Your Guide to Warrants Alert



If longevity is a fair test of a newsletter's worth – and we think it might be – Warrants Alert has obviously proved valuable over the years. Published since October 1989, the newsletter has been published every month through all sorts of market conditions. This has enabled us to hone and fine-tune our format to what we believe is the most useful structure.

This introductory guide is intended to briefly describe each part of the newsletter, to help you make the most of the content. We will also explain a little about the different types of warrants along the way.

To keep this document print-friendly, we have kept to A₄ size and kept it quite plain, avoiding the use of block colour and complex typesetting.

Introduction

We try to keep the introduction short because no doubt most investors have more than their fill of general economic and stockmarket comment every day from the television, the internet, and from newspapers. The newsletter is all about specialist advice, so we try not to stray from that brief.

Market Statistics

Getting straight into the meat of the newsletter, the market statistics give you a quick overview of how the market is structured and valued. This should help provide context for individual warrant valuations, and also enable you to gauge how the market is changing over time.

The statistics are split into two sections – **corporate warrants** and **covered warrants**. The newsletter includes analysis of all types of warrants (and similar securities) listed on the London Stock Exchange, currently a few hundred in total. While these securities may have similar names, though, they can be quite different in certain respects.

Corporate warrants are warrants issued by investment trusts and other companies, over their own shares. Frequently now these are called **subscription shares** rather than warrants – effectively the same thing, but with one big difference that they can be included in ISAs. These are traded just like ordinary shares, with the prices set by competing market-makers and being affected by the forces of supply and demand. The relative lack of trading activity and liquidity in the corporate warrants sector can lead to price anomalies from which we can try to profit.

When corporate warrants reach the end of their lives, holders can choose to pay the **exercise price** (sometimes called the strike price) and convert their warrants into ordinary shares. If you do not convert – and this is a right rather than an obligation – you may in certain circumstances receive a value if the warrant would be worth converting. Sometimes – not always - a trustee is appointed to try to achieve value for the lapsed warrants, with mixed results.

After the average warrant price, the next statistic is the average **premium**. The premium on a warrant is effectively the extra you are paying for the benefits they offer. Warrants will normally (though not always) command a higher price than they are intrinsically worth on conversion. This 'conversion premium' is

the premium you pay for buying the warrants instead of the shares, and the lower the premium, the 'cheaper' the warrant. It is important though not to consider the premium in isolation - the time of expiry is important (see below), as is the degree of gearing.

Premium = <u>warrant price + exercise price - share price</u> share price

Next is the average **final exercise date.** When new corporate warrants are issued they will have a defined life that may vary from a few months to many years. The time to expiry is important because the longer the time remaining, the greater the opportunity for the warrant to gain in intrinsic value as the share price appreciates.

Conversely, the premium takes this into account and incorporates what is known as 'time value': a measure of the benefit of the time remaining in terms of likely appreciation. When a warrant has several years to run the time value and premium may be considerable. Naturally, time value disappears as the time to expiry diminishes, and the premium will disappear. Hence, when considering the premium, or time value, it is always necessary to consider it in relation to the time to expiry.

Gearing is the main benefit that warrants offer – this is the feature that means warrants can give investors the chance of greater capital gains from a given sum of investment capital. Using warrants you can gain rights over a relatively large number of shares with a relatively small outlay. For example, if Widget plc shares are 120p, then an investment of £1,200 will give the investor control over 1,000 shares. But if that same investor buys Widget plc warrants (each conferring the right to buy one share) at 40p then his investment of £1,200 give him control over 3,000 shares, and a commensurately larger potential gain. The term 'gearing' refers to this extra exposure, and also – loosely – to the opportunities for larger percentage gains (or losses) on warrants because of their lower price. Returning to Widget plc, if the shares rise by 30p, from 120p to 150p, then the percentage gain will be 25%. Over the same period though one might expect the warrants also to rise by 30p, from 40p to 70p - that's a rise of 75%. The 'gearing factor' is calculated by dividing the share price by the warrant price, and generally the higher this is, the greater the opportunity for large profits. It is important to bear in mind, however, that the gearing effect will work in reverse if the shares fall.

Gearing factor = share price/warrants price Widget plc gearing factor = 120/40 = 3.0

Finally in this section, there is a very useful indicator – probably the best indicator of all – called the **capital fulcrum point (CFP).** This is slightly complicated, but it is worth trying to understand what it means even if you cannot calculate it yourself.

The CFP is the annual percentage growth of the underlying shares required for you to do equally well in terms of capital appreciation with either the shares or the warrant. In other words, if the CFP is 7% and the share price actually rises by 8% per annum to the final conversion date then you are better off holding the warrants. In general, the lower the CFP, the cheaper the warrant. It can sometimes be negative if the warrants are trading on a discount. Effectively the CFP standardises the premium for the variable time remaining and enables us to compare all warrants on an equal footing.

Example: Widget plc, share price is 120p and the warrants at 40p command a premium of 25% and have five years remaining. In this case, the CFP is 6.58%, so if the shares rise at this rate you will, theoretically, be equally well off with either the warrants or the equity. In fact you would have been slightly better off with the equity if the company pays a dividend, since the CFP takes account of capital appreciation

only For more information on the CFP, we have a one-page explanatory PDF which you can download from http://www.tipsheets.co.uk/The Capital Fulcrum Point.pdf. Alternatively, we have an online CFP calculator that you can access at http://www.tipsheets.co.uk/cfp.html.

Covered warrants are issued by investment banks, currently just Société Générale (SG). They can issue covered warrants over all kinds of assets, whether these are market indices, major blue-chip shares, commodities, or currencies. These are also listed on the London Stock Exchange, but they are priced in a very different way to corporate warrants. The issuing banks maintain the prices, using algorithms based on option-pricing models like the Black-Scholes model. The major inputs to the model are the underlying asset price, the strike price, the time to expiry, and the level of implied volatility. Covered warrant prices generally have two components – intrinsic value and time value. The **intrinsic value** is the difference between the strike price and the price of the underlying asset. Warrants may be 'in the money' with intrinsic value, 'at the money', where the strike price and the asset price are equal, or 'out of the money' where the warrant has no intrinsic value.

Unlike corporate warrants, which are all call warrants that give the right to buy an underlying security at a fixed price, covered warrants can be **calls** or **puts**. The latter give you the opportunity to benefit from a falling price. Covered warrants are bought and sold using a stockbroker in the same way as ordinary shares, with the same charges, and they have the small benefit as well of being free of stamp duty. You can buy and sell covered warrants at any time during their defined life, which generally ranges from six months to three years. Often, covered warrants are used for fairly short-term trading, with investors using the gearing to multiply profits, but they can be used in a variety of skilful ways. Covered warrants are highly flexible instruments which can be used effectively in falling, volatile, and uncertain markets.

The large majority of covered warrant trades are closed before the warrants reach their **final expiry date**, but for those investors who hold warrants at the end of their lives, an automated cash settlement system kicks in. There is no 'physical' exercise, so for a warrant on a barrel of oil, for example, there is no actual purchase or sale of a physical barrel of oil, but the cash equivalent instead. The automated nature of this settlement is important too – if investors let their warrants lapse, they are automatically paid any intrinsic value. When the Financial Services Authority set up their regulatory framework for covered warrants back in 2002 they were very careful to ensure that this market was suitable for retail investors. This is why covered warrants have **strictly limited liability** (you cannot lose more than you invest) and why there is **automated cash settlement** on expiry.

Major Price Changes

This section of the newsletter is useful for getting a quick snapshot of which corporate and covered warrants have been moving up and down, over what periods, and by how much. You may well see that the **price changes** are quite large. The **gearing** property of warrants means that both gains and losses are amplified.

• Warrants Alert Trading Portfolio

We often maintain a **trading portfolio** as a way of illustrating the potential returns from warrants and for suggesting how you could construct a small portfolio to benefit from our advice. The portfolio calculates **real profits and losses**, including all dealing spreads and trading costs.

It is not intended to be prescriptive – we do not really expect subscribers to follow it slavishly – but it can give you a good idea, we hope, of the actual returns possible. It is also a handy forum for us to discuss matters such as **selling discipline** and the use of **stop-losses**. We do use stop-losses for this portfolio – they seem essential for a portfolio that we only update once a month.

The **Fourth Trading Portfolio** started in January 2015 with £10,000 of initial capital, and by January 2017 is showing a gain of 11.7%.

The **third Trading Portfolio** ran for two years, finishing in January 2014 with a value of £15,276.87. That 52.77% gain translates into an annualised return of 23.60%. The **second Trading Portfolio** closed in September 2011, finishing with a gain of 255%, equating to an annual growth rate of 13.84% per year. The **first Trading Portfolio** gained 128.37% in three years, delivering an annualised return of 31.69% per year.

Corporate Warrants Analysis

One of the benefits of longevity is that the newsletter has settled into a nice annual rhythm. Warrants Alert is not exactly the same every month, although it has common features. Every January, first of all, we maintain the tradition of 'New Year Tips' by selecting our five favourite corporate warrants for the year ahead. We follow up on their performance in subsequent newsletters – you will see that we regularly comment time and again on the same warrants, trying to make sure you keep abreast of all relevant news and opinions.

In February we run a special additional form of analysis that we have found beneficial as an adjunct to our usual work. We create charts for investment trust warrants and subscription shares that plot the performance of their net asset value against their CFPs and gearing levels, enabling us to present three key elements of valuation in one go and to compare a number of warrants in a useful visual way.

In June we publish our **annual liquidity survey** for all corporate warrants. Unlike covered warrants, which are generally easy to trade, dealing in corporate warrants and subscription shares can be problematic, and we recognise how frustrating it can be to identify a good trading or investment opportunity to then be thwarted because the dealing spread is wide or the dealing size inadequate. This guide helps subscribers to identify the most liquid warrants that are more frequently traded on reasonable terms.

In October we challenge our analysis with another form of analysis that we have called 'CFP range analysis'. Using monthly data on the capital fulcrum points for every corporate warrant over the last year, we calculate the high and low points and then plot all of this information on a chart in a similar way to the lines on a 'candlestick' technical chart. The result, for each warrant, is a vertical line showing the range from the lowest observed CFP over the last twelve months to the highest, with a small horizontal line bisecting it at the point of the current CFP. This enables us to see at a glance whether the current CFP is high or low in relation to its recent history, and enables us to make more sensible valuation decisions.

• Corporate Warrants News

Usually a large part of the body of the newsletter, we try to keep you up to date with all relevant news that impacts on warrant prices across the sector. This may be company profits, manager comments, new net asset value announcements, broker research, personal manager meetings (we do regularly meet investment trust managers ourselves), or changes in valuation statistics. Wherever we feel the new information leads us to a definite conclusion we will try to finish with definitive **buy, sell, or hold advice**.

You will see that we follow up on the same warrants often, sometimes month after month. We view warrants analysis as an ongoing process, not a one-time job, and we hope subscribers build a full picture of the potential rewards and risks over time.

Technical Merit

We are particularly proud of this section, which we have been running in the same format for a very long time. Here we produce two tables – a list of **undervalued warrants** and a list of **overvalued warrants** – that are highlighted by our computer model. This is purely mathematical, and does not involve any subjective views. As at January 2017, our undervalued selections have outperformed our overvalued selections in 272 out of 326 months. That's an 83% success rate, maintained over more than 27 years. Even if we say so ourselves, that seems a remarkable result, and is one reason why many subscribers will make sure they consult these tables before making trading decisions. In the undervalued list we provide some numeric information, including the exercise terms for each warrant and a summary of the most important valuation data.

Technical Merit for Covered Warrants

We have replicated the analysis above for covered warrants too, where the difficulties of calculation mean we restrict the selections to sterling-denominated call warrants. To January 2017 this section has also worked very well. Our 'technically interesting' selections have outperformed the 'technically unsuitable' selections in 26 out of 31 months to date - an 84% success record.

New Covered Warrants Issues

Moving on to covered warrants now, this can be a fast-moving market. The issuing banks have historically been quite dynamic, bringing warrants to the market in response to changing conditions, and because covered warrants are generally shorter-dated than corporate warrants, the **regular expiry cycles** also generate a need for new listings. We report on new issues as they occur, although these are not quite as frequent now as they have been in the past.

Leveraged ETFs

This is a comparatively new section that has become a regular feature. Leveraged ETFs (exchange-traded funds), typically offering between two and five times gearing, are London Stock Exchange listed securities that offer exposure to equity indices, currencies or commodities. They are issued by firms such as Boost (www.boostetp.com) and ETF Securities (www.etfsecurities.com). Leveraged ETFs do not have a maturity date, and incur costs in a slightly different way, but they otherwise have much in common with other forms of geared derivatives - that's why we include them even though they are not called warrants. Leveraged ETFs have the considerable advantage that they can be included in ISAs and SIPPs.

Covered Warrants Ideas

This last section of the newsletter contains some ideas for **covered warrants trading.** Some of these might appeal to you; others might not. As with all of the information in the newsletter, this information is all provided for you to consider and to mull over for yourself. You are free to take it or leave it as you please, and although we hope to provide expert advice, the onus is still on you to make your own investment decisions. We learned a long time ago that investors have widely different enthusiasms, interests, amounts of time available, and levels of risk tolerance. What is right and best for one investor may not necessarily be optimal for another.

When we mention covered warrants in this section we will identify their **main characteristics** in one information string, in the format "SL29 Lloyds Banking 0.992 19-Dec-20 calls." This will generally tell you most of what you need to know – in this case that these are call warrants on Lloyds Banking with a strike price of £0.992, running until 19th December 2020, and with the **ticker code** SL29. All covered warrants have a unique identifier – this ticker code, or **TIDM** – that you use to distinguish the warrants when dealing or finding further information.

The nature of covered warrant pricing, whereby the prices are determined using options pricing models, means that we think about them in a certain way. For a start, this semi-automated pricing system should be efficient, meaning that prices are 'faithful' and generally move largely as you would expect, rather than being based on the vagaries of other investors' trading decisions. This can be very helpful for short-term traders and also for investors wanting to see what might happen to covered warrant prices under different future scenarios. There are **online calculators** that can help you forecast future covered warrant prices in this way.

Knowledge of the pricing method is useful when thinking about the style of analysis best suited to these instruments. Performing numerical analysis of warrant valuations and buying cheaply-valued warrants in the hope that their valuations will shift as demand rises is not a viable approach for covered warrants. Instead, in our opinion, it is better to take a view on an underlying asset and its likely movement over a period of time, and then to find a suitable warrant to match that view.

Before buying any covered warrant you need to take a view on the likely direction of an underlying asset. Although there are several influences which have a bearing on warrant prices, the movement of the underlying asset is often the most powerful. If you believe the asset will rise in value then you might wish to buy a call warrant; if you believe the asset will fall in value then a put warrant may be appropriate. This is sometimes rather grandly called a 'directional strategy'. In making this judgement you may consider a wide range of factors. Most importantly, fundamental analysis needs to reach a conclusion on whether an asset price is likely to go up, down, or sideways, but this is not really enough. If the analysis points to a rising asset price, for example, it is possible there may a wide range of call warrants to serve this purpose. But is it better to buy a short-dated, highly-geared, out-of-the-money warrant or a more conservative medium-term warrant with modest gearing and some intrinsic value? Do you invest a lot or a little? To answer these questions requires some more detailed steps to develop a clearer expectation for the future movement of the asset price.

1. Direction

Whilst most effort is usually devoted to trying to find assets which are likely to rise in value, with covered warrants it is possible to prosper equally from a fall in value. This has an interesting implication for the way in which investors with plenty of interest but less time might concentrate their research. Other things being equal, it can be worth covered warrant investors specialising in a particular niche, sector, or market. One drawback with this approach in the past has been that localised knowledge can seem useless for periods when the asset is not performing well. Spare a thought for Japanese and technology fund managers whose career paths happen to have directed them into areas which then fell out of favour. The merit of being able to buy call and put warrants is that views can be backed at all times, and not just occasionally when the forecast direction happens to be up.

2. Degree of confidence

Conclusions are not always reached with equal force. On some occasions, analysis might find a number of conflicting indicators which lead to nothing stronger than a hunch or a vague feeling that an asset could head off in one direction or another. On other occasions, a number of indicators might all point towards an outcome which can be backed with a high level of conviction. It is very useful to measure the **degree of confidence** you might have in any judgement because this can materially affect the selection of the most appropriate warrants. A low degree of confidence might lead you towards **in-the-money** warrants with modest gearing levels, whilst a more confident prediction can be backed by more volatile warrants which are perhaps **out-of-the-money** and highly geared so that an aggressive position can be taken.

3. Size of movement

Similar comments apply to the size of movement expected. If your analysis can quantify this so that you can reach a definite expectation, then your warrant choice can be tailored more effectively to maximise returns. Investors expecting a small movement in an asset which might generate a satisfactory rather than enormous profit will not want to take too much risk, so an in-the-money warrant with moderate gearing might be suitable. Clearly, however, an investor expecting an unusually large move in an asset will make the most money, if they are right, using an out-of-the-money warrant with high gearing.

4. Likely time-frame

The final question is over what period the movement is likely to occur. Whilst a **long-dated** warrant provides maximum leeway and opportunity for a move to occur, greater profits will be generated by **shorter-dated** warrants if the move happens quickly. Again, the more closely this judgement is defined, the more fine-tuned the process of warrant selection and purchase can be.

You may notice a couple of differences in the jargon used when we are discussing covered warrants. One is that instead of the simple gearing we use for corporate warrants, we tend to speak of 'effective gearing' or 'leverage.' This is a slightly different concept in that it refers to the capacity for extra price movement rather than the extra exposure obtained by buying warrants instead of the underlying asset. Thus a covered warrant with effective gearing of, say, five times, might be expected to move by five times as much as its underlying asset. Its simple gearing will likely be higher.

Second, we tend to consider the time value or premium rather than use the CFP, which is a less powerful tool when we are dealing with a fairly short time to expiry. We also refer often to a variable called the **delta**, which helps to tie some of these concepts together. The term 'delta' usually refers to a **rate of change**, in this case the change expected in a covered warrant price for a given change in the underlying instrument. This is an estimate of the true gearing or leverage that will actually occur.

For call warrants with a parity ratio of one the delta will always fall between zero and 1 (the figure is also sometimes expressed as a percentage). At zero, no movement is expected in the warrants. At 1 the warrant can be expected to move penny-for-penny with the underlying asset. Typically the delta will be around 0.50 (or 50%) for a call warrant which is 'at the money', meaning that a penny movement in the underlying should generate a 0.5p move in the warrant, assuming a parity ratio of one.

The delta will move towards zero as a warrant moves out-of- the-money, or towards 1 as the warrant moves in-the-money. There are other factors which influence a warrant price, and the delta is always changing, but in theory we can use the delta to forecast how the warrant price is likely to move.

For put warrants with a parity ratio of one the delta will always fall between zero and -1. If the delta is -0.5 then a penny movement in the underlying asset would imply a 0.5 p movement in the opposite direction. Most of the time we think investors will be aiming for **medium-delta** warrants. The received wisdom is that the 'comfort zone' is in the range between 0.4 and 0.6. If the delta is lower than this the warrants are likely to be out-of-the-money, meaning that the underlying asset has to work hard for the warrant to achieve any value. **Low delta warrants** are the long shots which could pull off a large profit if the underlying asset moves dramatically in the right direction, but which have a relatively high chance of expiring worthless. **High delta warrants** are much lower risk, but with less gearing. The price will be more sensitive to movements in the underlying, but the potential gains will not be magnified greatly.

Clearly the delta is a very useful indicator for assessing the likely movement of a warrant. For this alone it is valuable. It also has a second application which is equally helpful. The delta also indicates the approximate likelihood of a warrant finishing its life in-the-money – with intrinsic value. A delta of 0.7, for example, indicates an approximate 70% chance of the warrant finishing its life 'in the money'. This is useful as a quick, rough-and-ready indicator of risk. Finally, the delta is also used to convert simple gearing to leverage, as follows:

The delta actually comes from the **Black-Scholes formula**, which is widely used in the pricing of covered warrants. It can be employed usefully when analysing all forms of warrants, corporate warrants too. Formulated in 1973 by Fischer Black and Myron Scholes, and subsequently developed by Robert Merton, the Black-Scholes model has become standard usage for analysts valuing options or synthetic warrants. It is the benchmark against which all other option pricing models are compared. It is widely used to calculate 'fair value' prices in many forms of derivative markets – not just the European-style call options for which it was first created. Its huge contribution to derivative pricing was recognised in 1997 when the Nobel Prize for economics was awarded to Myron Scholes and Robert Merson (Fischer Black died in 1995). You can find Black-Scholes models online, but you will need to calculate the historical volatility of the underlying assets as a key input.

All of these different forms of instruments have their merits. For sensible medium-term investment in cheaply rated warrants, with a manageable level of risk, and perhaps within an ISA in the case of subscription shares, we think corporate warrants are hard to beat. Unfortunately the range here is not great, and there can also be liquidity restrictions. For their sheer range and flexibility, coupled with the relatively low cost and ease of dealing, covered warrants and leveraged ETFs also offer a good deal for many investors. To us, there is no reason at all why these different forms of warrants or quasi-warrants should not be used side-by-side, perhaps in slightly different ways for different parts of your portfolio. That's why we continue to cover all forms of warrants in this newsletter, and have no plans to change that.

Risk Warning

Finally, no guide on warrants – or indeed an issue of the newsletter – would be complete without a **risk warning**. You will see we have a lengthy risk warning on the front page of every newsletter. It is there for a reason, and we would urge you to read it through at least once. The gearing on all forms of warrants can magnify losses, and the value of warrants can fall to zero. The prices can be volatile, and for these reasons it is a very good idea to familiarize yourself fully with their characteristics before you deal.

• Further Information

While we certainly like to think that the newsletter contains comprehensive information allowing you to deal in a fully-informed manner, there is a whole world beyond our monthly newsletter. We don't think our information is actually replicated anywhere else, but you can build on it and conduct further research. Nowadays, most research tends to be conducted online. We sometimes post some limited information between newsletters on our website (http://www.tipsheets.co.uk), where you can also obtain free annual reports, you can always check prices with your stockbrokers or on numerous general stockmarket information sites such as ADVFN (http://www.advfn.com), and for covered warrants, SG's website is a very good starting place (http://sqlistedproducts.co.uk).

If you really want to learn more, our editor **Andrew McHattie** has written two **books** on warrants. They were both published many years ago, but their theoretical content retains its value. You can just search using his name on the internet in general, or on the websites of booksellers such as Amazon (http://www.amazon.co.uk).

You can also follow us on our Facebook page - the address is http://www.facebook.com/warrantsalert.

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Warning: you should not buy shares or warrants with money you cannot afford to lose. This guide is intended for UK investors. This warning notice draws your attention to some of the high risks associated with warrants. The risks attaching to instruments and transactions of this kind are usually different from, and can be much greater than, those attached to securities such as shares, loan stock and bonds, such transactions often having the characteristics of speculation as opposed to investment. Warrants may involve a high degree of 'gearing' or 'leverage'. This means that a small movement in the price of the underlying asset may have a disproportionately dramatic effect on your investment. A relatively small adverse movement in the price of the underlying asset can result in the loss of the whole of your original investment. Moreover, because of the limited life of warrants, they may expire worthless. A warrant is a right to subscribe for shares, debentures, loan stock or government securities, usually exercisable against the original issuer of the securities. Because of the high degree of gearing which they may involve, the prices of warrants can be volatile. Accordingly, you should not buy warrants with money you cannot afford to lose. You run an extra risk of losing money when you buy shares in certain smaller companies including 'penny shares'. There is a big difference between the buying price and the selling price of these shares. If you have to sell them immediately, you may get back much less than you paid for them. The price may change quickly, it may go odown as well as up, and you may not get back the full amount invested. It may be difficult to sell or realise the investment the volatile nature of the investment, a fall in its value could result in your recovering nothing at all. Changes in rates of exchange may have an adverse effect on the value or price of the investment in sterling terms. As with other investments, the many give you to a time-limited right to acquire or sell one or more types o