

Investment basics XXI

Options trading in the gilt-market

Part 1: A background to the market

In early January, gilt traders returning from Christmas holidays were looking forward to some action after a dull December. Long gilt rates were at 15,42% and had been fairly lacklustre for some time. The 400 point bull market of 1986 had left most operators with good profits but 1987 had not been quite so kind. Long dated gilts had traded generally within the 14,50% to 15,50% band with most of the year's activity above 15%. The "common consciousness" in January was that the market would resume a bull trend and rates would drift gently down. Consequently, most of the market's active traders were holding long positions. In the early weeks of January, interest rates rose substantially. The year had not started auspiciously for most. In an attempt to read the "top of the market", traders bought stock at just under 16% and watched helplessly as rates continued to pass through the "so called" 16,20% resistance level like a hot knife through butter. Within a few weeks, long term gilts yields had risen some 180 basis points, representing a potential capital loss of some R70 000 per million nominal stock purchased. Certainly, the buyer had the benefit of running yield but that is little comfort when interest rates rise sharply and has never been one of the better reasons for keeping a long position.

What could a portfolio manager have done to avert this crisis? If he was a visionary, he could have sold his position out before the rise and invested in shorter dated security. He could also have sold short, borrowing the stock every account day until he closed out his position when rates had risen. This is often a cumbersome exercise and there is no guarantee that the stock can be borrowed. Besides, there are still many market participants who fail to grasp how one can sell what one does not own. In all probability he did nothing at all.

The enlightened portfolio manager would have made use of options and would have, at worst, minimised the damage of rising interest rates and, at best, made substantial capital gains.

Options in South Africa are a fairly new financial innovation in fixed interest markets. The market began with over the counter options in the early 1980s. One of the problems of running a gilt position was the absence of hedging mechanisms. Decisions were either right or wrong and if they were wrong, you dropped the stock into the bottom drawer and withdrew until your wounds had healed. We had no such thing as futures with which to insure against the unthinkable possibility that an investment decision may go awry. So, in a rather strange twist to the logical sequence of events, options were introduced in SA ahead of the futures market.

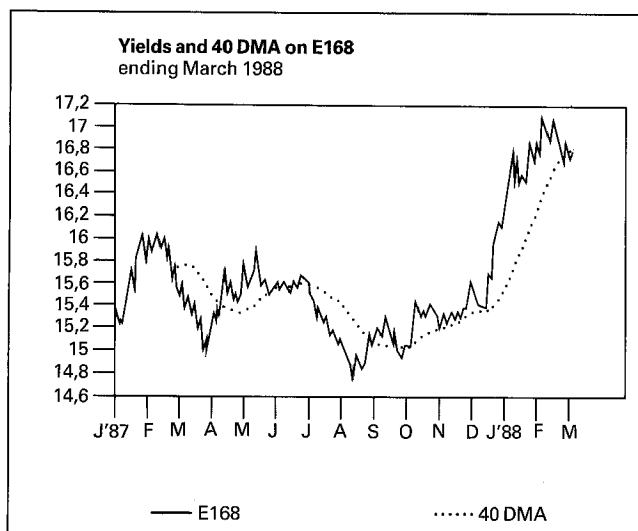
Options are quite simply a right, but not an obligation, to buy or sell a certain stock at a certain price within a certain time frame. The call option gives the holder the right to buy stock and the put option the right to sell stock. The option trades at a price, known as the premium, which takes into account the period of the option and the likelihood of the option being exercised. In other words, the purchaser is paying for time and probability.

The need for some means of insuring against risk was

long overdue in 1983 when over-the-counter (OTC) options made their appearance. Somewhat more cumbersome than their modern standardised counterparts, OTCs involved buyer and seller agreeing on dates, prices and strike rate. In a rapidly moving market it was often difficult to strike a bargain because one or the other party was watching rates move erratically and hoping to squeeze a better deal. The result was a fairly thin and inefficient market. The next step, in August 1987, was the development of a standardised option. This was very much the initiative of Eskom and a group of innovative bankers who, after consulting with interested parties, introduced options on loan 168, maturing on the first Thursday of the following months: February, May, August and November. As one maturity passes, so the next is activated. Another development was to quote the buying and selling prices via the Reuters screen. This meant that traders could display prices and attempt to make a market, thereby greatly increasing liquidity. The market is currently trading for only the nearest two maturity dates, although that may be due in part to the complexities of the Reuter system. The strike rates are fixed and are determined by the level of market rates. They are currently 17%, 16,5% and 16%. The spot rate for Eskom 168 is 16,75% at the time of writing. If that rate were to trade above 17% for five consecutive trading days, then a new strike rate of 17,5% would appear and 16% would come off the quoted screen. Conversely, if the rate were to close below 16,5% for five consecutive days then 17% would disappear and be replaced by 15,5%. Prior to this, there were no strict rules as to how strike rates should be determined with the result that a strong enough vested interest could keep strike rates artificially low if it believed this would prevent spot rates from rising. This happened earlier this year and the result was that the quoted options market bore less and less relevance to the spot market and temporarily lost its liquidity. Meanwhile, participants traded off screen at market related strike rates. It also served as a lesson to the unsophisticated that trying to interfere with natural market forces not only costs money but also affects market credibility. The major advantage of the standardised option is the fixed strike rate and date, leaving only the premium as the variable. Obviously, it is easier to trade an instrument with only one variable, however complex the pricing of that variable may be.

The current situation then, is that we have a standardised option on Eskom 168 which is quoted through Reuters. The option is usually in the form of a bearer negotiable instrument and is transferred by delivery. There is no standardised format for option documents as yet, which ought to be a major cause for concern. Nor are the documents printed on security paper which makes possible forgery a problem. Furthermore, there is no reporting of any sort to the monetary authorities (because they have not asked for the information) so it is impossible to tell what options are in the market at any time, how many have traded and what the major players' exposure is. This is not an ideal situation and the result is that the market is relatively small and trades between institutions that feel comfortable with each other. The

comparative lack of sophistication makes the market attractive in the sense that profitable arbitrage opportunities often arise, but unattractive, particularly to foreign investors, because of the unstructured nature of the market.



The fact that options on other stocks are still traded only on an OTC basis must inhibit their potential. Also, out of four major long dated stocks (R124, SAPO, SAT and Eskom) why should the market choose the E168? The reason is very simple. Although both R124 and SATS have had their day as the market's bell-wether long dated stock, volume on Eskom 168 is about five times the volume of the other stocks every day because Eskom have concentrated on making a market in both stocks and options and obviously investors prefer to buy something they know they can sell. After all, why buy stock that not even the issuer is prepared to buy? This makes options in other long dated stocks as unattractive as the stock itself and, apart from technical strategies, the market prefers to stick with the E168.

While option activity is concentrated on the long end of the market, there is a very definite demand for some similar instrument in the medium dated gilts. Whether this gap is filled by options or futures, or both, remains to be seen. The few options that are written on medium dateds are, again, over the counter and only trade sporadically.

Options were developed by both stockbrokers and bankers in the early 1980s but it was the banks that formed the nucleus of the market in 1984, with stockbroking firms developing and selling the concept to their institutional clients. Although considerable lip-service was paid to the idea at a conference in May 1984, the actual support in the early days of the market was a little disappointing. It was only really when standardised options were introduced that more participants became aware of opportunities; probably because they could see prices quoted on their Reuter screens and therefore were aware of the potential profits. Although the market is still growing, options are now being used, for a variety of reasons, by banks, discount houses, parastatals, mining houses, brokers, life companies, pension funds and even private investors. There are still the reactionary few who will have nothing to do with options, but this is probably due more to an unwillingness to learn new tricks than any rational opposition to options. Unlike other capital markets, the competition for top investment jobs is not

as keen in SA with the result that standards are generally poorer because performance is not under the spotlight.

Having set the scene, the second part of this series will concentrate on the practical use of options, the theory of pricing and how market forces often make a mockery of even the most sophisticated pricing mechanisms. A glossary of Optionspeak follows.

Glossary of option terminology

American option	An option exercisable at any stage of its life up to the strike date.
At the money	Spot rate and strike rate are identical.
Bear	One who believes prices will fall and therefore, in the bond market, that yields will rise. The bear will either be short of stock or buy put options.
Bearer document	A financial instrument, ownership of which is transferred by simple delivery. If the financial instrument carries a special endorsement it is no longer a bearer document but is payable to the endorsee.
Bond	A certificate issued by a borrower as security for monies borrowed. A generic term for gilts and semi gilts.
Box option	A simultaneous purchase of both a call and a put option.
Break even point	The level at which an option neither loses nor makes its owner money.
Bull	One who believes prices will rise, and therefore that yields will fall. The bull will either be long of stock or buy call options.
Call option	The right, but NOT the obligation to buy a particular bond at a specific rate within a specified period.
Confirmation note	A written notification that a transaction has taken place. It should contain all the details of the transaction. It is not a bearer document.
Coupon	The annual interest rate payable on a bond.
Delivery date	The settlement date on which the bond is bought in the case of an exercised call option; or delivered in the case of an exercised put option.
Discount stock	A bond trading at a yield above its coupon therefore giving a clean price below its par or redemption value.
European option	An option exercisable ONLY on the strike date and not at any other stage of its life. SA options are almost all of the American kind.
Exercise	To invoke the right granted in the option. Call holders will buy bonds, put holders will sell bonds.
Grantor	The writer or maker of the option and, therefore, the party to whom the buyer has recourse. The grantor's name will appear on the original document.
In the money	An option which if exercised would produce a profit for the holder.
Long of stock	To hold a bull position in bonds that are expected to rise in price and give the holder a profit.
Intrinsic value	The value of an option if it were to expire immediately. The amount by which the option is in the money.
Option contract	The underlying contract is an option deal. The contract pledges to buy or sell a certain stock at a certain price within a certain time. The right to exercise is at the discretion of the holder.

Out of the money	An option which, if exercised, would produce a loss for the owner.	Short of stock	To hold a bear position by selling bonds that you do not own in the hope of buying it at a cheaper price before the settlement date.
Point	A point in the SA bond market refers to ,01% on the yield. Therefore, 20 points below 14,90% would be 14,70%.	Spot rate	The rate quoted in the market for the current settlement date.
Premium	The price paid for an option. The sum of the intrinsic value and the time value premium.	Stock	A general term for a position in bonds: long of stock.
Premium stock	A bond trading at a yield below its coupon thereby giving a clean price greater than its par or redemption value.	Strike date	The final date on which an option can be exercised.
Price	The amount of consideration payable for a particular bond.	Strike rate	The rate at which the holder can exercise an option.
Put option	The right, but NOT the obligation to sell a particular bond at a specific rate within a specified period.	Time value	The amount by which an option's total premium exceeds its intrinsic value.
Rate	The terms RATE and YIELD are interchangeable. Rate is simply an abbreviation for interest rates which is the same as yield.	Volatility	A measure of the amount by which an underlying bond can be expected to fluctuate within a given period.
Settlement date	Bonds are normally traded in the spot market for delivery on the third Thursday from the date of the transaction. When an option is exercised the stock is delivered on the third Thursday from that date.	Yield to maturity	Bonds trade at a yield to maturity and have to be converted to a price. The yield moves constantly and reflects the level at which investors are prepared to lend money for a given period.