Is Trend-Following Performance Mercurial?

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Abstract
The first half of 2022 was an arduous stretch for markets, as the reflation risks of 2021 shifted to full-blown inflation coming into the year. Amid the resultant dispersion in active management styles, trend-following has been a notable winner. But given the capricious nature of global events, it's reasonable to ask how trend portfolios might fare under a sudden reversal of recent moves. In this note, we show that volatility-targeting trend-following portfolios would not per se draw down badly, even in an extreme scenario.

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1. Introduction

The first half of 2022 gave investors plenty to contend with. Between global supply knots, war in Ukraine, and evolving central bank policy, the year has seen dramatic moves in major asset classes. Stocks and bonds are down roughly 20% alongside striking moves in commodities and currencies. Trend-following has by and large been able to capitalize on these moves; the SocGen CTA Trend Sub-Index is up nearly 30% through the end of June (see [1] for details).

Of course, there is no guarantee that trend-following will continue its charmed run. What if recent trends die out – should we worry about being whipped around in sideways markets? What if unforeseen circumstances bring about an even sharper reversal in global markets?

We cannot reasonably hope to forecast such events, much less make predictions about how asset prices and correlations would respond in the full range of outcomes. A conservative – if contrived – scenario is to assume a perfect reversal of the moves in the first half of 2022. That is, what if market prices completely re-trace their moves from the end of June 2022 back to January 1, 2022? How would trend-following portfolios fare?

In the following, we show that generic trend models would hold on to a good portion of their year-to-date gains. Of course, we can always engineer circumstances for which some trend-followers would finish in the red. Rather, the point is to use an extreme example to highlight some of the attractive features of a frequently-rebalanced trend-following portfolio.

Equity	Fixed Income	Commodity	Currency
S&P 500	US 10y Note	WTI Crude Oil	EUR
DJ Euro Stoxx 50	Euro Bund	Corn	GBP
Nikkei 225	Short Sterling	Gold	JPY

Table 1. A portfolio of twelve benchmark futures and currency instruments.

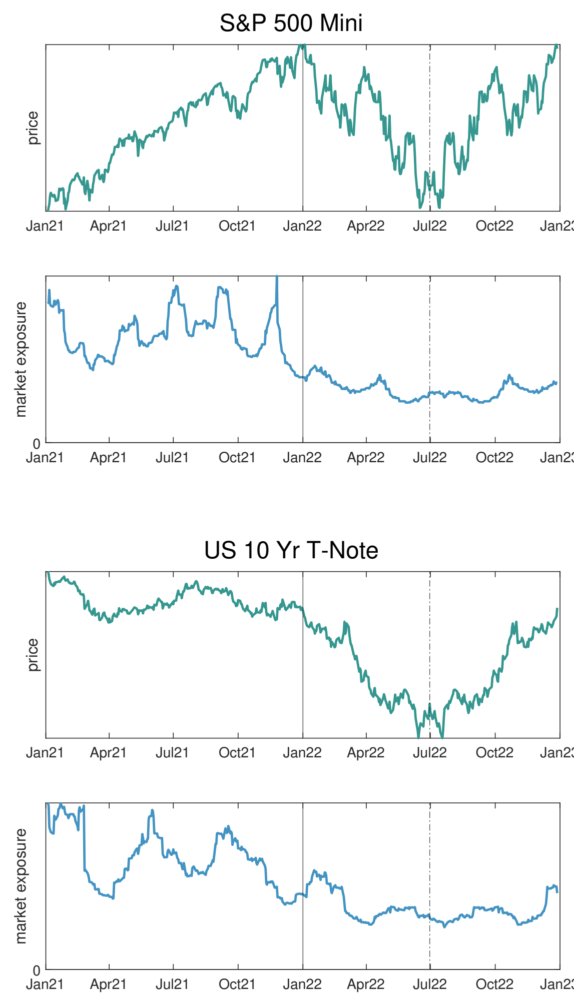

Figure 1. Historical and simulated ("flipped") prices for two futures markets, as well as gross exposure, here defined as the magnitude of the trading signal divided by the rolling market volatility. Market positions have shrunk this year in response to heightened volatility.

2. Holding a Mirror to Time

Consider a core portfolio of macro instruments (see Table 1). We hypothetically trade these markets using a generic trend-following

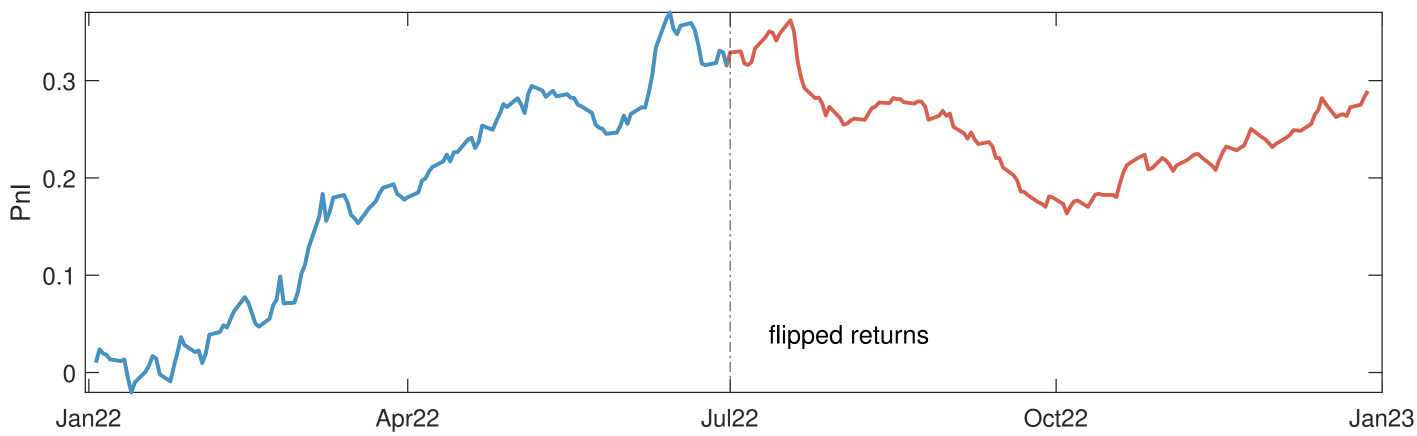

Figure 2. Historical and simulated performance for a generic trend-follower. We see the model recovering a good portion of its gains after a simulated full reversal of market returns starting in July 2022.

rule: buy the asset when its price goes above the 200-day simple moving average, and sell short when the price is below. Signals are then scaled inversely by the 30-day rolling market volatility. We rebalance daily to target a constant 15% annualized portfolio volatility. Figure 1 shows price series for some sample markets from 2021 to 2023. The six months following June 2022 are simulated as a total reversal of the preceding market returns in 2022H1. We see how drastic such a reversal would be, with strong trends having characterized many markets so far this year. Alongside the prices we show market-level gross exposures, here simply proportional to the inverse of market volatility. The de-levering in response to heightened volatility puts the model in a good position should market behavior suddenly revert.

We show hypothetical cumulative returns in Figure 2.[1] After some initial losses, the model turns and recovers more than 90% of its gains as of end of June 2022. Note the beneficial effect of rebalancing positions inversely with market volatility. There is some symmetry in the NAV just after the flip, which starts to break down after about a month. While the model is wrong-footed starting July, the positions, and hence losses, are smaller than they would have been earlier in the year when the trailing volatility was not so high. By year end, despite the constituent markets having gone nowhere, this strategy is able to record a nearly 30% return. Of course, this only represents one potential price trajectory. Other scenarios could lead to better or worse outcomes for our generic strategy. It is still likely, however, that volatility combined with signals will lead to a proportion of gains being retained.

[1] Performance shown is gross of transactions costs. For this very liquid set of futures and currencies, costs do not qualitatively change the result.

3. Conclusion

Simply put, trend-following works best when there are trends to follow. After a period marked by sustained directional moves, it is natural to consider what might come next. We have shown that even under an extreme reversal of market conditions, a very simple trend-follower would be able to lock in most of its YTD gains. We've also highlighted the importance of rebalancing for volatility-targeting, which in this case allows our model to harvest the volatility of the underlying assets and achieve a positive return despite those assets doing a round trip on the year.

References

[1] `https://portal.barclayhedge.com/cgi-bin/indices/displayHfIndex.cgi?indexCat=SG-Prime-Services-Indices&indexName=SG-Trend-Index`

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