

Practical Meaning of Developing Warrant In China Security Market

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Abstract

In all the finance innovations, warrant and its finance relative product will be the new direction. Warrant has the lower risk compared with others, and there is a large quantity of demand for it. In our inland security market, the condition for developing other finance product, such as stock futures and stock option is not mature, so it is a smart choice to choose warrant at first. Warrant is safe, efficient and possible choice. It is propitious to connect with the international market, to provide a new financial tool to investor, to active the market exchange; meanwhile to improve the competition ability of security companies in the international market.

Keywords: Warrant, Practical Meaning, China Security Market

1. Background

1.1 Definition

Generally speaking, warrant is a type of security voucher, which the publisher issues and the holds have rights to buy and sell the specific number security with a given price and in a specific period. The strict definition is that warrant publisher sell the stock buying rights to investors, in other words, the warrant holder has the right (not obligation) to buy a number of stock in the valid period and with the promissory price, and warrant publisher has to give the stock to the holder without any condition. It is a kind of call stock option essentially. In this paper, warrant is the later one if there is no explanation.

1.2 Classification of warrant

With the fast development of multiple innovations, it is the same like other finance products; the sort of warrant becomes multiple. We only introduce some main labels in this paper.

(1) According to the different main publishers, it could be divided into two kinds: Equity warrant and covered warrant. Equity warrant is published by asset publisher (normally it is listed company), the holder has the right to buy stock in the fixed period and with the promissory price from the list company, and the list company has to issue stock to the holder. Covered warrant is based on the exist stock, the stock is not new and has floated in the market, publisher must have the underlying stock and hold as guaranty, and the warrant will be kept by the independent assignee. Covered warrant publisher is normally the security company, investment bank, and it is a high requirement for publisher's financing and the ability to resist the risk.

(2) According to the right content, it could be divided into put warrant and call warrant. Put warrant is a selling right: warrant holder has the right to sell the underlying asset under the fixed condition: fixed number, fixed period and the fixed price. Call warrant is a buying right: warrant holder has the right to buy the underlying asset under the fixed condition: fixed number, fixed period and the fixed price. Call warrant is a buying option, the proverb in Hong Kong is "friend turn"; on the contrary, put warrant is a put option, the proverb in Hong Kong is "light turn".

1.3 The development history

Warrant first appeared in the U.S.A, and the first issuer date was 1911 by the American Lights and Energy Company. In 1930s', warrant had been a financing tool to raise money in company's merge and acquisition in USA. In 1960s', bond with warrant was popular in American Company. And in 1980s', the bond with warrant which was published by Japanese company was fashionable in Europe. It took an important role in oversea financing for Japanese company. Then, the company in Europe and Asia started to adopt this financing tool. Among this, Hong Kong market has become the largest covered warrant market all over the world. At this moment, warrant has been the most popular in the emerging security market. Nearly all the security market own warrant trading except Chinese inland. According to the data from WFE, among the 56 member exchanges, there are at least 42 exchanges which set up different warrant products.

1.4 The development history in oversea market

Warrant is more developed in Europe market and Asian-Pacific market, and the size in America is not large because option had been recognized and accepted by most investors. Frankfurt is representative in Europe market, warrant increased fast from 1999 to 2001, there are 10956, 16841 and 23133 kinds of new warrants which came into the market in the three years, and the covered warrant is in the majority. Warrant exchange separately occupies 1.8%, 1.2% and 2.4% in the market exchange. Hong Kong had 291 types warrant by the end of 2000, and worth 16000000000 HK\$. The proportion warrant exchange took in the total market exchange is larger than both New York security exchange and Taiwan security exchange.

At the beginning of 1980's, the warrant issued in Hong Kong is normally with company bond, and the main purpose is for money collection. In 1990's, the covered warrant is brought in by the foreign institutions and developed fast. In the Hong Kong market, the warrant trade is quite active. According to the statistics from KBC, Hong Kong warrant market is the first all over the world. The number of warrants which came into Hong Kong market is 1262, and increased 86% compared with the number in 2003, and it is the new record in the history. Warrant market becomes more and more important in Hong Kong investment market. In 2004, the day average exchange in the whole year is 15.9 billion HK\$, and it increased 53% compared with 10400000000 HK\$ in 2003. The increase in the warrant market speeds over the whole market. The day average exchange is about 2.08 billion HK\$ in 2004, the proportion increases at least 91%, which is more than 1.08 billion HK\$ in 2003. The average for daily warrant exchange occupies 13.1% in the whole market; the highest exchange in one day takes 25.1%. With the requirement for warrant, other relative products come up. It brings the whole Hong Kong market to a new level, and establishes its unique status in the whole Asian-Pacific area.

From the warrant development history in Taiwan, during the period 1996-1997, foreign investors published the warrant out of Taiwan of which Taiwan stock is underlying. With the purpose of strengthening competition ability and satisfying the requirement, Taiwan security exchange started to develop warrant. The warrant market in Taiwan develops by referring the development experience in Hong Kong fully. So from the very beginning, the stock warrant was abandoned, and only covered warrant was issued. The development did not go on wheels in Taiwan warrant market from the first issue in 1978. In the early open days, the security market was bullish in Taiwan, so investors scramble for issuing security. In the Asian Financing Crisis, Taiwan was affected seriously, nearly all the warrant went down to the lowest, and as a result, investors were not confident in this financing tool. In 1999, stock market renewed, warrant market started to act again. In 2003, there are 19 publishers issued 321 warrants totally, and it was two times compared with 100 warrants in 2002; the issue sum increased from 12.149 billion (in Taiwan \$) in 2002 to 30.984 billion Taiwan\$. For the present moment, warrant has been the main approach for developing new finance product in Taiwan.

2. The possibility for developing warrant in China

2.1 The market becomes perfect gradually

Dr. Barclay and Mr. Noll (The Creation of Equity Derivative markets: Learning from Experience) research on the derivative market, the investigation result is that the dimension of the derivative market could be the criterion for scaling the derivative market. Stock market develops perfect, and it could be considered as the physical function for developing warrant. First, the proportion security sum takes in GDP goes up year by year. The proportion has increased from 2.93% in 1992 to more than 40% in 2003 and the trend still last and develops. There is a potential requirement for using the derivative product to control the risk in a developing stock market. Secondly, it is necessary to analyze the exchange need for developing the derivative product, the manpower resource and the investment, and a basic market is required. The market size could be from about 30000000000 US\$ to 4400000000000\$ if conclude from the covered warrant market, e.g. the market size for developing covered warrant in Taiwan is 280000000000 US\$, and now in our security market, the merchandise market size is around 500000000000US\$, it is enough to set up the warrant market.

2.2 The supervise and management system is perfect, the level improves much

The canonical operation and the high management level in our security market proved a firm foundation in building a warrant market. And in recent years, a series of law and code come up, and it forms a self-contained law system, the three-level management system becomes much better and perfect. This three-level contains the follows: the government's and regulations legally, the self-control in the industry, and self-management in the exchanges.

2.3 Exchange medium and the technology condition are provided

Shanghai and Shenzhen security exchange adopt a suit of system to develop them which contains security trusteeship without paper, intangible trade model, dynamic and real time exchange regulation system and an

efficient information-spreading system. Advanced technology systems decline the market operational cost but improve the market efficiency. The high-automatically exchange supervise system regulation the security exchange in real time and analyze after the exchange, then the system will remind and alarm if there is a unwonted wave or exquisite exchange action, find and deal with the potential risky exchange, and maintenance the exchange order in the market. All these provide a nicer foundation for the exchange warrant.

2.4 The mature experience from other countries, the experiment in the early time

In the developed countries such as the security exchanges in America, England, Germany, especially CBOE, they have rich experiences in stock option market, so many new security markets such as Singapore, Hong Kong also provide the stock option and warrant markets which suit themselves much. All the successful experiences from other exchanges could help us to set up the warrant market in a high level. In our security history, there was a warrant exchange in a small scale, for example, Bao'an warrant issued in 1992, the allotment warrant issued in 1990's and so on. Although the early warrants were not that satisfied, they still provided the practical experience on issue, list, exchange and regulation. Besides this, there were some institutions made a basic explore on issuing warrant, e.g. Junan security applied to issue Shen Fazhan-Junan 96 covered warrant in 1994, the bench bank of ICBC in Shenzhen applied to issue "Shenzhen ICBC treasury covered warrant" in 1994. Although it can not be issued for several reasons, the principal parts had made a deep research on the covered warrant, and it accumulates rich experience in setting up covered warrant.

3. The effect and meaning to investor

3.1 The jam for the investor in china

According to the security law, stock could only exchange in spot transaction, and fictitious transaction is forbidden. So stock exchange mechanism in China is unilateral call mechanism, and investors can only earn money when the price goes up, so it is a typical "unilateral market". It may spur the investors over invest or arose short-term behavior, and the market will be in the "call" condition, so it had no choice but to keep on going up. However, the stock index went down when it arrived at the highest in 2001, and 45% had fell down. In the stock market, the failure investors have increased to 90% from previous 80%, and it is nearly bosh that the investors can share the stock development. So the investors do need a new investment tool to change their present trouble.

3.2 Warrant provides investor a new tool for avoiding risk and investment

Warrant can be used for avoiding risk. If the investor has some stock and the price was forecasted to go up, but there still some worries on the wrong, so to avoid the went down risk, the investor can buy a sold warrant with little money. When the underlying stock go down, his gained from the warrant can make up the lost in the fall. When the price goes up, the spot transaction had gained, and the loss is only the money which used to buy the warrant.

Warrant can be used to lock payoff. Just suppose that investor hold S stock and the price had gone to 90 from 80 Yuan, and the payoff is over 10%. There is still a good trend in the mid-long investment, but the investor is worried about the adjustment in the short line. So at this moment, the investor could sell the S stock in the price 90, and buy warrant with the price 5. Even though the price fell in the market, the most losing for investor is the cost for buying warrant--5. But locking the payoff comes true. If the stock still goes up, the warrant the investor has could gain the payoff from the long-term investment.

First of all, the investment consultation institution should have the ability to provide warrant consultation, besides, with the development of covered warrant product, it is propitious to the security businessman in china and training the person with ability in the institution; meanwhile improve the skill on risk management. Secondly, for the investor, there is still risk if invest in warrant. Warrant fluctuates much more over the stock market, if warrant is still out of the price when the deadline comes, then warrant won't be implemented. The cost invested on warrant will be lost. It is quite complicated to analyze warrant value, because it requests that investor should improve the ability on analyzing risk perpetually.

From figure1, we can see directly an obvious advantage in investing warrant: the lost is fixed up (warrant money), and from the theoretical view, the income may be infinite. It shows the leverage avail in warrant. If the real stock price is lower than warrant price, the embedded value of warrant is zero, and investor will lose all the warrant cost. So buying warrant is a kind of high lever in stock investment, and investor could against others by buying warrant. The leverage in warrant is decided by its specialty.

The payoff model in the past is: buy the stock-the price goes up-sell the stock, and gain the income. When the stock market goes up, then investor can get the payoff only. Warrant could provide a flexible and abundant investment plan to the investor. The investment risk can be control well from the risk estimated angle, and the base line for the investment losing is the warrant price. Especially after developing warrant, the investor could still gain the payoff

even if the price keeps fall down, and this increase the new model for payoff.

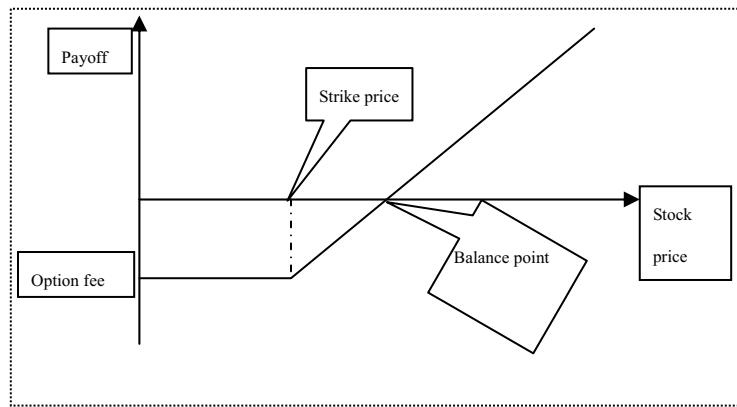


Figure 1. Leverage Principle of Warrant

4. The effect and meaning to the warrant issuer

4.1 Meaning to the listed company

Warrant can be seen as a new way to finance for the listed company. The listed company can gain capital by issuing warrant; on the other hand, the capital collected could arrive by stages by issuing warrant in different time. Besides, if the stock price goes up, then investor could use his subscribe exertion so that the listed company can raise funds successfully by the market mechanism.

The financing cost on raising money on warrant is lower than the cost for bond. Warrant can attract investor and reduce the cost. Because if the investor get warrant, then company can negotiate with the investor or consignee when it issue bond or preference bond, so the company will gain the benefit of the low finance cost and the loose proviso. Especially for the corporation who had got a number of owes already, it is always to charged with the increased capital cost if it issues new bond or preference stock. Company can issue new bond or preference stock with attaching warrant so that it can issue without paying a high marginal cost.

Warrant can improve the company governance efficient. Manager’s incentive and restrictive problem could be describing as follow (use the information economic analyze framework): as the client, shareholder wants the manage (attorney) to act for his own benefit goal. Hemmer Kim Verecehia(2000) had proved that the optimization incentive contract is consisted with three parts when manager’s utility function is power function, and the relative risk aversion is 0.5. The three parts are as follow: a fixed income, a part which is relative with the stock price line and a part that income is the incentive part in the stock price increase function. The fixed income is the cash income which is not relative with stock price; the second part is mainly the stock holder in governors. The last part is the income the manager got is a function in the stock price increase. In other words, if the incentive contract evaluated by the stock price can arrive at the preference level, it must contain an incentive element which had protruded characteristic, so the contract is satisfied the request. Although there is a lot of incentive means that contain protrudes, the result in the real demonstration is management warrant. When issue warrant to the manager and connect the manager’s private income with company’s long-term benefit, the manager have not only to take care of the present, but also the company’s future. The theoretical logic is:

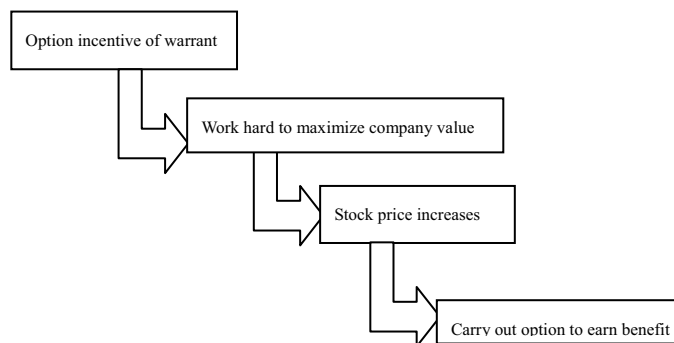


Figure 2. Incentive Logic of Warrant

There out, the manager's maximum private income had combined with the company's maximum value successfully, therefore it formed a commutative dependence between the two, which ensure the high efficient and benefit in financing decision and implementation.

4.2 Meaning for security company management

Covered warrant provides finance institute, especially the security consignee a good chance to explore operation, and it helps to change the simple variety in security business, and then increase the income source. It contains: (1) It helps to increase the issue and the consign operation. Because the issue price for covered warrant is lower, the occupied capital is limited if there is exclusive selling condition; meanwhile, the lower price decides the limited fall space, thus the losing for the fall is limited; (2) extending covered warrant is helpful to act the security market, improve the fluidity in the market, explore the exchange in the market, so that increase the manage income; (3) increase the self-support income, meanwhile to use it as a tool to avoid risk, elude investment risk, reduce the possible lose in self-support.

In our security market, the single investment variety has existed for a long time, and there isn't any facility to avoid risk, the only way for the investor is to follow the change in exchanges, and warrant issuer is the amplitude exchanger but not the in directional exchanger. The amplitude is very important for the issuer, and warrant can be considered as a kind of anticipant amplitude. Warrant issuer is double win in academic view.

The most important meaning for institute investor is the lighten security risk. Warrant is the best choice for dealing the risk of falling price, because it allows the holder to sell the stock with the appointed price, and it is advantaged for the holder who holds large number of stocks. The security businessman could also reduce his losing by issuing warrant.

As an important instrument for gaining operation, the security businessman still needs to issue security by exclusive selling balance. As a result, consignee might be forced to have exclusive selling balance. For solving the above problem, it is possible to allow security businessman to issue covered warrant which the exclusive balance has to be under lied. By issuing covered warrant, the security businessman could get the income for issuing warrant; it may abate the capital pressure that is from the exclusive selling; on the other hand, the held stock switched to monetary asset, it could be considered as collecting money and improving the fluidity. Security Company, as the warrant issuer, only needs to help the list company to issue warrant, whether the warrant holder implement warrant or not is not relative with Security Company. It is helpful to relax the risk from exclusive selling and the capital pressure.

5. The effect and meaning on the function and configuration of the security market

5.1 The microcosmic meaning for Chinese security market

The microcosmic configuration is an organic composing part in the exchange function, the microcosmic configuration in the second market will affect the price volatility, fluidity and potential investment and exchange amount. There are three main problems at present, the first is the low exchange fluidity; the second is lack of price finding function, the last is inefficient resource configured. The present condition increases the volatility in the whole market.

According to the reference from abroad, most of the research showed that option stock market might reduce the volatility in stock market. Option exchange open out the future exchange information, and the incentive for the new information increase, so the volatility for underlying stock will narrow. Nathan Associates (1974) researched on the 16 option warrant in CBOE, and he found that option warrant can stabilize the underlying stock. This result is proved by others later. The demonstration research from Haddad and Voorheis (1991), Detemple and Selden (1991), Skinner (1989), Damodaran and Lim (1991) show that, the volatility of underlying stock reduced after the option warrant coming into market. It does not only exist in America, but also be proved in England, Canada, Switzerland and Sweden.

The economist from oversea had explained the effect on the stock price. Ross (1976) first pointed out that the option market could add the market integrality, and the risk the investor faces could reduce, so the requested return will reduce, as a result, the price for underlying stock will go up; next, Harris and Gurel (1986) thing that if one part do not like to exchange in the market, then the other part must finish the exchange with a higher cost, it is called price pressure hypothesis; thirdly, according to the incomplete replacement proposed by Conrad (1989), the unacceptance for using other stocks as the avoiding risk will result on the request for the underlying stock and price goes up; fourth, Detemple and Selden (1991) pointed out under the GEM of single period, when the risk aversion investor and the risk preference investor have the same function, extending the option can force the stock price going up, and the volatility of underlying stock price reduce. At last, Chan and Wei (2001) think that the issuer behavior on avoiding risk, the behavior on controlling the stock price for a high reward and the feedback on issuer behavior are the main

three reasons to force the underlying stock price going up with the warrant issue.

The proved conclusion from oversea market had showed that warrant is valid for improving the underlying stock fluidity, and is helpful to activate the underlying stock exchange. When the investors carry out warrant, the underlying stock will move and float and this could solve some problems in the market. For the institutions who issue the covered warrant, it will do business in the underlying stock market for reducing the risk. It could also change the downturn condition in the market. The better the market condition is, the better the security market operation may works.

5.2 Perfect the market configuration and operation, decrease the finance risk

It is necessary to change the market operation from single financing operation to multiple operations, such as investment, risk management, preference combination and so on. Warrant may help the security market to finish the work. On the other hand, warrant could help us to perfect the exchange policy, and a short mechanism should be set up by the finance relative product. But it is quite difficult to extent it at this very moment in the security market, so we could use the finance relative product as an assistant, and then the risk can be avoided efficient.

Warrant has some price finding capability. Zhou Xingyi(1999) showed by researching Taiwan warrant market that warrant has price finding function, because option market has advantage on some aspect, new information can be reflected on the option price. Manaster and Rendleman (1982) analyzed daily closed price from April 1973 to June 1976, they find that option closed price includes some information which is not reflected in stock price.

After introducing warrant in refinancing, issuer will do their best to improve management quality to raise arranged capital. So we think warrant can make listed company assume some financing risk, restrain cheating trap. In addition to, those good quality listed company may introduce warrant to send signal to market, thus distinguish it with other listed company. So, warrant can bring screening function to play. Warrant can increase attraction of high-tech Company financing, provide convenience to high-tech small and medium enterprise.

5.3 In favor of opening and internationalization

Numerous derivatives are complex in pricing and risk-avoiding, so knowing derivatives well needs a procedure. Warrant is a fundamental instrument; many derivatives are devised on the base of warrant. So warrant is the first step to develop derivatives, developing warrant as soon as possible is advantageous to both security's company and investor.

Warrant possesses forward, leverage, arbitrage and hedging function, so it is a suitable choice to introduce complex investment instrument to China market. At suitable time, developing warrant is in favor of increasing competitive capability and promoting internationalization.

6. The risk of warrant and avoiding

6.1 Investment risk of warrant

Investment risk of warrant mainly includes several aspects below: (1) credit risk. If warrant holder asks to balance the position, issuer has difficulty in finance, so investors confront credit risk. (2) price manipulated risk. It includes manipulating both underlying stock price and warrant price. (3) Missing expired time risk. If investors can not carry out warrant, then warrant will be cancelled. (4) out-of-the-money risk. If warrant lies in the out-of-the-money situations, the warrant will count for nothing. (5) Time risk. With maturity of warrant, its time value will decrease rapidly.

6.2 Influence and meaning to regulation

Issuing and trading warrant need relevant regulation and law. In the first, there must be a set of regulations, which should stipulate warrant's attribute, intention, issuing mode and trading rule. At the same time, regulation department should designate special institution to be charged with concrete function, which includes credit inquisition, evaluating issuing scheme, regulating market risk, and controlling exerting phase.

6.3 Influence and meaning to exchange

If issuer is appropriate for various conditions stipulating by institution in charge, then he may apply for trading his warrant. At the moment, exchange should censor going market, which mainly includes going market standard, risk management etc. In addition, after warrant goes market, exchange regulation department need regulate and control according to relevant provision.

7. Conclusion

"Nine articles" requests to develop company bond market actively and reliably; research and explore new variety and its derivative product, which correlate with stock and bond; explore the security product which are low risky

and fixed income liking, so it could provide the investor a safe security variety. In all the finance innovations, warrant and its finance relative product will be the new direction. Warrant has the lower risk compared with others, and there is a large quantity of demand for it. In our inland security market, the condition for developing other finance product, such as stock futures and stock option is not mature, so it is a smart choice to choose warrant at first. Warrant is safe, efficient and possible choice. It is propitious to connect with the international market, to provide a new financial tool to investor, to active the market exchange; meanwhile to improve the competition ability of security companies in the international market.

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