

# Analysis of Investment Opportunities and Strategies of Convertible Bonds

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## Abstract

Convertible bonds have dual attributes of debt and equity. There are many factors inducing the price rise of convertible bonds or stocks, such as the bullish market, the improvement of corporate performance, sector rotation, international hot money, etc. This paper analyzes the investment opportunities from the evaluation of convertible bonds, the probability and time of convertible bonds rising to 130, as well as the investment strategy of convertible bonds -- review analysis. The risk of investors investing in convertible bonds is low. The risk of investors investing in convertible bonds is low. It is highly likely that investors will make strict independent evaluation and selection of convertible bonds, implement the buying and selling criteria, control investment risks and achieve good investment returns.

## Keywords

Convertible Bonds; Important Price 130; Investment Strategy; Evaluation.

## 1. Overview of Convertible Bonds

Convertible bonds have the dual attributes of bond and stock. When the price is relatively low, convertible bonds have the attribute of obligatory bond. When the price is relatively high, convertible bonds rise and fall similar to equity, showing more of the stock attribute. Convertible bonds have a bottom limit but no upper limit. The bottom limit is its bond attributes. When buyers buy convertible bonds, they can not only earn a certain minimum income, but also enjoy part of the dividends brought by the development of listed companies.

Listed companies issue convertible bonds for the purpose of low interest financing to reduce financial costs. Listed companies can use the combination of (price downward resetting convertible bonds) and (price upward resetting convertible bonds) to achieve redemption. So far, no convertible bonds have defaulted. Previous historical data show that the default probability of convertible bonds is relatively low.

## 2. Investment Evaluation of Convertible Bonds

### 2.1. Overall Assessment of the Convertible Bond Market

Median and average evaluation methods for convertible bonds: for example, price statistics on April 25, 2022 (Table 1)

**Table 1.** Median and mean statistics

Category	Total	Average	Median	<= 90	90-100	100-110	110-120	120-130	>130
Summation	399	122.7	112.5		7	134	157	45	56
Proportion(%)					1.8	33.6	39.3	11.3	14

This data comes from the analysis of convertible bonds by WIND Information. According to the historical data, we can judge the water level of convertible bonds 100-104 (extremely undervalued). 104-108 (underestimation); 108-112 (reasonable); 112-116 (overvalued); 116-120 (extremely overvalued). The statistical deviation between the median of convertible bonds and the average price of convertible bonds in the table is relatively large, indicating that the market sector is very differentiated. The fluctuation of convertible bonds is very large, and it is easier to form price differences at different times.

## 2.2. Independent Valuation of Convertible Bonds

Screening of listed companies issuing convertible bonds: identify the sector in which the companies issuing convertible bonds are listed, the historical valuation of the sector, the certainty of market prosperity and performance, and the periodicity of the sector. Independent evaluation of convertible bonds: (1) Safety analysis, issuance of convertible bond listed enterprises, issuance amount, maturity date, convertible bond price,[2]Premium rates, Convertible bonds rating, Stock financial analysis, Straight bonds value, Overall valuation of convertible bonds, Stock index analysis, Maturity of convertible bonds (must be more than 2 years at time of investment), Redemption conditions for convertible bonds. (2) analysis of elasticity: According to the difference between the convertible bond price and 130, with its debt as defense, stock as offense.(3) Elimination analysis: goodwill impairment, pledge impairment, assets and liabilities, etc.

For example, the price of the convertible bonds of big banks: From February 2021 to April 2022, it is difficult for the Shanghai Bank convertible bonds to break through 110. In the three years from the issuance of Suyin convertible bonds in April 2019 to April 2022, the convertible bonds never reach 130. From the historical price trend and the analysis of the underlying companies, it can be concluded that the price elasticity space of this convertible bond. For example, table 2 below analyzes lixun convertible bonds on March 29, 2022.

## 3. The Probability and Time that Convertible Bonds Reach 130

### 3.1. Important Price of Convertible Bonds 130

130 yuan is an important price for convertible bonds. Up to now, the majority of delisted convertible bonds have ended in Mandatory redemption. Mandatory redemption means that the conversion value of convertible bonds is higher than 130 yuan for a sustained period of time. Convertible bond price = Turned stock value\* (1+ conversion premium) Mandatory redemption can only be implemented during the conversion period, during which the conversion premium rate of convertible bonds is greater than 0 in most cases, Otherwise there will be arbitrage to balance the conversion premium. The vast majority of convertible bonds delisted at present eventually rose to more than 130 yuan.

### 3.2. Factors that Induce Convertible Bonds Or Underlying Stock to Rise

The fundamental reason for theoretically, the fundamental reason for the facts of inducing rising convertible bonds is the rise in the price of the underlying stock stocks when the conversion premium of convertible bonds is relatively low. Factors inducing the price rise of convertible bonds or underlying shares:(1) bullish market(2))the improvement of the company's performance (3) the increase in the price of the company's products(4) sector rotation (5) international hot money6) favorable policy.Convertible bonds are bought at a low point, that is, their debtability. There are also more market factors that induce price changes. In theory, the average time of mean regression is less than one year.

### 3.3. Time from the Listing of Convertible Bonds to 130 Yuan

As of October 8, 2021, a total of 610 convertible bonds have been listed; Of these, 375 are still trading and 235 have been delisted. Of the 610 convertible bonds, 528 have a maximum price of more than 130 yuan, and many of the remaining bonds that have not risen to 130 yuan have just been listed. Of the 528 convertible bonds, 126 rose to 130 yuan on the day they were listed; There are 402 convertible bonds that did not reach 130 yuan on the first day of listing, but rose more than 130 yuan later. 402 convertible bonds: increased to 130 yuan within one month of listing, accounting for 15.17%; Increased to 130 yuan within two months of listing, accounting for 27.36%; Within three months after listing, it increased to 130 yuan, accounting for 34.08%; Increased to 130 yuan within six months of listing, accounting for 52.99%; Within one year of listing, it rose to 130 yuan, accounting for 73.89%; Within two years of listing, it increased to 130 yuan 73.89%; After two years on the market, it increased to 130 yuan 26.11%; It is highly probable that the convertible bond will rise to 130 YUAN from the ipo date.

**Table 2.** Rose 130 yuan to the time

The serial number	category	quantity	percentage
1	It went up to 130 yuan within a month of listing	61	15.17%
2	It went up to 130 yuan in two months of listing	110	27.36%
3	It went up to 130 yuan in three months of listing	137	34.08%
4	It went up to 130 yuan in six months of listing	213	52.99%
5	It rose to 130 yuan within a year of listing	297	73.89%
6	It rose to 130 yuan within two years of listing	353	87.81%
7	It rose to 130 yuan within three years of listing	382	95.02%
8	It rose to 130 yuan within four years of listing	399	99.25%

The data in Table 2 comes from the valuation of dolphin index. It can be seen from the above table that if a newly listed convertible bond finally rises to 130 yuan, 52.99% of it may rise successfully within half a year. 73.89% are likely to be successful within a year. It is highly probable that the convertible bond will rise to 130 yuan from the ipo date.

### 4. Convertible Bonds Investment Strategy -- Review Analysis

According to the independent evaluation requirements of convertible bonds, representative convertible bonds in recent years are selected for re-analysis, and each convertible bond is expected to be open a position for four times: The first purchase price is within a 5% to 10% premium to the Straight Bonds value premium, The second purchase price is within a 0% to 5% premium to the Straight Bonds value premium, The third purchase price is within a 0% to 5% premium to the Straight Bonds value premium, The fourth purchase price is less than Straight bonds value premium of -10%. Principle of selling convertible bonds(total amount): Price over 130 yuan; The emergence of large financial risks; Approaching the redemption and maturity date of convertible bonds. The quantity of each purchase is 1 lot, and the specific data of the resumption are shown in the following table3.

Table 3. Analyse the data

Name	Xiwang Convertible bonds		Jianrun Convertible bonds		Hejian Convertible bonds		Guangdian Convertible bonds	
<b>Straight bonds value</b>	97.73		95.68		99.5		99	
level	AAA		AA		AAA		AA	
Buy1(<107.4)	Time	2020/7/19	Buy		Buy1	2020/8/24	Buy1	
	price	107.3	(<105.2)		(<109)	108.57	(<108)	
Buy2(<102.7)	Time		Buy2	2020/12/29	Buy2	2020/9/15	Buy2	
	price		(<100)	98.7	(<105)	105	(<104)	
Buy3(<97.73)	Time		Buy3	2021/1/29	Buy3		Buy3	2018/7/24
	price		(<95.68)	93.2	(<99.5)		(<99)	95.8
Buy4(<88)	Time		Buy4		Buy4		Buy4	
	price		(<86)		(<90)		(<89)	
Sell	Time	2021/10/10		2021/8/24		2021/12/16	Sell	2019/3/5
	price	133.2	Sell(>130)	133.3	Sell(>130)	130.75	(>130)	132.5
lowest price	103.6		92.6		99.95		90	
maximum drawdown	-3.45%		-3.49%		-6.4%		-6.05%	
Operating margin	24.14%		38.93%		22.44%		38.31%	
Annualized profit	19.26%		71.23%		19.36%		69.63%	
Name	Penghui Convertible bonds		Linggang Convertible bonds		Zhengbang Convertible bonds		Nanshan Convertible bonds	
<b>Straight bonds value</b>	96		100		97.8		99	
level	AA		AA		AA		AA	
Buy1(<105.6)	Time	2021/3/9	Buy1	2020/9/9	Buy1	2021/5/24	Buy1	2008/6/12
	price	105.1	(<110)	105.5	(<107)	107	(<108)	104
Buy2(<102)	Time		Buy2		Buy2	2021/6/18	Buy2	2008/8/5
	price		(<105)		(<102)	102.57	(<102)	99.9
Buy3(<96)	Time		Buy3	2021/1/8	Buy3		Buy3	2008/9/25
	price		(<100)	99.1	(<98)		(<99)	94.6
Buy4(<85.4)	Time		Buy4	2021/2/3	Buy4		Buy4	2008/10/27
	price		(<90)	89.9	(<88)		(<90)	88.49
Sell(>130)	Time	2021/7/9	Sell(>130)	2021/8/16	Sell(financial risk)	2022/2/7	Sell	2009/5/4
	price	136.3	)	131.5		106.1	(>130)	131.95
lowest price	103.5		89.6		100.55		83	
maximum drawdown	-1.52%		-0.1343915		-4.04%		-14.21%	
Operating margin	29.69%		33.96%		1.25%		36.39%	
Annualized profit	117.65%		51.27%		1.86%		55.46%	

## 5. Conclusion

The data in this table is derived from the review of Wind Information. It can be seen from the above table that the maximum drawdown of Nanshan convertible bonds is around 14%, most of which are around 5%. The average holding time is around November, and the annual profit rate is over 19%. Generally meet financial risk to sell, the annual profit rate is not high or even loss, but this situation is relatively rare. With the expansion of data samples, there will be a certain difference in the number of Convertible bonds purchased each time. It can be shown qualitatively and quantitatively that this kind of investment method has a small retracement and can obtain higher investment returns. It is highly likely for convertible bonds to rise to 130 yuan. Buying and waiting for the rise to 130 yuan on the first day of listing can obtain higher investment returns. It is highly likely for convertible bonds to rise to 130 yuan. Buying and waiting for the rise to 130 yuan on the first day of listing can obtain higher investment returns. Through the portfolio of convertible bonds in different industries, the position can be well controlled and the investment risks can be controlled within the tolerable range. In this process, the possibility of principal loss is not very high, and a certain amount of time cost is needed. For investors with low time cost, it is an investment method with both offense and defense.

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