Analysis of Convertible Bond Investment Value

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Abstract: During the vigorous development of convertible bonds in China, it has become a hot investment product recently. This paper introduces the investment methods and risks of convertible bonds to investors with various risk tolerance through the explanation of the background and important clauses. Convertible bonds, as a combination of creditor's rights and options, can be said to be applicable to all kinds of investors at the same time. Investors with low risk tolerance can obtain fixed income regardless of market conditions under the condition that they have stable and low-risk coupon rate as guarantee. Investors with high risk tolerance can obtain returns with greater risks and greater returns through stock conversion under the same stable fixed income background. Under the protection of many important clauses (the specific clauses are as follows), the interests of various types of investors are stabilized. At the same time, this paper also puts forward several investment suggestions according to the risks of convertible bonds.

1. Introduction

1.1 Background
In recent years, convertible bonds have greatly increased both in terms of the number of bonds issued and the total amount of bonds issued, which provides a good investment channel for investors under the environment of rising convertible bonds. Convertible bonds, as a novel investment product, have both safe floating returns and stable guarantee measures. At present, convertible bonds are a valuable investment product with high savings.

1.2 Literature review
Convertible bonds, as a novel investment method, have attracted the attention of a wide range of domestic scholars and experts. According to the viewpoints put forward by other scholars, this paper analyzes the investment in convertible bonds. Scholars Wang Yiming, Pei Naitong and Guo Lei (2015) proposed that convertible bonds also perform well in a volatile market environment. According to the different performance of convertible bonds in China's A-share bull market and bear market, relevant data are sorted out and examples are given to illustrate the investment prospects of convertible bonds in different market environments and the investment characteristics of flexible returns on guaranteed bonds. At the same time, it also puts forward several suggestions to avoid risks and the prospect of convertible bonds market.

Dai Jing (2019) proposed that convertible bonds are an investment product with controllable risks and considerable returns. This paper analyzes the investment of convertible bonds under the current macroeconomic situation from the important terms, issuance conditions and historical relevant data of convertible bonds. At the same time, according to the historical data, the investment characteristics of convertible bonds are analyzed, the risks are controllable, and the positive stock price has driving effect.

① Wang Yiming, Pei Naitong, Guo Lei. Analysis of Convertible Bond Investment Value in Niuxiong Market [J]. Bonds, 2015 (02): 68-74.
② Dai Jing. Investment Characteristics and Investment Ideas of Convertible Bonds [J]. Bonds, 2019 (06): 31-35.
2. Brief Introduction of Convertible Bonds

Convertible bonds are special corporate bonds that are converted into ordinary stocks at a specific time and under specific conditions. The global convertible bond market is mainly concentrated in the United States, Europe, Southeast Asia and Asia. The issuance of convertible bonds not only promotes the prosperity of the financial market and the competitiveness of enterprises, but also gradually attracts the attention of China's securities market and investors and is accepted by the market. In the meantime, China's domestic convertible bond market is also booming under the influence of domestic and foreign countries. A large number of excellent companies have flocked to the market to promote the development of convertible bonds in China.

China's A shares issued the first "Bao'an Convertible Bond" on November 19th, 1992 under the condition that the early market was not mature and lacked management. Due to the failure of conversion, China could not issue any more convertible bonds until 1997. In March 1997, the China Securities Regulatory Commission (CSRC) issued the “Interim Measures for the Administration of Convertible Corporate Bonds” (No. 16, 1997) (abolished on May 8th, 2006, No. 42, 2006) to strengthen the administration of convertible bonds. This treaty not only provides a standardized system for convertible bonds and stipulates that the issuance of convertible bonds must abide by the principles of fairness, impartiality and openness, but also limits the scale of convertible bonds issued by listed companies. When China's early convertible bond market was not mature, convertible bonds failed to flourish in the Chinese market due to higher profit requirements for convertible bond issuing companies and imperfect convertible bond system. In March 2001, the CSRC promulgated the "Implementation Measures for the Issuance of Convertible Corporate Bonds by Listed Companies" (Order No. 2 of the CSRC) and three related supporting documents, which have strict requirements on the profit quality and requirements of listed companies as well as the rules and regulations and procedures for the issuance of convertible bonds. Due to the high profit requirements of these policy documents on the sponsors of convertible bonds and the restriction of the issuance scale, and the insufficient awareness of convertible bonds in the domestic market, convertible bonds have failed to show explosive growth. In February 2017, the CSRC issued the "Detailed Rules for the Implementation of Non-public Issuance of Shares by Listed Companies" (No. 302, 2007) and in May of the same year, it also promulgated the "Several Provisions on the Reduction of Shares by Shareholders/Directors of Listed Companies" (CSRC Announcement No. 18, 2015). Through the support of policies, convertible bond financing is no longer limited by the frequency of financing. What's more, more and more listed companies and financial institutions need to use convertible bonds to achieve financing purposes after the restriction of private placement, which makes the development of convertible bonds rapidly usher in an outbreak period.

Data of Wind show that 3 convertible bonds were issued in 2015, 40 convertible bonds were issued in 2017, and 67 convertible bonds were publicly issued and listed in 2018, raising a total of 78.7 billion yuan. In 2019, 151 convertible bonds were issued, with a scale of 269.5 billion yuan, far exceeding the previous year's level. Convertible bonds, as relatively low-risk and stable investment products, show an increasing trend annually. The number of bonds issued is increasing daily, and investors' confidence in convertible bonds is also increasing day by day.
3. Basic Attributes of Convertible Bonds:
Convertible bonds are the combination of common creditor's rights and securities options of companies. They have the attributes of bonds and stocks, and have three characteristics: creditor's rights, equity rights and convertibility. 1. Creditor's rights are no different from ordinary bonds. They are fixed income corporate bonds. Investors obtain the prescribed coupon principal and coupon interest at the prescribed interest rate and term. 2. Equity means that investors can convert convertible bonds into ordinary shares of the company from creditors to shareholders of the company after meeting the conversion treaty during the conversion period when holding convertible bonds. 3. Convertibility is one of the most important characteristics of convertible bonds, including the option value of stock conversion. Holders of convertible bonds can convert into company shares at the price specified at the time of issuance, and can also continue to hold convertible bonds to collect principal and interest when they mature. Investors can obtain basic income by purchasing convertible bonds. Take the coupon rate shown in the announcement issued by Yatai Pharmaceutical as an example, 0.3% in the first year, 0.5% in the second year, 1.0% in the third year, 1.5% in the fourth year, 1.8% in the fifth year and 2.0% in the sixth year.
Holding convertible bonds has a stable income with guaranteed bottom and low risks. Convertible bonds with convertibility are equivalent to holding a call option. Investors can complete debt-to-equity swap under the condition of meeting the conversion conditions, thus changing from creditor's rights to equity.

4. Important Terms and Functions of Convertible Bonds:
The following are several important clauses that are of vital importance to investors in the announcement of the issuance of convertible bonds.

(1) Stock transfer price

Stock transfer price refers to allowing convertible bond holders to exchange convertible bonds into ordinary shares of the company according to a specific proportion within the conversion time specified when issuing convertible bonds. The stock transfer price of convertible bonds shall follow Article 22 of the Measures for the Administration of Securities Issuance of Listed Companies, “The stock transfer price shall not be lower than the average trading price of the company's shares in the 20 trading days prior to the announcement of the prospectus and the average price of the previous trading day”. As the basic criterion of convertible bonds, stock transfer price is also one of the criteria to measure whether convertible bonds should be converted into common shares of the company according to the corresponding proportion. The stock transfer price is similar to the exercise price of the option. The level of the stock transfer price is a game between investors and issuers. Investors can decide whether there is arbitrage space in the stock price at this time through the stock transfer price. When the stock transfer price is lower than the positive stock price, it is equivalent to investors can buy the stock at a low price and wait for the stock price to rise to reap profits. When the stock transfer price is higher than the positive stock price, it is equivalent to buying the stock at an excessively high price, which may cause profit damage. Investors need to judge whether the stock price is too high or too low by comparing the stock price and the stock price of the positive stock, so as to convert shares at the most appropriate time. Therefore, when investors see the stock price change, they can decide whether there is arbitrage space at this time. Investors can judge whether to exercise shares or continue to hold bonds at this time through the conversion premium rate and the pure bond premium rate. The following two indicators are introduced: conversion premium rate and pure debt premium rate to help investors judge the timing of buying or selling.

The conversion premium rate refers to the premium level between the market price of convertible bonds and their converted value. To measure the strength of convertible bonds' equity, the conversion premium rate = 

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\frac{(\text{Convertible Bond Market Price} - \text{Stock Transfer Value})}{\text{Stock Transfer Value}}
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When the conversion premium rate is low, the stronger the convertible bonds' equity, the higher the fluctuation frequency of convertible bonds and positive shares. At the same time, the risks borne by conversion are relatively low and there is more room for increase. When the conversion premium rate is negative, it indicates that the opportunity of low-risk convertible bond conversion arbitrage may be coming soon. When the conversion premium rate is high, the positive share price is lower than the convertible bond price, which indicates that the price is not at the same fluctuation frequency. The weak equity of convertible bonds and the high conversion risk may lead to the damage of investors' funds and may trigger the put provision (described below).

Pure debt premium rate refers to the embodiment of the premium degree between the price of convertible bonds in the secondary market and the price of pure debt. Through the formula:

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\frac{(\text{Convertible Bond Market Price} - \text{Pure Debt Value})}{\text{Pure Debt Value}}
\]

When the premium rate of pure debt is low, it indicates that the stronger the debt, the smaller the possibility of falling and the smaller the investment risk. When the premium rate of pure debt is high, it shows the possibility that the debt is weak and there is more room for decline.

The adjustment of the stock transfer price (also known as the "active amendment clause") occurs when the total number of shares of a listed company changes due to stock dividends, conversion of shares, issuance of new shares or allotment of shares, etc., and the stock transfer price shall be adjusted according to the corresponding formula. It can be said that the active revision of the stock transfer price is a protection of investors' rights and interests.
(2) Downward revision clause

The downward revision clause (also known as the "passive revision clause") belongs to a special stock transfer price amendment regulation, which usually occurs when the closing price of the company's shares is lower than the current stock transfer price for several consecutive trading days for a certain proportion, and the issuer has the right to revise the current stock transfer price downward and become the new stock transfer price. Taking the second extraordinary shareholders' meeting of Jiangyin Convertible Bonds on August 27th, 2018 as an example, in view of the fact that the closing price of the Bank's A-share shares has been lower than 80% of the current stock transfer price (6.92 yuan/share x 80% = 5.536 yuan/share) in 15 of any 30 consecutive trading days, the downward revision condition of the stock transfer price of convertible corporate bonds is met. When the listed company triggers the downward revision clause, it will not only stabilize the convertible bond price when the positive stock price falls, but also easily make the positive stock price rise rapidly. Take Jiangyin Convertible Bonds as an example. On August 28th, 2018, the stock transfer price was adjusted from 6.92 yuan/share to 5.67 yuan/share after the revision. After the announcement, the positive share turnover of Jiangyin Convertible Bonds increased significantly and the positive share price also increased slightly. Convertible bond holders do not have to bear any risks due to the decline in the price of the positive shares, but will get the gains from the rise in the shares. In addition, the issuer has no right to adjust the stock price upward after the stock price rises due to the trigger of the downward revision clause. While the listed company initiates the downward revision clause to cause the convertible bond holders to make profits, the listed company can also make profits from it. When the downward revision clause is triggered, it will promote investors to convert shares so as to avoid repaying the principal and interest. Listed companies also initiated downward amendments to avoid triggering resale regulations (described below). Generally speaking, the downward revision clause issued by listed companies is good news, and issuers and investors make profits together.

(3) Put provision

Generally speaking, the put provision means that the holder of convertible bonds can sell some or all of the convertible bonds back to the issuing company if the closing price of the company's shares continues to be too low and exceeds a certain range within a certain period of time. Take the conditional review clause announced by Yatai Pharmaceutical as an example: In the last two interest-bearing years of the Convertible Corporate Bonds issued this time, if the closing price of the Company's shares on any 30 consecutive trading days is lower than 70% of the current stock transfer price, the holders of Convertible Corporate Bonds have the right to sell all or part of the Convertible Corporate Bonds they hold back to the Company at the par value plus the current accrued interest. The put provision has a restrictive effect on both buyers and sellers, which is a right that convertible bond holders can exercise. When the stock price of the positive stock falls sharply and the downward revision clause is met at the same time, the issuing company fails to take corresponding measures, and the bondholder has the right to sell the bonds held back to the issuer. This provision gives investors full confidence in the purchase of convertible bonds. Taking Yatai Pharmaceutical as an example, the current share price is 16.25 yuan/share. If the share price of Yatai Pharmaceutical is lower than 
"(16.35 x 0.7 = 11.375)" for 30 consecutive days, the downward amendment regulation will be triggered. In the absence of any action by Yatai Pharmaceutical, the holder of convertible bonds can sell back to Yatai Pharmaceutical at the par value of the bonds plus the current interest payable. The above examples show that convertible bonds can also safely guarantee investors' funds and obtain stable bond interest returns in bear markets. As a guarantee to protect the safety of bond investors, the put provision gives investors the right to sell. Whether a bear market comes or the issuing company's share price is in a low state, investors can sell back to the company at a price of 103. The appearance of the put provision will prompt the convertible bond issuer to revise the share price to achieve the purpose of investors' share conversion. At the same time, the put provision will also serve as an incentive to enable the issuer to continuously safeguard the company's profits and fundamentals so as to avoid the trigger clause of the company's share price decline.
(4) Redemption Clause

Redemption clause usually refers to the provisions that convertible bond issuers can redeem bonds before the maturity date of the bonds, which is usually divided into the following two categories.

1. Redemption clause at maturity. Taking the announcement of Yatai Pharmaceutical as an example, within five trading days after the expiration of the convertible bonds issued this time, the Company would redeem all convertible bonds that have not been converted into shares from investors at 115% of the par value of the convertible bonds issued this time (including the interest of the last period).

2. Conditional redemption clause. Taking the announcement of Yatai Pharmaceutical as an example, when meeting either of the following two situations, the board of directors of the Company has the right to decide to redeem all or part of the convertible corporate bonds that have not been converted according to the par value of the bonds plus the current accrued interest:
   ① During the conversion period of the convertible corporate bonds issued this time, if the closing price of the A-share shares of the Company is not less than 130% (including 130%) of the current stock transfer price for at least 15 of the 30 consecutive trading days;
   ② When the outstanding balance of convertible corporate bonds issued this time is less than 30 million yuan.

The redemption clause gives the issuer the right to complete debt-to-equity swap through maturity redemption, right redemption and insufficient balance redemption in order to allow investors to convert shares as soon as possible when the price of the positive shares rises. Basically, debt-to-equity swap for convertible bond holders is the most ideal result for investors and listed companies when the positive share price is greater than the agreed share price.

5. Benefits of Convertible Bonds to Investors

Compared with other investment methods, convertible bonds are very suitable for investors with low stability and risk preference. For example, stock investment, in the stock market, the market fluctuates greatly and is difficult to predict. When a bear market comes, it may face risks such as limit decline and forced liquidation at any time. Convertible bonds have the advantage of guaranteed bottom and uncapped top, giving stable investors confidence when a bear market comes. When the market plummets, ordinary investors cannot be sure of the market. Even if the stock falls to 90%, the bonds held by investors can still receive interest guarantee. When the stock price of the positive stock keeps falling, it will trigger the above-mentioned "downward revision clause". When triggered, it will usually prompt more investors to convert their debt-to-equity swap into stock, thus pushing up the stock price. Convertible bonds can wait for the issuer to announce the downward conversion of the stock price to buy the stock at a low price and wait for the rebound. The worst result of holding convertible bonds is the "maturity redemption clause". According to the treaties published by listed companies, some profits and principal guarantees can still be obtained. Under strict market supervision and examination, investors can safely treat redemptions at maturity. Convertible bonds are an investment method that can be held at ease and have stable returns for stable investors.

The advantage of uncapped convertible bond income is also a good investment method for radical investors. Buying stocks requires both judging the direction and avoiding risks. Debt-to-equity swap is a high-risk investment behavior for radical investors. Debt-to-equity swap has the double benefits of guaranteed bottom in bear market and rising stock price and rising premium rate in bull market. Therefore, convertible bonds are an investment method that can be operated in heavy positions for investors. When the stock price is higher than 130%, radical investors can choose to continue to convert shares and hold positive shares to obtain the benefits brought by the rise of positive shares. The purpose of issuing convertible bonds by listed companies is to raise funds at low interest rates and to urge investors to convert shares. Therefore, when the stock price of the listed companies does not perform well, the stock price will be lowered to promote the price to reach 130%. It should be noted here that investors need to hold or stop profits according to market conditions so as not to be forced by the issuer to redeem lost benefits. For example, the market price of the redemption announcement issued by
Guangdong Shengyi Technology Co., Ltd. was 166.78 when it was redeemed at a price of 100.34 yuan. If investors did not sell successfully before this, they would lose 66.44 yuan in vain.

Through the understanding of various special regulations, investors can safely invest and make profits under the protection of various policies. For the issuing company, some regulations favor investors to convert shares and bring low interest financing opportunities to the issuing company. Therefore, the above four regulations give more qualified listed companies more financing channels while protecting the principal and interest of investors.

6. Convertible Bond Risk
Although convertible bonds have a put provision that limits the minimum loss for investors and has lower risks than other investment means convertible bonds. However, in fact, convertible bonds also have the following risks that require investors to pay careful attention to.

(1) There is a risk of stock price fluctuation when investing in convertible bonds.
There is an inseparable relationship between convertible bonds and the stock price. Although whether the stock price falls or not will not affect the maturity income of convertible bonds, it will increase the risk of holding convertible bonds and also affect the floating income of investors, especially for radical investors. When the stock price rises to 130%, investors need to pay attention to the fact that convertible bonds can be regarded as high-risk stock investments at this time, and blind pursuit of higher prices may cause losses.

(2) Compulsory redemption risk
When the conditions for compulsory redemption are met, if investors cannot grasp the correct timing of conversion in the secondary market and sell their convertible bonds in the secondary market without completing debt-to-equity swap, the company may forcibly redeem at a lower price, resulting in damage to investors' income. For example, the 11th Corporate Bond Redemption Announcement announced by "Kangtai Biology" stopped trading on April 29th, 2019 because the Company had met the conditions for forced redemption. According to statistics, if investors do not complete the conversion before stopping trading, the loss ratio will reach 40.63%. Therefore, if investors fail to convert shares within the deadline, they may face losses.

(3) Risk of interest loss
When the stock price of convertible bond company is too low, the issuing company has the right to decide whether to revise the stock transfer price or not, and how much to revise is also decided by the listed company, so there is uncertainty and risk in the revised stock price. When the stock price of the company issuing convertible bonds continues to decline and does not lower the stock price to promote the debt-to-equity swap of convertible bond holders, investors can only reap a lower convertible bond interest rate of 1%-2%, which is far lower than the interest rate of government bonds and other bonds. Therefore, under the condition that the issuing company has full power to decide whether to revise the stock transfer price, there will be risks in the investment.

7. Suggestions
For investors, it is difficult to maximize returns and minimize risks. Although convertible bonds have provisions to protect the principal of investors, they still face some investment risks. Based on the investment risks mentioned above, this paper gives the following suggestions. (1) In order to ensure the floating interests of investors, investors need to strengthen their understanding of convertible bonds and learn, and be familiar with the functions and uses of several clauses of convertible bonds and various special regulations. It also requires investors to focus on announcements issued by convertible bond issuers, such as convertible bond redemption announcements, and avoid missing the redemption period. (2) Investors need to have certain cognitive ability and judgment ability on the stock transfer price and conversion period of convertible bonds, especially when the bear market comes and the bull market ends. The large fluctuation of stock price may affect the psychology of investors and lead to wrong judgment. (3) It is suggested that investors actively participate in the investor education sectors of major trading platforms to help investors obtain the latest and comprehensive investment risks, laws and
regulations and rights protection. Let investors know how to safeguard their rights and interests and how to protect their own interests, as well as how to protect their rights when investors face unfavorable situations. At the same time, investors can understand the products and other financial products invested by investors from the trading platform.

8. Conclusion
This paper makes a detailed study of the history of convertible bonds, important terms and investors' returns, so as to give investors with various risk types the returns and risks when investing in convertible bonds. Investors need to have a correct understanding of convertible bonds and an understanding of risks, especially the stock transfer price and transferring period. Correct convertible bond investment can bring greater floating returns to investors, and at the same time, we should also guard against various uncertain risks brought about by the stock market turmoil.

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