To do:

* Introduce other metrics used and why
* Create own 10 year yield chart
* Check emlyns data for SA
* Recalc performance under rising rates
* Rewrite summary for rising rates
* Calculate correlation financialisation returns
* Calculation correlations to commodities vs other assets
* Whipsaws chart
* Review faber sources for behavioural biases
* Rewrite practical implication/ behaviour implications
* Redo bitcoin correlation data
* Update references
* Write conclusion
* Write introduction
* Rewrite abstract

ABSTRACT

In 2006-2013 Mebane Faber released papers outlining a quantitative approach to tactical asset allocation that proved to improve risk adjusted returns across various asset classes. In this paper I revisit Faber’s papers, replicate his model with updated data to the end of 2016 and apply the same quantitative method to a South African asset allocation to see if his observations hold true. I then analyse practical issues for both institutional and retail investors using this approach before combining topical ideas to the original research. [rewrite once finished]

# Introduction

[write once finished]

# Practical and behavioural implications for Trend Following Investors

* Retail costs, behavioural finance aspects of sitting in strategy underperforming, too simple?
* Institutional investor benchmarks
* Clenow (2013) comments that although trend following strategies are easy, “sticking with them in reality is a whole different ball game”.
* Criticism of trend following – look in clenow - Long drawdowns, underperformance in bull markets
* Trend following strategies are dominated by a large percentage of small losing trades with a few large winners. Show distribution, can investor handle being wrong most of the time?
* the ability to cut losses and let winners run is opposite of investors natural instincts. (hence mechanical)
* Negative skew (koulajian and cskwianianc 2011). Are all asset classes negatively skewed? If so (equities go up the stairs, down the lift) then trend following helps cut the losses
* Although the diversification in the asset allocation reduces volatility risk, investors exhibit behavioural biases which work against the strategy.
* Tracking error aversion: investors are likely to track their investment to popular benchmarks like the S&P 500. Any underperformance relative to this benchmark, or even the buy and hold version of the asset allocation, will create doubt for the investor that they have selected the right strategy. Of course with hindsight it will be easy to identify the perfect asset allocation, removing asset classes that have underperformed and replacing them with allocations to the best perofmraning asset allocations. However would investors have been able to stick with this strategy. [Talk about study by newfound about god being a manager and how he would be fired]. Faber identifies his strategy underperforming in bull markets such as the equities market in 1990s. During these times will investors be able to stick to the strategy despite it underperforming each year. [look at rolling returns]. Humans are fickle, every bull market is apparently different and we have learned from the past. Humans greed / fear of missing out compared to the neighbours
* Doing nothing: with a timing model investors need to be able to follow the rules – might not be able to sit on their hands. *There is the plain fool, who does the wrong thing at all times everywhere, but there is also the Wall Street fool, who thinks he must trade all the time. Lefevre (reminiscences of a stock operator)*
* *The market does not beat them. They beat themselves, because though they have brains they cannot sit tight. Old Turkey was dead right in doing and saying what he did. He had not only the courage of his convictions but also the intelligence and patience to sit tight.*
* In times of underperformance?
* Tracking error – create worst 10 years with corresponding B&H and JALSH returns as well as rolling returns chart to show periods of underperformance. Would investor be able to stick when other side of the fence looks better. Would hedge fund manager be able to keep clients or would they be fired
* Daily drawdowns – makes strategy feel worse
* People like to trade [market timing JSE article
* Faber (ivy 2009) highlights that a trend following model will underperform a buy and hold strategy during a strong bull market. He also highlights the timing requires discipline (value of rules based approach) and you can have multiple losing trades in a row. (Humans don’t like being wrong bias).
* Active vs Passive - Evidence should an active model can consistently beat passive. However biggest thing is fees – if someone is going to charge 2% and 20% to do this then not worth it (show with stats?). The resulting average returns (13% vs 4.8% for buy and hold) with similar standard deviation (11.2% vs 10.3# for buy and hold) gives the trend following strategy a far superior sharpe ratio (1.16 vs 0.47 for the buy and hold) highlighting the value in actively trading vs passively buying and holding.
* Markets are known to rise on the elevator fall by the lift. In times of panic, the majority of investors are net long? Panic creates fear of losing. Faster emotional than greed?
* “Ilmanen (2011) and Friesen et all (2009) offer explanations as to why trend following may have been successful historically, including the tendency for investors to underreact to news and their tendency to exhibit herding behaviour” - trend is our friend clare et all
* Leverage and portfolio theory - Portfolio theory is you find the optimal portfolio and leverage up. Problem with leverage is it can be fatal for levered investors. Based on volatility. Past volatility. But what does volatility actually mean for an investor. Take 2008 (inker 2010) a levered investor would have been forced to sell…

Trend following strategies typically have low win rates and expect to lose 60-70% of all trades. However for the 30-40% of winning trades, the winners win big whilst the losers lose small. On average this results in positive expectancy.

Clenow (2015 - https://www.mta.org/wp-content/uploads/2015/11/0828-clenow.pdf) reports that most investors fail to trade trend following strategies for a variety of reasons including focusing on the wrong thing (entry signals), focusing on a single asset class and failure to properly diversify.

Clenow also identifies that CTAs will struggle in low yield environments due to interest income