before Evergrande issued perpetual bonds in 2013, its asset-liability ratio was slightly higher than Vanke's, and 10 and 20 percentage points higher than that of Country Garden and China Overseas, respectively. Moreover, Evergrande's net debt ratio, which is more crucial for real estate companies, was far higher than the other three companies, even reaching four times that of China Overseas. This made Evergrande's debt situation concerning and greatly affected its ability to raise funds through traditional financing channels. After issuing perpetual bonds, Evergrande's asset-liability ratio slightly decreased to a level comparable to its peers, and its net debt ratio also improved significantly. However, many analysts pointed out that since the perpetual bonds issued by Evergrande must be repaid within two years (and if not repaid, the interest rate increases sharply to 18% from the third year), these bonds were essentially treated as liabilities. Therefore, the company's asset-liability ratio did not fundamentally decrease. Evergrande's issuance of perpetual bonds allowed these bonds to be classified as equity under certain conditions, thereby reducing its net debt ratio and improving the overall asset-liability structure from a financial metrics perspective. In terms of debt structure, Evergrande's issuance of perpetual bonds reduced its reliance on current liabilities, with current liabilities accounting for 76.22% of total liabilities before issuance, and 70.01% after issuance. Additionally, by June 2013, the company's net profit reached 6.51 billion yuan, ranking first among national real estate companies. The issuance of perpetual bonds helped reduce reliance on current liabilities and alleviated the pressure of repaying short-term debts.

Table 1. Comparison of Asset-Liability Ratios of Real Estate Enterprises Unit: %

Enterprise Name	2012 Asset-Liability Ratio	2013 Asset-Liability Ratio	2012 Net Debt Ratio	2013 Net Debt Ratio	Net Debt Ratio Excluding Perpetual Bonds
Evergrande	82.56	77.21	84.20	69.50	101.50
Vanke	78.32	78.00	23.50	30.68	30.68
Country Garden	71.52	77.69	53.90%	67.30	67.30
China Overseas	61.90	62.55	20.50%	28.40	28.40

Data Source: Guotai An CSMAR Database

6.1.3 Rapidly Launching Investment Projects to Maximize Shareholder Value

When real estate companies face a lack of funds for large-scale projects, they can resolve financing issues through both internal company financing and equity cooperation with other investors. However, issuing perpetual bonds enables Evergrande to retain control and autonomy, which is beneficial for quickly launching and advancing investment projects. Equity cooperation is relatively cumbersome, as parties often need to negotiate for an extended period just on the equity share. Furthermore, many of Evergrande's projects originally relied on equity cooperation for financing, but the contributing fund companies required involvement in project management and procurement, which negatively impacted Evergrande’s operations. Therefore, when the interest rate of perpetual bonds is close to the required return rate of equity partners, Evergrande prefers financing through perpetual bonds.

In 2013, Evergrande was expanding into first- and second-tier cities, with projects in these cities being its highest-quality opportunities, offering significant future returns. Issuing perpetual bonds only requires paying fixed interest, with the remaining profits belonging to shareholders[3]. In contrast, equity cooperation requires profit distribution according to equity shares. When project returns exceed the interest rate of perpetual bonds, issuing perpetual bonds is a better option, helping maximize shareholder value. Between 2013 and 2017, the amount of Evergrande's perpetual bonds increased, prompting many investors to predict financial risks due to Evergrande’s high leverage. However, after careful analysis, it became clear that Evergrande was not blindly issuing perpetual bonds. With rapid sales growth and smooth cash collection, Evergrande had no difficulty repaying its perpetual bonds. In 2015, Evergrande repaid 25 billion yuan of perpetual bonds issued in 2013 and issued nearly 40 billion yuan in new perpetual bonds to replace the capital from equity partners in joint ventures. Evergrande's issuance of perpetual bonds can be seen as a strategic move that met its financing needs during a period of rapid expansion, avoided interference from other investors, and maximized shareholder value.

6.2 Impact on Evergrande Group at the Time of Redemption

Evergrande classified the perpetual bonds it issued as equity, and the interest on these bonds was treated as a profit distribution, which could only be deducted after tax, lacking the tax-deductibility of interest on ordinary bonds. Of course, most of Evergrande's previous interest expenses were capitalized, so the inability to deduct interest expenses for perpetual bonds did not result in significant losses. The interest on perpetual bonds, when treated as a profit distribution after tax deduction, could not be capitalized and had to be deducted from the profit of the current period. This resulted in a sharp decline in Evergrande's shareholder return on equity in the years of substantial perpetual bond issuance, and as a result, Evergrande's stock price remained low until the redemption of all perpetual bonds in 2017.

From an accounting perspective, perpetual bonds have the characteristic of recognizing future costs in advance. For real estate developers, a project typically takes several years from development to completion and sale, during which interest expenses are incurred. In traditional financing, the interest expenses that meet the capitalization criteria are capitalized as part of the real estate company's inventory, and when the property is sold, these costs are transferred to the current period's expenses, matching income with costs. In contrast, interest on perpetual bonds is deducted from the current net profit as a profit distribution, and will not later be included in project costs. Therefore, part of the cost is deducted from net profit earlier. This characteristic of perpetual bonds causes a decline in shareholder return on equity during the bond's term, which will sharply rise after the redemption. If multiple projects use perpetual bonds, shareholder return on equity will decrease until the total interest on perpetual bonds reaches a peak, after which the return on equity will increase. Evergrande's mid-2017 report disclosed that it had fully redeemed 112.9 billion yuan of perpetual bonds, realizing a net profit attributable to shareholders of 23.13 billion yuan, a staggering 224.4% increase year-on-year. The redemption of perpetual bonds not only adjusted the company's debt structure but also directly released over 10 billion yuan in profits. As a result, Evergrande's stock price soared, closing at 24.35 HKD per share on August 30, 2017, nearly 400% higher than its opening price of 4.95 HKD at the beginning of the year. Evergrande's market value also surged significantly.

6.3 Impact of the current financial environment

The findings of this study will be discussed in the context of the current financial environment. With the volatility of financial markets, changes in capital regulatory policies, and the cyclical risks of the real estate industry, firms face multiple external challenges in financing. In particular, real estate firms often have to deal with the effects of policy regulation and market uncertainty in the financing process. In this section, we will explore in detail how these external factors affect firms' choice of innovative financing tools such as perpetual bonds, and how these changes drive firms to adjust their financing strategies.

In recent years, changes in the financial environment have significantly affected the financing decisions of enterprises. The increased volatility of global interest rates, especially the changes in China's interest rate policy, has greatly affected the financing costs of enterprises, especially for highly indebted enterprises, the rise in interest rates may lead to higher financing costs, thus increasing financial pressure. Under such circumstances, perpetual bonds, as a flexible financing tool, help enterprises to reduce financing costs and avoid the risks arising from interest rate fluctuations in traditional financing methods. At the same time, the tightening of capital regulatory policies, especially the change of regulatory policies in China's real estate industry, has also made corporate

financing more challenging. To cope with these regulatory pressures, many companies opted for perpetual bonds, through which Evergrande not only solved the problem of shortage of capital, but also maintained its financial flexibility under the strict capital regulation. In addition, market uncertainty has intensified, with economic volatility and policy changes complicating corporate financing decisions. In this environment, enterprises obtain long-term funding through the issuance of perpetual bonds to avoid over-reliance on equity financing and bank loans, thus maintaining greater financial autonomy and flexibility. Evergrande's successful experience shows that in the current financial environment, perpetual bonds can provide important financing support for enterprises, especially in the face of market uncertainty, providing stable financial security.

7 Research Conclusion

With the improvement of the perpetual bond issuance system and the standardization of accounting treatment, perpetual bonds in China are becoming increasingly mature[35]. In the future, more and more companies will regard perpetual bonds as a key financing tool. The call option, interest rate adjustment mechanism, and deferred interest payment option of perpetual bonds provide issuers with more operational flexibility, allowing them to adjust the bond's maturity, payment timing, and coupon rate based on their operational conditions during the bond's life. The flexibility of perpetual bonds is unmatched by other debt financing instruments. Perpetual bonds that meet certain criteria can be classified as equity, which is an attractive option for companies with high leverage that need financing. However, this also means that perpetual bonds could potentially obscure a company's true financial position, and therefore, investors should closely monitor the perpetual bonds issued by companies.

In the case of Evergrande's perpetual bonds, the company was in a period of rapid expansion and strategic transformation, with significant funding needs. However, its traditional financing channels were restricted. Perpetual bonds helped Evergrande overcome its financing dilemma and improved its asset-liability structure from a financial standpoint. Perpetual bonds also expanded the company's financing channels, and when traditional channels are restricted, issuing perpetual bonds is a good alternative. When the future return on investment from a project exceeds the coupon rate of perpetual bonds, issuing perpetual bonds is a better choice than equity cooperation, as it allows the company to retain control and autonomy, executing its strategic plans without interference from other investors. Furthermore, perpetual bondholders only require fixed interest payments, whereas equity partners share profits based on their equity percentage. For high-return projects, shareholders are entitled to all the remaining profits after the interest payment on perpetual bonds, making perpetual bonds a more effective way to maximize shareholder value compared to equity cooperation.

The interest on perpetual bonds cannot be capitalized into project costs, meaning that it has the characteristic of recognizing future costs in advance. During the life of perpetual bonds, shareholder return on equity declines, which may adversely affect the company's stock price and could potentially influence equity-related matters. Companies should aim to maximize shareholder value by strategically combining equity financing and debt financing, long-term and short-term liabilities, as well as preferred stock and perpetual bonds. They should dynamically adjust their financing structure based on market trends and their operational status. When considering issuing perpetual bonds, companies should fully understand the features, advantages, and potential impacts of perpetual bonds, and take full advantage of their flexibility and differences in accounting treatment.

8 Conflict of Interest

The authors declare that they have no conflicts of interest to report regarding the present study

9 Author Contributions

The authors confirm contribution to the paper as follows:

Xinyong Lu: The author was responsible for the conceptualization, methodology, data collection, analysis, formal analysis, visualization, supervision, project administration, funding acquisition, and manuscript writing. No external contributors were involved in this study.

10 Funding

This research was supported by the Zhong Kai College of Agricultural Engineering Graduate Student Science and Technology Innovation Fund Grant (KJCX2024031) and General Program of the National Social Science Foundation (21BSH104). The funding institutions had no role in the study design, data collection and analysis, decision to publish, or preparation of the manuscript.

11 Acknowledgments

Not Applicable.

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