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Course Guide

PRODUCT SPECIFIC TRAINING: WARRANTS

Visio Capital ©

August 2018 2018

Course summary

The course is intended to provide product specific training for representatives registered in the Category I: warrants, certificates and other instruments acknowledging debt.

Time allotted for course

The course consists of 6 topics with an assessment that needs to be completed. The time allotted for each aspect is as follows:

Topic number	Title	Number of pages to read	Topic level	Time allotted
Topic 1	Warrants defined	4	Introductory	20 minutes
Topic 2	Types of warrants	4	Introductory	20 minutes
Topic 3	Pricing of warrants	3	Introductory	15 minutes
Topic 4	Warrants in the equity market	1	Introductory	5 minutes
Topic 5	Warrants in the commodity market	5	Introductory	25 minutes
Topic 6	Warrants in the currency market	4	Introductory	20 minutes
	Assessment			60 minutes
	Total time			2.75 hours

Assessment and certification

After completion of the workshop the learner must complete an electronic assessment on the learning management system.

- **Form of assessment:** Multiple Choice Questions
- **Number of questions:** 10 questions
- **Duration:** 1 hour
- **Competency mark:** 70%

Upon obtaining a competency mark of 70% the learning will receive a certificate of completion. The learner will be afforded an opportunity to re-do the workshop should a competency mark not be attained.

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TOPIC 1 WARRANTS DEFINED

1.1 Introduction

Warrants are a derivative that give the right, but not the obligation, to buy or sell a security—most commonly an equity—at a certain price before expiration.

Warrants are in many ways similar to options, but a few key differences distinguish them. Warrants are generally issued by the company itself, not a third party. In other words, Warrants are issued by companies, while exchange-traded options are listed by an exchange.

Warrants also have much longer expiration periods than options.

Unlike options, warrants are dilutive. When an investor exercises their warrant, they receive newly issued shares, rather than already-outstanding shares. Warrants tend to have much longer periods between issue and expiration than options, of years rather than months.

Warrants do not pay dividends or come with voting rights. Investors are attracted to warrants as a means of leveraging their positions in a security, hedging against downside (for example, by combining a put warrant with a long position in the underlying stock) or exploiting arbitrage opportunities.

1.2 The warrant market in South Africa

Warrants are incredibly popular internationally, having been traded in top European and Asian financial markets since the early 1990s. Top warrant markets include Germany, Switzerland, Italy, Australia, Hong Kong and the United Kingdom. The South African warrants market has grown exponentially over the past few years.

Warrants in South Africa are mostly traded on-exchange. All the major banks act as market makers in warrants. Standard Bank's Online Share Trading Platform is a very efficient broker platform, offering many benefits for warrant traders.

To allow investors to gauge the impact of changes of the underlying on the warrant, the banks publishes the prices at which it makes its markets on a pricing matrix which is accessible from the website or via email subscription (sign up on the website).

Market makers keep the market running efficiently by continuously quoting both bid (buy) and offer (sell) prices in their warrants as per the matrix and this adds liquidity to the market ensuring that warrant traders are able to efficiently enter and exit positions.

The different series of warrants can be identified by their JSE Limited codes. This is an example of a code, with an explanation of what each part of the code stands for.



Same as the three letter JSE Limited code for the underlying share, for example Anglo American



Issuer code: SB denotes Standard Bank



A-O Indicates call warrants listed over the underlying shares.

P-Z Indicates put warrants listed over the underlying shares

The following is a list of warrant issuers in South Africa:

- ABSA Capital
- Deutsche Bank AG
- Investec Bank Limited
- Nedbank Limited
- Standard Bank of South Africa

1.3 Investment fees

Warrants are bought and sold via a broker as they are traded in the same manner as any other security listed on the JSE. Investing through a stockbroker requires opening a trading account with a stockbroker (refer to the JSE website for a list of brokers).

All transactions are subject to:

- Brokerage fees
- Settlement fees (Strate)
- Investor Protection Levies
- Custodian or administrative fees (where applicable)
- VAT (where applicable)

1.4 Warrant terminology

The following terminology are used in warrants:

- Call warrant: Gives buyer the right to buy underlying.
- Put warrant: Gives buyer the right to sell underlying.
- Exercise / strike price: Specified price at which underlying can be bought or sold.
- Exercise warrant: To put into effect the right to buy or sell.
- Premium: Price paid by the buyer to sell for warrant.
- An uncovered or naked short call is: The writer does not have a position in the underlying instrument, i.e. is not holding the underlying instrument in portfolio.
- Covered short call: Where the writer does have a matching position in the underlying asset, he is covered.

1.5 Features of warrants

The following are features of warrants:

- Allow investors to benefit, whether asset prices are climbing or falling.
- The most an investor can lose from investing in a Warrant is the initial price paid for the Warrant.
- Warrants give investors exposure to a wide variety of asset classes.
- Warrants are highly liquid.
- Buying a Warrant from a particular issuer implies that you are taking on the credit risk of that issuer.
- The prices of Warrants move with those of the underlying assets and are subject to market risk because of social and economic unpredictability.
- The value of Warrants can be more volatile than the value of the underlying instrument.

The risks associated with warrants are price risk and credit risk.

Price risk is limited to the premium.

While settlement is guaranteed by the JSE, the holder takes on credit risk because the counterparty to the deal is the issuer.

As seen, these are the larger banks; as such credit risk is deemed to be small.

1.6 Advantages of warrants

Warrants has the following advantages:

- Warrants enable investors to trade on the JSE Limited with the same ease as trading ordinary shares.
- Warrants offer a low-cost entry into blue chip shares.
- There is potential to leverage or gear up your investment.
- Your risk is limited to the initial premium (price of the warrant) paid.
- Warrants have the transparency of a listed instrument.
- Small investors can short the market or hedge their portfolios using put warrants and so profit from falls in the market.
- The warrants market is extremely liquid, as the issuer is required to provide both bids and offers.
- Warrants are an extremely cheap instrument to trade with no STT tax and flat brokerage

1.7 Suitability of warrants

Warrants are suitable for the following investors:

- Investors wanting to gain geared exposure to the price movements of underlying assets.
- Investors wanting to protect existing portfolios against adverse price movements can use Call Warrants when they believe the price of an underlying asset will increase and Put Warrants when they believe it will decrease.

TOPIC 2 TYPES OF WARRANTS

2.1 Categories of warrants

Warrants can be divided into two basic categories namely call and put warrants. A call warrant gives the holder the right (but not the obligation) to purchase an underlying security at an agreed price while a put warrant gives the holder the right (but not the obligation) to sell an underlying security at an agreed price.

Warrants can also be categorised according to their 'style' which can either be "American" or "European". American style warrants allow the holder to exercise the warrant at any time between listing and the expiry date whereas with European style the warrant may only be exercised on the date of expiration.

The sections following consider the different types of warrants briefly.

2.2 Single Equity Warrants (Vanilla Warrants)

They allow investors to buy (call) or sell (put) an underlying Share at a predetermined price on or before a specified date.

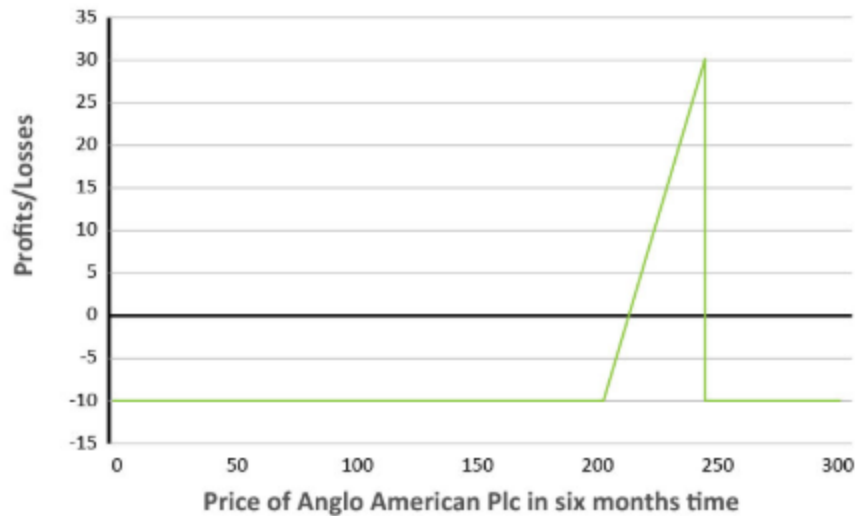
2.3 Basket Warrants

Basket Warrants are very similar to Vanilla Warrants except that the underlying asset comprises Shares from a group of different companies. The companies concerned often carry out similar activities, for instance mining or transportation.

2.4 Barrier Warrants

Barrier Warrants are similar to Vanilla Warrants except that they have a barrier level. If the price of the underlying asset breaks this level, the Warrant becomes worthless and holds no further rights to the holder of the Warrant.

The graph below shows the payoff profile for a barrier call warrant.



2.5 Bond Warrants

Bond Warrants are very similar to Vanilla Warrants except that the underlying asset is not a Share, but a Bond. This warrant-type does not exist in South Africa.

When a bond warrant (call option) is exercised, this leads to the issuer issuing new bonds.

The term to expiry of bond warrants (call options), unlike normal options, is long, sometimes running for many years. The underlying bond also has a long term to maturity, usually 10 years or longer.

2.6 Bond warrants: retail options

In South Africa, however, the term “bond warrant” refers to ordinary options on specific bonds, but they are retail options, i.e. the denominations are small.

A call does not lead to the issue of new bonds.

The issuer of bond warrants is an entity, usually a bank, which is not associated with the issuer of the underlying bond.

Bond warrants are listed on the JSE and are traded and settled with members of the JSE.

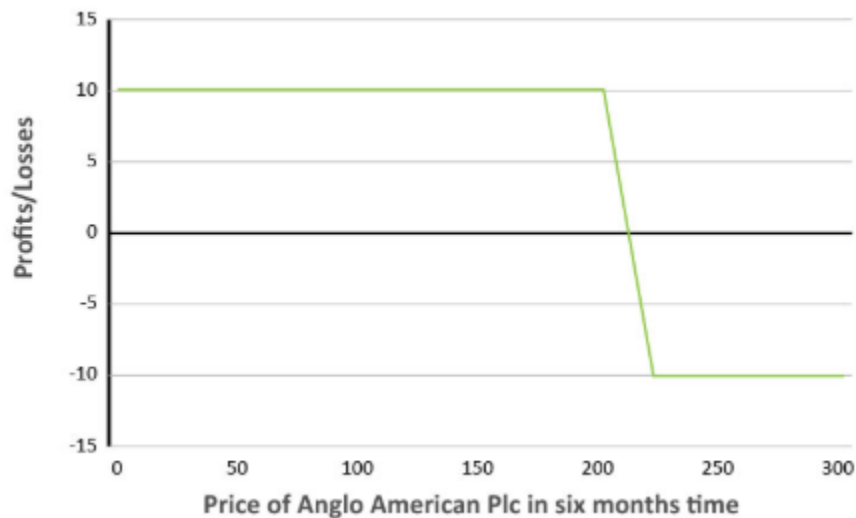
2.7 Index Warrants

Index Warrants are very similar to Vanilla Warrants except that the underlying asset is not a Share but an Index. An Index Warrant is settled by cash payment, calculated using an index multiplier assigned by the issuer when the Warrant is first issued.

2.8 Discount Warrants

Discount Warrants allow investors to gain exposure to an underlying asset at a lower cost than that of Vanilla Warrants. Investors are able to pay less for these Warrants because, with Discount Warrants, the potential profit is limited compared with that of the more conventional Call and Put Warrants.

The graph below shows the payoff profile for a discount put warrant.



2.9 Capital Protection Warrants

Capital Protection Warrants give the holder a guaranteed return. These Warrants are in essence a combination of Warrants (Single Equity warrants, Index Warrants and so on) and a risk-free investment.

2.10 Currency Reference Warrants

Currency Reference warrants give the holder exposure to the underlying exchange rate.

2.11 Commodity Reference Warrants

Commodity Reference Warrants give the holder exposure to price movements in the underlying commodity.

2.12 Reset Warrants

Reset Warrants differ from Vanilla Warrants in that they have a pre-determined reset date on which the strike price of the Warrant could be changed in the investor's favour. This increases the probability of the Warrant ending in the money and effectively gives the investor a second chance when an anticipated move in the underlying asset does not occur as initially expected. After the reset date, Reset Warrants behave like Vanilla Warrants.

TOPIC 3 PRICING OF WARRANTS

3.1 Introduction

There are various methods (models) of evaluation available to value warrants theoretically, including the Black-Scholes evaluation model.

3.2 Factors influencing the price

The price of Standard Bank warrants is dependent upon the following factors: •

- Underlying share price
- Time to expiry
- Volatility (the market's expectation of future share price variation)
- Interest rates
- Dividend expectations

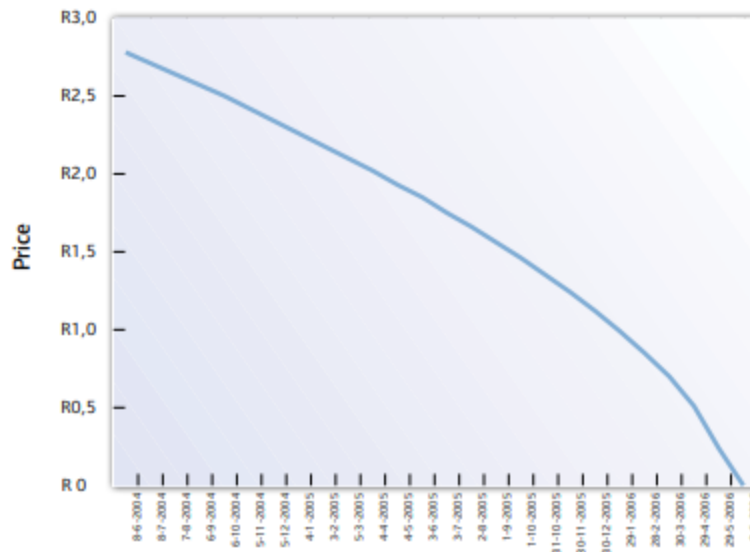
The table below shows the direction (up or down) that the value of call and put warrants will move in response to a change in these market variables in most situations

Market variable	Change in variable	Change in call warrant price	Change in put warrant price
Underlying price	↑	↑	↓
Time to expiry	↓	↓	↓
Volatility	↑	↑	↑
Interest rates	↑	↑	↓
Dividends and expectations	↑	↑	↑

3.3 Share price

The sensitivity of a warrant to a change in the underlying price is called the delta. It gives the relative change in the price of a warrant for a 1% change in the underlying. When dealing with warrants with a conversion ratio of greater than one, remember to divide the delta by the conversion ratio.

The diagram below show the gradual decline of a call warrant over the two year life of the warrant.



In this example, the share price used has remained constant throughout the period at a level equal to the exercise price of the warrant. If the share price was above the exercise price, the value of a call warrant would decay to the intrinsic value at expiry, being the difference between the share price and exercise price, divided by the conversion ratio. For example: If the share price was R105, then the value of a call warrant with a R100 exercise price and a 10:1 conversion ratio would tend towards the intrinsic value of R0,50

3.4 Time to expiry

All warrants lose value with the passage of time. This change, known as theta, is the value per day (expressed in cents) that the warrant price is reduced by. Over the course of a warrant’s life the theta increases and is highest in the last three months of a warrant’s life.

3.5 Dividends expected

Holders of warrants do not receive the dividends paid on the underlying shares. However, the dividend stream is priced into the warrants so that warrant holders aren’t prejudiced in holding warrants over ex-dividend dates.

Warrants do not carry voting rights, nor do they allow the holder of the warrant to participate in rights issues or bonus issues of the underlying share. However, in the case of rights and bonus issues, the terms of Standard Bank warrants are automatically adjusted so that neither the warrant holder nor warrant issuer is disadvantaged by any such dilutions or similar events that affect the underlying share.

Any changes in expected dividends generally have a small impact on the value of the warrants compared with other variables. Generally, when a company announces that it will change its dividend yield there will be a change in the price of a warrant. As a rule of thumb, the higher the dividend yield, the lower the value of a call warrant and the higher the value of a put.

3.6 Interest rates

The sensitivity of a warrant price to short-term variations in interest rates is called the rho. For normal changes in interest rates the impact of rho on the pricing of the warrant is very small.

3.7 Volatility

By definition volatility is a statistical measure of the tendency of a market or security to rise or fall sharply within a short period of time. Volatility is typically calculated by using variance or annualised standard deviation of the price or return.

In layman's terms volatility is a measure of the speed of a market. Slow moving markets have low volatility levels while fast moving markets have high volatility levels. In a low volatility market price movement is limited and warrants will be relatively cheap. While in a high volatility market, the chances for extreme price movement are greater and hence the warrants will be more expensive.

Warrant traders are not just interested in the direction of a market move but also the speed with which it moves. If the market does not move fast enough the warrant will have less value because of the reduced likelihood of the share reaching its strike price by expiry.

TOPIC 4 WARRANTS IN THE EQUITY MARKET

4.1 Equity warrants versus equity options

An equity option is a contract between two people that gives the holder the right, but not the obligation, to buy or sell outstanding stocks at a specific price and at a specific date. An equity warrant is just like an equity option because it gives you the right to buy or sell a company's share at a specific price and at a specific date. However, an equity warrant differs from an option in two key ways:

- An equity warrant is issued by the company itself.
- New shares are issued by the company for the transaction.

Unlike an equity option, an equity warrant is issued directly by the company. When an equity option is exercised, the shares usually are received or given by one investor to another. When an equity warrant is exercised, the shares that fulfill the obligation are not received from another investor, but directly from the company.

Companies issue equity warrants to raise money. When equity options are bought and sold, the company that owns the shares does not receive any money from the transactions. However, an equity warrant is a way for a company to raise money through shares.

An equity warrant is a smart way to own shares of a company because a warrant usually is offered at a price lower than that of an equity option. The longest term for an option is two to three years, while an equity warrant can last for up to 15 years. So, in many cases, an equity warrant can prove to be a better investment than an equity option if for mid-term to long-term investments

4.2 Equity warrants: call options

Internationally equity warrants bestow the right (option) on the holder of the warrant to take up new shares of the relevant company.

These call options are usually long term in duration.

4.3 Equity warrants: retail options

Equity warrants comprise call and put options on specific shares and on certain indices. Equity warrants (retail options) are of the American and European varieties and are listed on the JSE. Equity warrants (retail options) are traded and settled via a stockbroking broker-dealer firm. The warrant issuers make a market in their equity warrants, i.e. quote bid and offer prices (the premium).

TOPIC 5 WARRANTS IN THE COMMODITY MARKET

5.1 Introduction

Commodity reference warrant (CoRW) is a derivative – its value is derived from another underlying asset, in this case a Commodity (Gold, Platinum, Oil, etc). More specifically, its value is based on the change in the Rand price of the underlying Commodity (e.g. R7.50 x \$1,000.00)

CoRWs are available in both calls and puts, allowing investors to take advantage of positive and negative movements in the rand value of the underlying commodity. Depending on the type of warrant traded, the investor has the right but not the obligation to either buy or sell the performance of the rand value of the underlying commodity (e.g. the rand value of the gold price) at a specific rand value (known as the strike price) on a specific date (known as the expiry or maturity date).

A CoRW's intrinsic value is determined from the difference between the rand value of the underlying commodity and the strike price. It is the amount that the warrant is worth if it had to expire on that day. If a CoRW does not have any intrinsic value at maturity, the loss incurred is the initial amount invested (the premium).

CoRWs are cash settled in South African rand which means that no transfer or settlement of foreign currency occurs. CoRWs cannot be exercised into the underlying (i.e. physical gold); if they are held to expiry, investors will be paid their intrinsic value, if any. However, CoRWs can be bought and sold throughout their term (i.e. up until expiry), with the warrant issuer acting as the liquidity provider. In other words, CoRWs trade in a liquid secondary market where investors may enter and exit their warrant positions with ease.

The warrant issuer issues CoRWs over a number of commodities and provides both bid (buy) and offer (sell) prices intraday to the market, allowing investors to enter and exit positions throughout the day.

The graph below stipulates how to identify a commodity reference warrant.



5.2 Commodity reference call warrants

Call warrants enable investors to BUY the rand performance of a particular commodity (i.e. the rand value of the commodity) and are therefore suitable for those who believe the underlying rand commodity price will increase.

Holders of call CoRWs are at risk if the underlying commodity price weakens and/or the rand strengthens.

Call warrants are said to be in-the-money if their strike price is lower than the rand value of the underlying commodity.

If a call warrant's strike price is higher than the rand value of the underlying commodity at maturity, the warrant expires worthless and the loss incurred is the amount invested in the warrant.

5.3 Commodity reference put warrants

Inversely, put warrants enable investors to theoretically SELL the rand performance of a particular commodity (i.e. the rand value of the commodity) and are therefore suitable for those who believe the underlying rand commodity price will decrease.

Holders of put CoRWs are at risk if the underlying commodity price strengthens and/or the rand weakens.

Put warrants are said to be in-the-money if their strike price is higher than the Rand value of the underlying commodity.

If a put warrant's strike price is lower than the rand value of the underlying commodity at maturity, the warrant expires worthless and the loss incurred is the amount invested.

5.4 Uses of trading commodity reference warrants

Trading in commodity reference warrants is done to take advantage from the rand price of a commodity to take advantage of the view of where value of the rand of a specific commodity will be trading in the future.

Commodity reference warrants can also be used to hedge against adverse movements in commodity price or to diversify the investment portfolio by adding commodity exposure.

5.5 Advantages of trading in commodity reference warrants

The advantages of trading in commodity reference warrants are as follows:

- There is no STT (Securities Transfer Tax) payable.
- No margining process applies as with trading commodity futures and therefore no daily settlement of profits and losses takes place.
- Liquidity is provided by the warrant issuer.
- Geared/leveraged exposure to an underlying exchange rate.

5.6 Risks associated with trading commodity reference warrants

The following are risks associated with trading commodity reference warrants:

- If a warrant expires out-the-money at maturity, it is worthless. The loss is limited to the amount invested (the premium).
- CRWs are geared instruments. This implies that an adverse change in the underlying exchange rate will negatively impact their value by a factor of the percentage change in the underlying.
- A CRW that is far out-the-money and close to expiry is highly geared, which increases the risk of losing the amount invested.

5.7 Restrictions in terms of exchange control regulations

Pension funds and long-term insurance companies who have the required exchange control approval may not exceed 20% of their retail assets when investing in CoRWs.

Asset managers and registered collective investment schemes who have the required exchange control approval may not exceed 30% of their total retail assets under management when investing in CoRWs.

Individuals, foreigners, trusts and entities other than those specified above are not subject to any additional restrictions other than those set out in the warrants documentation.

5.8 Gearing or leverage

CRWs provide investors with leveraged exposure to an exchange rate. This implies that investors are required to pay a small price to purchase the warrant but are exposed to the full value of the underlying. Therefore, a small percentage change in the underlying exchange rate will result in a much greater percentage change in the price or value of the warrant.

Gearing improves the potential profits when trading a warrant. However, an adverse movement in the underlying exchange rate will result in a greater percentage loss in the value of the warrant than the percentage change in the underlying exchange rate.

The gearing indicates the extent to which the warrant will rise or fall if the exchange rates moves by 1%.

$$\text{Gearing} = \frac{\text{Price of underlying rand commodity price}}{\text{Price of commodity warrant} \times \text{conversion ratio}} \times \text{delta}$$

The gearing increases (everything else being equal) as the exchange rate decreases. As the gearing increases, so does the investor's risk.

5.9 Factors influencing the price and valuation of a commodity reference warrant

The factors that influence the price of a commodity reference warrant are as follows:

- **Commodity price** – CoRW prices are linked to the rand value of a specific commodity (e.g. USD/ZAR exchange rate x dollar gold price), so the underlying commodity prices is key to the price of the warrant. If the exchange rate had to remain constant and the underlying commodity price was to increase, the rand value of the underlying commodity would rise and a call warrants' value would thus increase.
- **Exchange rate** – CoRW prices are also linked to the exchange rate due to the underlying being the rand value of the underlying commodity. If the underlying commodity price was to remain constant but the exchange rate (e.g. USD/ZAR) had to weaken, the rand value of the underlying commodity would rise and call warrant's value would thus increase.
- **Time to expiry:** All warrants lose value with the passage of time.

The effect of the variables mentioned above on the price of a call or put CoRW is outlined in the table below.

Market variable	Change in variable	Change in call warrant price	Change in put warrant price
Exchange rate	↑ (rand weakens)	↑	↓
Commodity price	↑	↑	↓
Time to expiry	↓	↓	↓

5.9.1 Intrinsic value

ACRW's intrinsic value is determined from the difference between the underlying exchange rate and the strike price. It is the amount that the warrant is worth if it had to expire on that day. If a CRW does not have any intrinsic value at maturity, the loss incurred is the initial amount invested (the premium).

The intrinsic value of a warrant is determined from the difference between the underlying exchange rate and the strike price. A warrant can't have negative intrinsic value.

$$\begin{aligned} & \textit{Intrinsic value of call warrant} \\ & = \frac{\textit{Rand value of the underlying commodity price} - \textit{Strike}}{\textit{Conversion ratio}} \end{aligned}$$

$$\begin{aligned} & \textit{Intrinsic value of put warrant} \\ & = \frac{\textit{Strike} - \textit{Rand value of the underlying commodity price}}{\textit{Conversion ratio}} \end{aligned}$$

The conversion ratio refers to the number of CRW's that must be converted in relation to the Rand price of one unit of foreign commodity.

TOPIC 6 WARRANTS IN THE CURRENCY MARKET

6.1 Introduction

A currency reference warrant (CRW) is a derivative – its value is derived from another underlying asset, in this case an exchange rate. More specifically, its value is based on the change in the Rand price of one unit of a specified foreign currency.

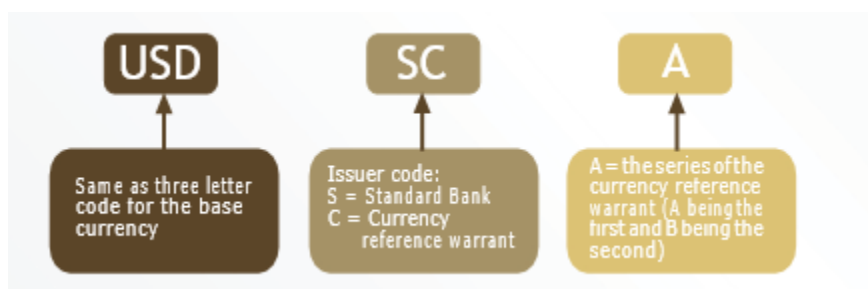
CRWs are available in both calls and puts, allowing investors to take advantage of positive and negative views of the future direction of the South African Rand. Depending on the type of warrant traded, the investor has the right but not the obligation to either buy or sell the performance of the Rand against a specified foreign currency (e.g. the US dollar) at a specific rate (known as the strike price) on a specific date (known as the expiry or maturity date).

CRWs are cash settled in South African Rand which means that no transfer or settlement of foreign currency occurs. CRWs can only be exercised at maturity (European style), at which point investors will be paid their intrinsic value, if any.

However, CRWs can be bought and sold throughout their term (i.e. up until expiry), with warrant issuers acting as the liquidity provider. In other words, CRWs trade in a liquid secondary market where investors may enter and exit their warrant positions with ease.

Warrant issuers CRWs over a number of currency pairs and will provide both bid (buy) and offer (sell) prices intraday to the market, allowing investors to enter and exit positions throughout the day.

Currency reference warrants are identifiable by the codes depicted in the graph below.



Call CRWs will be identifiable by the series A – O, and put CRWs by the series P – Z.

6.2 Currency reference call warrants

Call warrants enable investors to theoretically BUY a particular foreign currency (i.e. SELL the Rand against a particular foreign currency) and are therefore suitable for those who believe the Rand will weaken/depreciate against that foreign currency.

Holders of call CRWs are at risk if the Rand strengthens against the specified foreign currency.

Call warrants are said to be in-the-money if their strike price is lower than the relevant exchange rate as determined by Yield-X at the Expiration Time as the price of the relevant Exchange-Traded Currency Futures Contract at maturity.

If a call warrant's strike price is higher than the relevant exchange rate at maturity, the warrant expires worthless and the loss incurred is the amount invested.

6.3 Currency reference put warrants

Inversely, put warrants enable investors to theoretically SELL a particular foreign currency (i.e. BUY the Rand against a particular foreign currency) and are therefore suitable for those who believe the Rand will strengthen/appreciate against that foreign currency.

Holders of put CRWs are at risk if the Rand weakens against the specified foreign currency.

Put warrants are said to be in-the-money if their strike price is higher than the relevant exchange rate at maturity. The exchange rate is determined by Yield-X at the Expiration Time as the price of the relevant Exchange-Traded Currency Futures Contract.

If a put warrant's strike price is lower than the relevant exchange rate at maturity, the warrant expires worthless and the loss incurred is the amount invested.

6.4 Uses of trading currency reference warrants

Trading in currency reference warrants is done to take advantage from currency fluctuations and to take advantage of the view of where value of the rand will be trading against a foreign currency in the future.

Currency reference warrants can also be used to hedge against adverse movements in the Rand or to diversify the investment portfolio by adding currency exposure

6.5 Advantages of trading in currency reference warrants

The advantages of trading in currency reference warrants are as follows:

- There is no STT (Securities Transfer Tax) payable.
- No margining process applies as with trading currency futures and therefore no daily settlement of profits and losses takes place.
- Liquidity is provided by the warrant issuer.
- Geared/leveraged exposure to an underlying exchange rate.

6.6 Risks associated with trading currency reference warrants

The following are risks associated with trading currency reference warrants:

- If a warrant expires out-the-money at maturity, it is worthless. The loss is limited to the amount invested (the premium).
- CRWs are geared instruments. This implies that an adverse change in the underlying exchange rate will negatively impact their value by a factor of the percentage change in the underlying.
- A CRW that is far out-the-money and close to expiry is highly geared, which increases the risk of losing the amount invested.

6.7 Restrictions in terms of exchange control regulations

Pension Funds and long term insurance companies who have the required Exchange Control approval may not exceed 20% of their retail assets when investing in CRWs.

Asset managers and registered collective investment schemes who have the required Exchange Control approval may not exceed 30% of their total retail assets under management when investing in CRWs.

Individuals, foreigners, trusts and entities other than those specified above are not subject to any additional restrictions other than those set out in the warrants documentation.

6.8 Gearing or leverage

CRWs provide investors with leveraged exposure to an exchange rate. This implies that investors are required to pay a small price to purchase the warrant but are exposed to the full value of the underlying. Therefore, a small percentage change in the underlying exchange rate will result in a much greater percentage change in the price or value of the warrant.

Gearing improves the potential profits when trading a warrant. However, an adverse movement in the underlying exchange rate will result in a greater percentage loss in the value of the warrant than the percentage change in the underlying exchange rate.

The gearing indicates the extent to which the warrant will rise or fall if the exchange rates moves by 1%.

$$\text{Gearing} = \frac{\text{Price of underlying exchange rate}}{\text{Price of currency warrant} \times \text{conversion ratio}} \times \text{delta}$$

The gearing increases (everything else being equal) as the exchange rate decreases. As the gearing increases, so does the investor's risk.

6.9 Factors influencing the price and valuation of a currency reference warrant

The factors that influence the price of a currency reference warrant are the time value and intrinsic value.

The value of put and a call CRW declines as the time to expiry decrease.

ACRW's intrinsic value is determined from the difference between the underlying exchange rate and the strike price. It is the amount that the warrant is worth if it had to expire on that day. If a CRW does not have any intrinsic value at maturity, the loss incurred is the initial amount invested (the premium).

The intrinsic value of a warrant is determined from the difference between the underlying exchange rate and the strike price. A warrant can't have negative intrinsic value.

$$\text{Intrinsic value of call warrant} = \frac{\text{Underlying exchange rate} - \text{Strike}}{\text{Conversion ratio}}$$

$$\text{Intrinsic value of put warrant} = \frac{\text{Strike} - \text{Underlying exchange rate}}{\text{Conversion ratio}}$$

The conversion ratio refers to the number of CRW's that must be converted in relation to the Rand price of one unit of foreign currency.