
*Momentum Strategy:
A Risk Management Perspective*

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Abstract

Purpose: the present study investigates momentum strategies' potential in terms of risk mitigation whereas the available literature on the subject of the momentum-analysis is targeted to outperforming the market in terms of profitability.

Design / Methodology / Approach: this paper proposes an alternative formulation of the momentum strategy which relies on price levels referred to a 6-month moving average and entails the possibility to stay "off the (equity) market" throughout the bearish momentum phases, which occur when the price level falls below the moving average.

Findings: the proposed momentum strategy delivers remarkable benefits with respect to a passive strategy in terms of both risk reduction and return-risk ratios improvement. The strategy is backtested on a set of stock indices wide enough to provide statistical inference aimed to generalize the findings to any stock index worldwide. To these regards, the article provides confidence interval estimates for a comprehensive set of performance metrics.

Practical Implications: the empirical evidence provided hereby advocates for inclusion of the momentum analysis in the portfolio manager toolbox and proves that staying temporarily off the market pays off. These findings are resourceful for balanced funds' managers who are allowed to periodically reduce the percentage of the portfolio's assets allocated to the equity asset class.

Originality and Value: with respect to the current academic literature, the proposed momentum-based active strategy represents a novelty as it encompasses the possibility to stay off the market. By contrast, all the available literature on momentum-based strategies is focused on stock picking and assumes that the fund's assets are always fully invested on the equity asset class.

Keywords: Portfolio Management, Momentum Analysis, All Country World Index

JEL Codes: G11, D53

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I. Introduction

In financial economics, the efficient market hypothesis (EMH) is a fundamental theory which is the subject of intense debate among academics and professional investors because of its profound implications. EMH asserts that markets are efficient in the sense that the prices fully reflect all relevant information (Fama, 1970). Fama defines three types of market efficiency: the strong-form, the semi-strong and the weak-form efficiency. Some empirical studies have definitively refuted the efficient market hypothesis even in its weakest acceptance:

- Weak-form efficiency: in the weak form it is not possible for investors to make excess returns by using trading strategies based on historical price information.

Market efficiency, either strong or weak, implies that no active strategy based on past data – neither a momentum strategy nor a contrarian strategy – should generate extra returns with respect to a passive strategy. By contrast, both momentum strategies and the contrarian strategies have been proved to overperform passive strategies, respectively with mid-term/long-term (Jegadeesh & Titman, 1993) and short-term (De Bondt, 1985) holding periods. Quite recently, MSCI (Morgan Stanley Consulting International) back-tested the most renowned momentum strategy, that formulated by Jegadeesh and Titman (1993), on the stocks comprised in the MSCI ACWI (All Country World Index) and demonstrated the viability of said strategy as a means to enhance profitability (MSCI, 2021).

The present study does not aim to provide further evidence for the refutation of the market efficiency theory. To these regards, Jegadeesh & Titman (2002) and Bhootra (2011) already provided quite an extensive coverage of the subject suggesting that momentum largely results from behavioural biases. The present paper rather investigates the effectiveness of a new formulation of momentum strategy which instead of being targeted to increasing profitability is expressly committed to consistently reducing risk and optimising the return-risk trade-off metrics. The preeminent feature of the alternative momentum strategy proposed in this paper is that it's an “*on-off*” strategy, meaning that it demands to stay on the market through the bullish momentum phases and to stay off the market through the bearish momentum phases. The scholars' formulation of the momentum strategy, by contrast, demands to stay always on the market, periodically replacing some holdings with others.

2. Literature Review

The strategy proposed in this paper differs from the Jegadeesh & Titman strategy (1993) mentioned so far not only in that it is allowed to stay off the market but also with respect to the predictors involved, namely the price level instead of the past returns. Price levels are preferred by the present authors in consideration of the psychological “anchor-and-adjust” bias reported by Kahneman and Tversky (1982) which affects individuals in general, especially the traders. Besides, according to a study by George & Hwang (2004), price levels, such as the 52-week high, provide a psychological anchor to traders and as a result their decisions are significantly influenced by such levels, and finally future prices are influenced by said decisions creating a trend-continuation effect. Said scholars provided empirical evidence for the superiority of a price-level-based momentum strategy with respect to past-return-based momentum strategies. Regardless of the technicalities involved in price level determination, it is worth noticing that by considering price levels instead of market returns the impact of the so-called “overreaction effect”, a counter-trend effect which would undermine the profitability (Chopra et al. 1982), is definitely reduced.

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