

Rebalancing Risk

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Introduction

How rebalancing works

- Start with buy-and-hold portfolio
- Add a short straddle (sell a call and put option)

Under ideal conditions

- The conditions under which rebalancing returns.. when there is mean reversion
- when the price underperf

The problem

Cumulative returns to 60/40 portfolios of the S&P500 and 10-year US Treasury bond

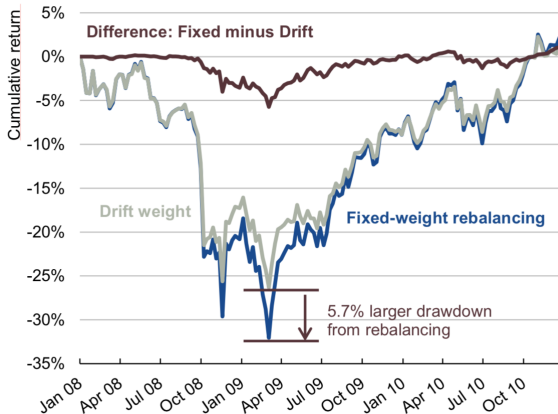


Figure 1: Rebalancing magnified drawdowns. Source: Reuters.

Characteristic return profile

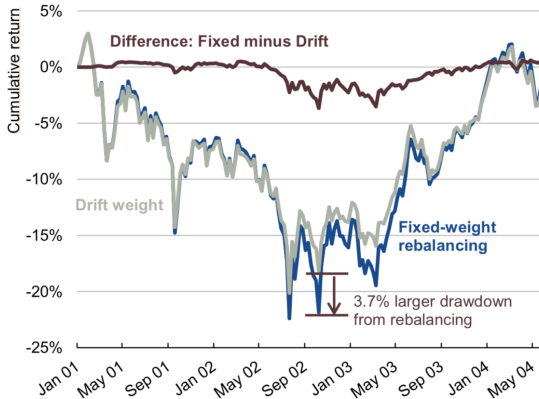
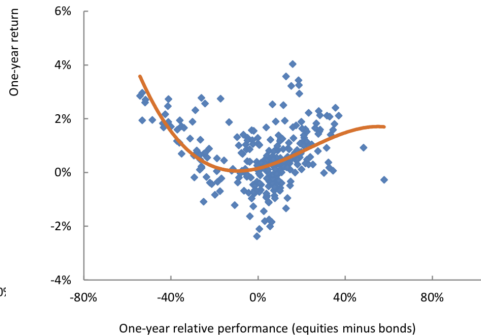
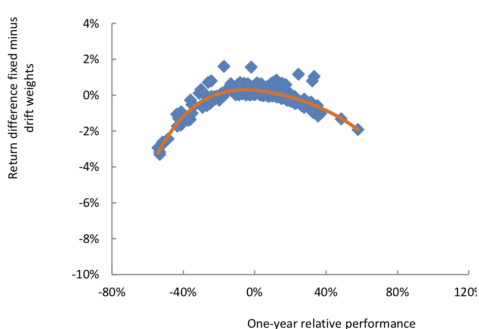


Figure 2: Divergence in stock and bond returns results in negative convexity.
Source: Reuters.

A solution

Leverage opposing return profile of momentum overlay



Method

- high frequency momentum overlay can reduce risks induced by rebalancing # Results

Future

Discussion