A New Breed of Oscillator

Monest Value Indicator – Part 2

In the previous article we developed an oscillator that was not prone to stickiness in the overbought and oversold regions and does not have the lag that oscillators have which are built on moving averages. Next up, we are going to study its usage and usefulness.

Dirk Vandycke

Dirk Van Dycke has been actively and independently studying the markets since 1995 with a focus on technical analysis, market dynamics and behavioural finance. He writes articles on a regular basis and develops software, some of which are available on his website www.chartmill.com. Holding master degrees in both Electronics Engineering and Computer Science, he teaches software development and statistics at a Belgian University. He can be reached at dirk@monest.net.

The Monest Value Indicator (MVI) is a short-term oscillator which tries to capture overbought and oversold setups. As a consequence of its design, a statistical normalisation procedure, it is unlike most other well known oscillators. For one thing, it does not have the stickiness that keeps other range bound oscillators in overbought and oversold zones when a strong trend is developing. The lag associated with moving average based oscillators is also not an issue with the MVI. What is more, having no parameters in its equation, it is totally objective by definition. This still leaves us with a necessity for an objective interpretation. Let us find out if our indicator is of any real and statistical significant usefulness.

Value Consensus

In the previous article we introduced the Monest Value Indicator (MVI) and how it is constructed. Due to its normalising nature it can be used in the same way for any time series.

Any value between -4 and +4 indicates a strong short-term consensus regarding current pricing and fair value. Between four and eight we have slight overvaluation and anything higher than eight indicates plain overpricing. It is very rare to see values much higher than eight with this indicator, even though this not a range bound oscillator. Given that value for the MVI is rarely much higher than nine, this would indicate major overvaluation with respect to short-term consensus.

Likewise we define minor undervaluation in regard to short-term consensus between -4 and -8 and plain undervaluation below -8. Anything lower than -9 would be considered major undervaluation.

These levels are not written in stone, but nevertheless they are deducted from the standard deviation intervals we have in the statistical normalisation process.

For the purpose of finding the advantages of the MVI, we will consider the violations of 8 and -8 of primary interest to us. In other words, we will look into what happens if we focus on just those overvaluation and undervaluation signals. Anything still further from zero would give us information to use in order to obtain a meaningful sample space.

Right, Right Away

Do you remember a trade where at first you have this small adverse movement against you, before the trade finally takes off? I think every trader knows what we mean. In fact, when you open a position, costs are incurred, putting the position in the red from the start. If you can picture

F1) An Overvalued vs. an Undervalued Buy

What is the difference between trading a long setup not on the signal but on the first undervaluation after that (MVI<=8)? In this chart two entries are compared, coinciding with the highest and lowest MVI value for that week.

Source: www.chartmill.com

that, then the trade where you get stopped out before it materialises is not hard to imagine either. Would it not just be cool if we could do something about this?

Look at Figure 1. It is an example of how a setup accompanied by a short-term overvaluation (MVI>4) can be postponed until the MVI drops below -8. What we did is, of course after the fact, see how the trade would have turned out if it would have been entered on the highest MVI value of the week (5.53) in comparison to what would have happened if we bought at the lowest MVI value that week (-8.43). The effect is a far lesser adverse excursion of the trade after its initialisation. What is more, the postponed entry can make the difference in getting stopped out and loosing the setup out of sight, and having a very successful trade, riding the subsequent trend in the case of the postponed entry. This is just an example of course. But it is a start to see if the idea of just taking the undervalued signals

of a system has merit. At least, the idea is sound, because if you only take setups that are undervalued, you might have a far better profit/loss ratio on the trade. And we just might have better entries leaving us with less initial adverse recursion before trade takes off. Which, in turn, might even lead to fewer losers because fewer setups are taken. We only take those setups where an undervaluation is present or turns up soon enough after the setup signal. And because of less counter-movement, fewer trades might get stopped out.

So, what if we opened long positions only on moments of short-term undervaluation and, likewise, short positions only when short-term consensus of value is overrated.

MVI to the Rescue

To prove the possible added value of our indicator here, we pull out our Monte Carlo simulator and look at a whole lot of random entries where the MVI went below -8 within the next week

(remember our MVI is a short-term value indicator). One could point out the fact we only take the random entries where the MVI goes below -8 within the next week, as a problem. What about all the random picks where the MVI does not go below -8 in the five days that follow? Well we do not have to take those setups. At this point we do not want to prove that we have a better system with the MVI constraint added. We will get into that next. For the moment, we just want to see what happens with our initial adverse recursion of trades when we wait for undervaluation, or, if that does not happen, do not take the trades at all.

Figure 2 displays an average trade (of thousands of random entries) in a few months of a strong bull market where an undervaluation (MVI<-8) followed within the next week. In the same figure one can see the difference if we just wait for the MVI to go below -8 before taking an entry. The difference is clear. The random entry has an initial drawdown of up to ten per cent. Remember that, through position sizing, one might invest 20 per cent of one's portfolio while taking only per cent risk on that portfolio. Which, in turn, might stand for a ten per cent loss on the position (but only one per cent on the portfolio). Nevertheless, there is hardly any

Monest Value Indicator

The Monest Value Indicator (MVI) is a short term oscillator trying to capture overbought and oversold setups. It is available at www.chartmill.com, both on the charts as well as in its screener. So it is possible to add screening constraints on the MVI value (greater of smaller than a certain level), giving, for instance, only undervalued equities and ETF's in your custom screen based on other criteria.

F2) Average Random Buy vs. Postponed Random Buy
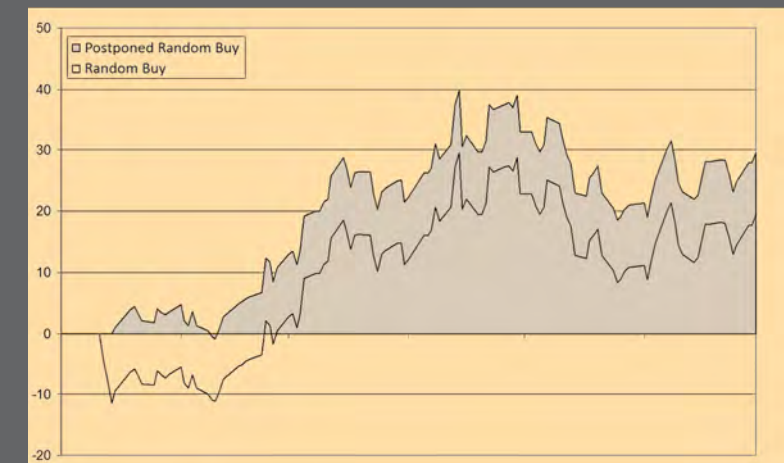
A comparison of an average random buy (during a bull market) and what happens if the buy is postponed until a MVI undervaluation (<=8) is recorded or, if that does not happen within a week, the setup is aborted.

Source: www.chartmill.com

drawdown left when the random entries are postponed until the MVI goes below -8 (or the setup gets cancelled if it does not go below -8 in the next week). This simulation did not take costs into account. But the point for using our MVI is clearly made. We will not go into a similar simulation for a bear market, using short positions. Results were indicative of a similar effect taking place.

Of course this is based on what we see for an average trade. It does not say anything about what could happen with any specific trade taken.

Let Us Dig Deeper

With the promising results from our simple preliminary test, we wanted to dig deeper into the possible benefits of the Monest Value Indicator (MVI). So we came up with the following test setup.

Let us see what our average trade would look like under different entry strategies. One of which will be our undervalued filter based on an MVI value below -7. In contrast, as the opposite entry extreme, we have an overvalued entry strategy, buying only when the MVI is greater than seven. Our third entry strategy is a dollar cost averaging one, buying every first day of each month. Of course for the purpose of comparison, we still have our average random entry trade and also our random entry trade only made when the MVI is below -7. Hence we compare five strategies to a mere random entry strategy. Again the test is run in a pure bull market.

All six strategies were compared on a 50 day basis after

> ## "If time is money, we would add that 'timing is money'. "

each entry. The result of which can be seen in Figure 3.

The period tested being a bull market, still does not seem to help our overvalued entry system, which is barely able to make money with several large periods in the red zone. The dollar cost averaging entry system performs a lot better, even better than the random entries system. Exactly what could be expected, because dollar cost averaging benefits from buying more shares at lower prices and less shares at higher prices. The best performing system is, as we hoped, the entry system buying only on undervaluation. It performs best over almost the entire period.

Combining undervaluation with random entry (taking only the random entries when the MVI is below -7), does seem to improve the random entry system. However the equity curve becomes more volatile. Which could be the reason it loses from merely random entry by a big performance drop at the end. The overall conclusion is that buying on undervaluation, as indicated by the Monest Value Indicator, results in a better performance and far less time of the trade being spent in the red.

Conclusion

If time is money, we would add that "timing is money". There is evidence supporting the idea that our MVI has true added value not only in measuring short-term valuation consensus, but also might be a valuable system add-on to lower the frequency of losers by lowering the frequency of trades, dumping the ones with a poor profit/loss ratio. It seems as if the initial drawdown on trades can be kept smaller, meaning fewer positions are stopped out because of initial adverse recursion. In our final article on this new indicator we will go into its effect as a possible trade system enhancer (taking only the undervalued setups). ◼

MVI Value on Entry

The entry systems had, on average, the following MVI value on entry:

Random Entry	-0.01
Undervalued	-7.70
Overvalued	7.53
Dollar Cost Averaging	-0.84
Undervalued Random Entry	-8.09

F3) Different Entries vs. Undervalued MVI Entry
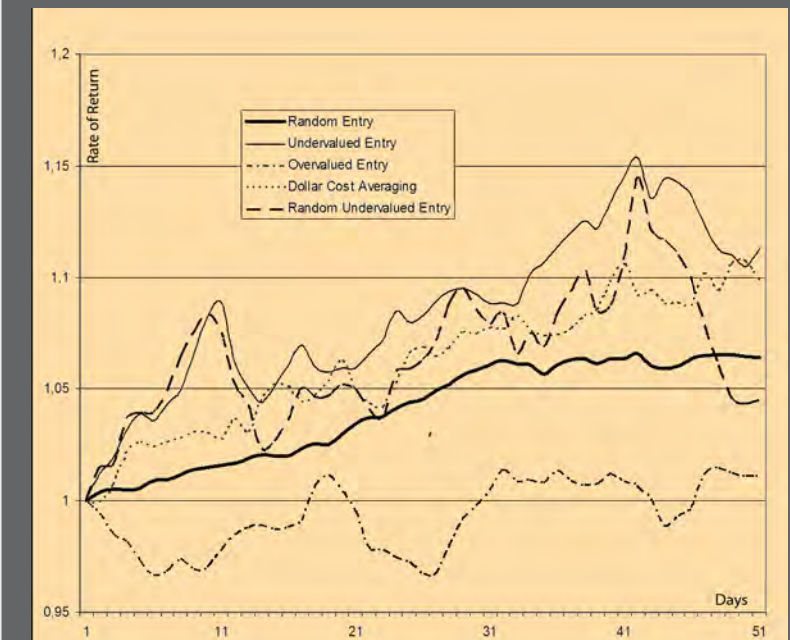
Buying while short-term undervalued (MVI<=7) seems to pay off against other entry strategies. All systems are compared to a random entry system.

Source: www.chartmill.com