Outstanding Warrants – A Look at the Canadian Warrant Market

Peter Vanderploeg, Risk Manager, Polar Securities
Paul Sabourin, CIO and Portfolio Manager, Polar Securities

Like smaller markets around the world, the Canadian market has its own set of circumstances which offer great opportunities for the experienced trader. Consider the large number of warrants (over 200 at last count), both listed and unlisted, and the various hedging strategies which can be employed to take advantage of the substantial volatility associated with this generally small to mid cap market. Let's look at this sector which has provided attractive returns for hedge funds over the past 4-5 years and how Polar's approach may differ from other fund managers.

The Canadian Warrant Market

Like other markets, many smaller cap or early stage Canadian listed issuers will make private placements of securities in order to raise capital in a strong market. Recently, that hot sector in Canada is resources – gold, nickel, copper, oil and gas, etc. – a sector which makes up a large component of the Canadian stock market. In fact, The Toronto Stock Exchange continues to be home to more than half the world's mining IPOs.

Canadian listed issuers often complete private placements to "qualified" investors without issuing a prospectus. Obviously, this allows issuers to raise more capital more rapidly, particularly critical in hot

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markets. And, as in many other markets, securities issued by private placements are subject to trading restrictions. In Canada, trading restrictions are simply a four month holding period – no further registration other than the passage of time is required.

In order to overcome the lack of free-trading for restricted shares, issuers will often offer units comprising of restricted shares and a "sweetener" of either cheap or even free warrants. These warrants can represent tremendous value to the purchasing investor.

Many long-only investors will buy the units in order to access the "cheap" warrants and expect to realize these generous discounts as the stocks trend higher. Such an investor effectively builds up an even

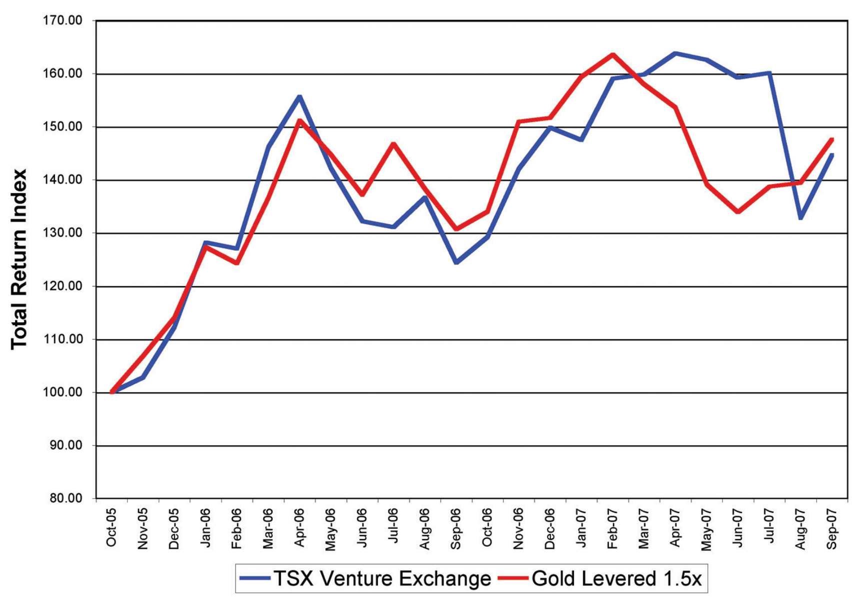

Figure 1: Basis Risk: Gold showed a high correlation to the TSX Venture Exchange with a beta of about 1.5 from October 2005 to March 2007. Correlation then broke down in March 2007, highlighting basis risk

greater long exposure to the resources sector in general and to the issuing companies in particular. And these markets can be very volatile - they tend to be boom/bust markets. In order to capture some (but not all) of the value of these generous discounts with a much reduced exposure to a volatile market, Polar uses a variety of hedging techniques.

A sense of history is critical, and history does not mean 90 days

Delta Hedging

Shorting freely tradable and borrowable stock against the restricted stock and warrant can eliminate virtually all the equity risk inherent in the units. In the case of restricted stock, the right hedge ratio is 1 to 1 – one listed share short to one restricted share long. Such an approach allows one to capture any discount offered on the restricted stock. Of course, that "free arbitrage" – buying restricted stock and shorting borrowed shares – is not always available.

With warrants, the hedge is trickier. Traders need to calculate the correct ratio, defined as delta, of stock to short versus the warrant. Delta hedging requires constant monitoring and is an inexact science, requiring the use of an option/warrant model. If done well, delta hedging (i.e. buying or selling shares to change the hedge ratio) allows one to capture much of the value in the cheap warrants.

The Next Level of Hedging

Of course, the trade sounds simple. By shorting stock, we have captured the discounts and virtually eliminated our equity risk. One problem: many of these issuers are small or mid-cap companies, with little stock available to borrow. How does one manage the exposure to the resource sector now?

Our experience indicates that a portfolio of restricted stock and warrants will, in aggregate and in the medium term, behave similarly to those other stocks in the same sector which can be borrowed. Moreover, in some cases, we will short the underlying commodity itself (oil, gold, silver, copper, etc) against our long exposure when we find the commodity and stocks are highly correlated (which is often the case). Thus, after a careful analysis of the relationship of our longs versus potential shorts, we can still hedge some of our equity exposure even when we cannot borrow the underlying stock. Some traders will assume that the models/software tell us that such an approach can virtually eliminate equity risk. However, we disagree. Such analysis ignores basis risk.

Basis Risk

Basis risk in this case is defined as the risk that the historical relationship between longs and shorts (similar stock, sector indices or commodity), which has been so carefully analysed, will eventually change. While statistically unlikely, it seems to us that more often than not basis risk moves against you! We believe that basis risk is a more significant concern than many simplistic risk models would suggest.

For example, you might find that in a bull market, the delta (or correlation) between your longs and shorts is 1. Suddenly, after a market sell off, the delta becomes 2 (i.e. has changed significantly); often because Mr Market not only hates the sector, but particularly hates restricted, illiquid and unusual securities. Your hedges fail to act as you expected and the portfolio suffers unexpected losses. As a consequence, you might be tempted to adjust after the first loss to the "new" delta - just in time for the snap back rally when the delta is once again 1, leading to even more losses.

Clearly, this is a concern. How to manage it ? Here we make our first nod to active, broad diversification, a principle which pervades all aspects of our money management outlook at Polar. Managing basis risk means only taking on positions where returns justify the cost of difficult to hedge risks and then also diversifying across uncorrelated strategies.

Now, assuming one can borrow similar stock, sector indices or the commodity to short and can also manage the equity and basis risks, there is yet another risk to take into consideration – long vega risk.

Vega Risk

Vega is a measure of the exposure to implied volatility. Every equity derivative, including warrants, is valued using a model that makes some assumption of the volatility of the underlying stock – and of course, the more volatile the stock, the more valuable the warrant. Vega risk is the risk that future volatility expectation will change.

Tools of risk management can become the tools of risk creation if they are naively followed

Because of vega, the value of a warrant can increase or decrease even if the related stock hasn't moved much. Delta hedging can't protect you from this risk. Thus, in addition to equity exposure and basis risk, one has vega risk. Managing vega risk is difficult.

You can try to short listed options or warrants (getting short vega), but the universe of appropriate securities is limited in a similar security or in the commodity itself.

Even if you do find a "related" option or warrant to short, it will probably have a different strike and maturity, so it is not even the same vega. Note that two call options on the same stock can have different volatilities, and thus different vega. Vega exposure might be reduced, but another, different and hard to mange basis risk is generated.

> If you are long 5 year vega and short 2 year vega across every warrant position, you are still not diversified

The Big Picture Risk Approach

Trying to fine tune all our hedges can be difficult. As you try to nail down the vega exposure, you affect the delta and if you are lucky to get the delta and vega under control, you will throw up still another risk - gamma - the rate of change of delta with stock price.

This is usually the point where risk systems and models get hedge funds into trouble because they want to offset one risk with similar but not quite the same risks, and smooth over the imperfections of the hedges thus giving a false sense of confidence. These tools of risk management can become the tools of risk creation if they are naively followed.

Maintaining Perspective

The big picture solution which we at Polar try to employ is to take a step back and recognize the imperfection of hedges at each level and decide two things: How bad can our portfolio get hurt if the relationship between our longs and shorts in place today is not true tomorrow; and, on the greatest risk /reward trades, is our exposure small enough so that we won't be hurt (embarrassed) when things change? One thing we've learned in sixteen years of managing hedge funds - we know things will change.

A sense of history is critical, and history does not mean 90 days. For example, every few years, the markets have a severe credit crisis. Stock markets might recover quickly but high yield bonds might take longer. Short term implied volatility might rise and fall but long term implied volatility will usually be stable for years – until a few years after the collapse of an equity bubble.

And where history fails to provide a precedent, a little imagination and market intuition can serve as a helpful guide. For example, for the past 3 years there was a strong structural demand for mezzanine CDO tranches. That structural demand has quickly changed, so it is reasonable to expect continued correlation trouble in the credit markets.

Will one's portfolio be hurt (embarrassed) when things change? Ideally, in every crisis you've been the contrarian and made a fortune. But in reality, to capture something you want (such as the discounted value in privately placed units of restricted stock and cheap warrants) one must expose oneself to something you can't hedge perfectly (such as commodity exposure, or implied volatility). Our risk management response: everything has to be well diversified and right sized.

Strategy Diversification

To manage risks, we believe you have to diversify across issuers, and on a higher level, you have to diversify across industries. But if you are long 5 year vega and short 2 year vega across every warrant position, you are still not diversified. If you are long restricted shares and short unrestricted but similar stock across your portfolio, you are still not diversified.

So, we also believe that a warrant strategy only makes sense as part of a diversified multi-strategy portfolio. When a dark day comes for the relevant market sector, compensating profits will often be made somewhere else. Our multistrategy portfolio at Polar includes restricted share and warrant arbitrage (resource and non resource), convertible arbitrage, credit arbitrage, balance sheet arbitrage, merger arbitrage, long/short equity and strategies involving closed end funds, income trusts, restructurings and SPACs.

As a Canadian hedge fund money manager, we find many Canadian centric opportunities (such as our warrant book of over 100 issuers) across many different strategies. For some years now, warrant and restricted share arbitrage has been a solid performer. We have been able to capture that opportunity without exposing ourselves unduly to the resources sector through well thought out hedges and strategy diversification. Markets will continually present new trading opportunities and Polar will seize these opportunities as we have done since 1991, delivering satisfying returns to both our domestic and international clients.

Polar Securities Inc. was established in 1991 and has more than US$ 800 million of hedge fund assets under management. Polar is the investment manager to both multi-strategy and long/short funds available to Canadian and non Canadian investors. ■

Contact Information
Polar Securities Inc.
372 Bay Street, 21st Floor
Toronto, Ontario
M5H 2W9 Canada
www.polarsec.com

For more information,
please contact Michael McNeil,
Tel: +1 416 369-4451
Email: mmcneil@polarsec.com