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MARKET UPDATE: SHORT SELLING

by Vito Antonio Amatulli

MSc in Finance Student, Bocconi
Research, Minerva IMS

and Gianluca Luigi Segreto

MSc in AFC Student, Bocconi
Equity Research, Minerva IMS



SHORT SELLING EXPLAINED

Although short selling is common practice in trading today, it was not always around. Short selling is thought to have originated in the Netherlands by Isaac Le Maire, a stockholder of the Dutch East India Company, in 1609. Le Maire is said to have shorted the Dutch East India Company by speculating on ships being lost at sea or valuable cargo being lost during the long transport between the East Indies and Europe.

What does “short selling” mean? Essentially, short selling is defined as the opposite of purchasing a stock: it is when an investor borrows shares and immediately sells them, hoping he/she can scoop them up later at a lower price, return them to the lender and pocket the difference. However, being short is way riskier than being long: when you “go long,” your maximum possible loss is 100%, or your entire initial investment (that can happen, for example, if a company goes bankrupt); but, if you have a short position, there’s no limit to how much money you can lose if the share price rises. If the share price increases soon after you place a short position, you could quickly “cover” by buying back the shares and returning them to the investor you borrowed them from. If you’re lucky, you might not lose very much.

Looking at some definitions now, one fundamental factor is the Short Interest, which is defined as the number of shares short of a stock at a given point in time. Notice that you must pay a fee in order to be short; it is computed as an annual percentage rate of the value of the stock itself and sometimes can be very high (depending on the asset and especially on the short interest). What are the cash implications whenever you go short? Suppose you have \$1mln in your account. You short sell \$500,000 worth of some stock. Since you’re selling, you will get a cash inflow and the cash amount in your account will be \$1.5mln. Moreover, there are some restrictions put in place by regulators. For example in US, short orders can only be initiated when a stock ticks up (i.e, when executed at one tick size above the last buy transaction) or alternatively the uptick rule is imposed when a stock is down more than 10% (rules put in place by SEC).

SHORT SELLING: SOME EXAMPLES

As of February 3rd, Tesla short-sellers were feeling “the heat Monday”. Short-seller mark-to-market losses reached \$2.5 billion in just one day as Tesla's stock surged to new highs, according to the financial-analytics firm S3 Partners. At one point, the stock traded up 20%, the biggest one-day gain for the equity since 2013, according to Bloomberg data. Looking at the year-to-date mark-to-market losses instead, this brought short-sellers’ losses to \$8.31 billion, according to S3 data. That's nearly three times greater than short-seller losses in 2019, which were about \$2.9 billion mark-to-market at the year end. As we can see in the chart below, the peak was reached on February 19th at 917.42\$/per share. However, due to the coronavirus outbreak, short-sellers must have made some money recently!



Figure 1 – Tesla Share Price YTD

Source: Yahoo Finance

Another interesting example of short-selling is represented by Beyond Meat. It became publicly traded in early May 2019 at an IPO price of \$25/per share, and since then the stock price hit an intraday peak of \$230 in July. However, short sales of the stock have ballooned ahead of the expiry of the company’s so-called “lock-up period” on October 29th 2019, which will allow company insiders and pre-IPO investors to start cashing out of their holdings for the first time. In fact, the stock fell back below \$100/per share. As of January 14th 2020, Beyond Meat’s short interest was \$1.20 billion and the number of shorted shares accounted for 41% of the free float (10.53mm shares shorted). As we can see in the chart below, this makes Beyond Meat (as well as Tesla in the previous example) a really volatile stock.



Figure 2 – Beyond Meat Inc. Share Price YTD
Source: Yahoo Finance

A CHEAPER ALTERNATIVE TO SHORT SALES

According to the Chicago Board Option Exchange (“CBOE”) there were approximately 1.2bn option contracts sold via its systems in 2019. An option is a contract between two parties that gives to the buyer of the contract the right (read “option”) to buy or sell a specified amount of an underlying asset at a predetermined price called “strike price” within a specified time frame in exchange for a “premium”. The option to buy an underlying asset at a specified price is called call option, while the option to sell an underlying asset is called put option. At expiration, if the strike price of our call (put) is lower (higher) than the actual price of the underlying asset, the option will be “in the money” and will be exercised, otherwise it will be “out of the money” and will die unexercised.

But can we always exercise an option? It depends on the terms of our contract. In general we distinguish between an American option and an European one. The former can be exercised any moment before the expiration date, while the latter can be exercised only at the expiry.

So how can we reduce the risk of a short position with an option contract? There are two alternatives:

1. Buy an out of the money call option with a strike price higher than the actual price of the underlying, therefore capping the losses from the short position to the difference between the call’s strike price and the price at which we entered in our short position;
2. Buy a naked put: instead of taking a short position on an underlying, it is possible to simply buy a put option without holding the actual underlying asset. In this way, we will profit if the underlying asset

price decreases and – at the same time – our losses are capped to the premium that we paid for the option.

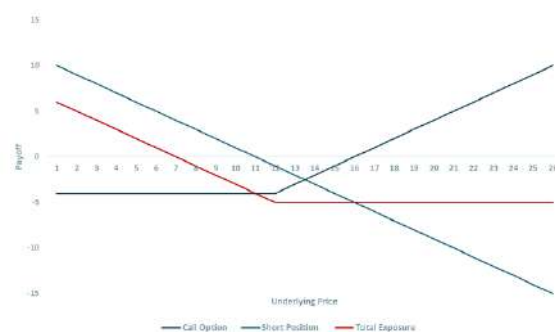


Figure 3 – Short Position + OTM Call Option
Source: Minerva IMS



Figure 4 – Naked Put Option
Source: Minerva IMS

PUT OPTIONS: AN EXAMPLE

“I view derivatives as time bombs [...].”

Warren Buffet, 2002, Berkshire Hathaway Annual Report

If someone told you to “invest like Warren Buffet”, you would instantly think about long term investing and start looking for “bargains”. You would start changing your interpretation of Bloomberg TV to Graham’s interpretation: “S&P500 entered the fastest bear market in history” would be instantly replaced by “S&P500 Covid-19 Sale – Only for a Limited Period (how limited we don’t know)”. But would you ever think about selling put options? Probably not. As we said before, buying a naked put option would effectively give a floor to your maximum loss if you are a bull or give you a “safer” short exposure if you are a bear. Selling a put option, on the other hand, will give you a long exposition to the market but with a capped-but-instant profit equal to the option premium and an unlimited-but-



postponed exposure to market downturns. However, there are some strategies that make the sale of naked put options a really smart move.

It's 1988 and Warren Buffet, one year after the Black Monday stock market crash, started buying shares in Coca-Cola (\$KO). Fast forward to 1994 and Berkshire Hathaway owns about 400 million shares in Coca-Cola: that must have been expensive! But, was it? Of course, paying \$1.3bn for 400 million share seems to be expensive (even though at the time of writing they are worth \$17.876bn at a price of \$44.68 per share), but it could have been worse.

In April 1993, Coca-Cola shares traded for \$39 and Buffet shorted 50,000 contracts (equivalent to 5 million shares) of out-of-the-money Coca-Cola put options expiring in December 1993 at an exercise price of \$35 for \$1.5 per share. By doing this, he received \$7.5 million upfront and, if Coca-Cola's price in December was to be lower than \$35, he would be forced to buy 5 million shares at \$33.50 each (\$35 - \$1.5 option premium), a more than 14% discount than the April 1993 price, which was a great price for him. Basically, by using wisely what he defined as a "time bomb" he put himself in a win-win situation.

Therefore, humbly, we could say "derivatives are time bombs but, before they detonate – if used wisely – they can be quite profitable".

CONCLUSIONS

Bottom line, it could be worthwhile to introduce the concept of gambler's ruin, which is a statistical concept expressed in a variety of forms. The original meaning is that a persistent gambler who raises his/her bet to a fixed fraction of bankroll when he/she wins, but does not reduce it when he/she loses, will eventually and inevitably go broke, even if he/she has a positive expected value on each bet.

At the end of the day, it is a matter of expected returns and investors' attitudes towards risk. If you are looking to be a successful investor, you must:

- find investments with high expected rates of return;

- be a long-term investor.

Historically, here there are some investments with nice expected rates of return:

- Buy and hold the market (from 4% to 9% per year);
- Selling options (from 0% to 70% per month, depending on the level of risk);
- Selling VIX Futures (expected returns around 40% per year).

DISCLAIMER

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