

THE SELLING CLIMAX

FUSION ANALYSIS IN ACTION

by John Palicka



The number of managers, especially hedge funds, using a combined fundamental and technical approach to investing has been rising. Achieving risk-adjusted excess returns is not easy and it makes sense to be pragmatic. Yet while there are numerous books and journals devoted to fundamental and technical analysis, each in isolation, there is little written about the two combined.

Here, I present an example of how a quantitative fusion trading strategy can be built from a combination of fundamental, technical and also behavioural considerations, to identify and trade the Selling Climax - a fairly common occurrence in the markets.

Technical considerations

Based on the definition of leading technical analyst, John J. Murphy, a selling climax is a significant reversal occurring at a chart bottom. (One can also have the reverse, a Buying Climax at a chart top). It is "...usually a dramatic turnaround at the bottom of a down move where all the discouraged longs have finally been forced out of the market on heavy volume... The subsequent absence of selling pressures creates a

vacuum over the market, which prices quickly rally to fill."

While it may not mark the final bottom of a falling market, it usually signals that a significant low has been seen. Edwards and Magee in their *Technical Analysis of Stock Trends* (8th Edition) state, "It is a harvest time for traders who, having avoided the bullish inflection at the top of the market, have funds in reserve to pick up stocks available at panic prices".

So, a selling climax based on the observations of leading technicians appears to provide good return opportunities.

Fundamental considerations

Selling climaxes may reflect various corporate imbroglios, such as earnings disappointments and governance issues. Optimistic earnings models of PEG (price/earnings to growth) and DDM (dividend discount model) are scaled down substantially, leading to lower earnings estimates and the removal of buy recommendations.

Upon sell-off, however, a stock may reach valuation levels that are more attractive (e.g. lower price/book ratio, smaller market capitalization). Some value players would also claim that the lower P/E ratio of the stock should enable it to show future risk-adjusted returns as well. This is based on the →



Figure 1.

belief that over long periods low P/E stocks perform better than high P/E stocks, because investors tend to over-pay for the perceived expected growth associated with a high P/E ratio. Under the Gordon Growth model, a P/E increases as growth increases, assuming the other variables remain constant.

Behavioural considerations

James Montier, a leading observer of behavioural finance on Wall Street has commented, "... if a stock price drops, then in theory if the analyst were correct in their initial price target, it should become even more attractive to buy. However, in practice, analysts actually reduce their target prices in response to a drop in the current market price."

One behavioural influence on analyst forecasts is Representativeness. This is a "...tendency to evaluate how likely something is with reference to how closely it resembles something else, rather than using probabilities." For example, one could see the initial accounting scandals of Tyco as similar to those of Enron, even though based

upon subsequent events they weren't even close.

Representativeness generates inappropriate forecasts, which partly explains why stocks trade at much lower levels than would otherwise be expected.

Example - Impath

We can demonstrate our fusion process by examining the stock of Impath. Impath was a medical diagnostic company that reached lofty valuation levels and eventually went into bankruptcy. Along the way, it had several investor disappointments. These included, at first, earnings disappointments and later, announcements of management governance violations, thereby causing selling climaxes. The chart below indicates a selling climax in late April, based on a disappointing earnings announcement.

On a technical basis, when IMPH went below 30 at the end of April, a short-term fusion trader would have bought the stock at that point because the combination of the stock plunge

and relatively high volume would seem to indicate a selling climax. Thus, one would expect some sort of rally once calmer days set in.

On a fundamental basis, the stock's P/E and P/B relative to the market was markedly more attractive at the approximate 30 selling climax low and appealed more to value investors. The expected P/E was 26 (1.2 x the SP 500), the trailing P/E was 33 (1.3 x the SP 500) and the P/Book was 3.3 (about 60% of the SP 500).

Just a few months before, IMPH had traded at 60 with much higher absolute and relative valuations. The significant fall in IMPH brought it closer to the sweet spot of value investors.

The stock subsequently rallied nicely. About two years later, upon announcement of fraud issues, IMPH experienced another massive selling climax, this time to about \$0.75 with a subsequent rally to over \$5.00 within one month. On a valuation basis, one could easily make the ultimate calculation of liquidation value (according to Graham and Dodd) which subsequently proved true, as IMPH paid off its creditors and as of today will soon return about \$4.50 per share to stockholders. Of course, not all selling climaxes end up in bankruptcy, and many times they are just storms in a long prosperous voyage.

Thus, to play a selling climax only technically may lead to profitable opportunities, but combined with valuations that have been shown to exhibit better than average results greatly enhances profit potential.

One can also get a better feel for the psyche of the holders by scanning SEC documents such as Schedule 14A to determine the level of nervousness that behavioral finance may impose. A stock with mostly index fund holders should show little need to panic sell, as compared to "hot money" funds that shoot first and ask questions later. In the case of IMPH, of the three major 5% holders as of April 26, 2001, all lowered or eliminated their positions by the time

“SELLING CLIMAXES ARE BECOMING MORE COMMON, ESPECIALLY WITH THE INCREASED USE OF MOMENTUM STRATEGIES BY HEDGE FUNDS.”

of the next filing on April 12, 2002. Perhaps, the Representativeness issue of IMPH reminded them of similar torpedo stocks in their portfolios.

Hedging

Selling climaxes are becoming more common, especially with the increased use of momentum strategies by hedge funds.

In a selling climax, one can attempt to buy the stock at the low and hedge risks with derivatives, namely buying a protective put option with an elasticity that is as close as possible to -1.0. Naturally, upon a stock rally from the low, the price of the put should expire worthless, but its loss would be offset by the much larger gains of the stock.

In the case of Impath, one can use an upside target price objective of around 40 based upon drawing a downward trendline that connects the peaks of near 58 in February and 48 in April. Thus, buying around 30, and using trendlines as a guide, the selling climax would lead to a 10 point potential gain.

For illustration purposes, if a 30 put strike with one month to expiry cost under 3, the ensuing risk/reward of over 3 to 1 would be very attractive. Since the selling climax tends to reverse in a few days, one would not pay much for an option's Theta (time value) but one would seek a near term put with a strike price close to the selling climax price. Should the stock not have options, one could create a synthetic option from other securities.

The spread trade

One can also execute a spread trade on an intermarket basis. For example, if the stock was a housing stock that sold off because of a selling climax, one can evaluate it against a related area (most likely the industry ETF) where the sell-off was overdone, and try to position a spread trade. A spread trade may try to buy the "cheaper" security, say the housing stock, from the proceeds of a short on the more "expensive" asset, say the ETF. Hopefully, the spread will narrow and thus generate profits after carrying and transaction costs.

Other, more complex strategies that play up behavioral aspects could also be used, such as Vega analysis of the implied and historical volatility of the stock's option. One would then exploit the Vega mispricing. Since a selling climax would lead to panic selling, this could artificially boost the option's price based on investors expecting relatively higher volatility in the security going forward.

As we can see, a selling climax combined with derivative strategies could lead to many trading permutations that should satisfy the utmost leveraged speculator.

A quantitative trading system

Traders and hedge funds may seek selling climaxes as a major strategy for profitable trades. Using fuzzy logic one can create algorithms to identify technical patterns. Fuzzy logic has been applied to more complex patterns such as head-and-shoulders, and a selling cli-

max can be easily programmed. These should lead to a quantitative decision-making process.

Using fundamental databases, one can select fundamental filters to screen for optimal valuations. Combining both, one can have artificial intelligence programs automatically present real-time trading opportunities. In fact, these trades could be done without human intervention under strict parameters, creating something akin to a fusion black box.



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