

Relative Momentum Back-test

Summary

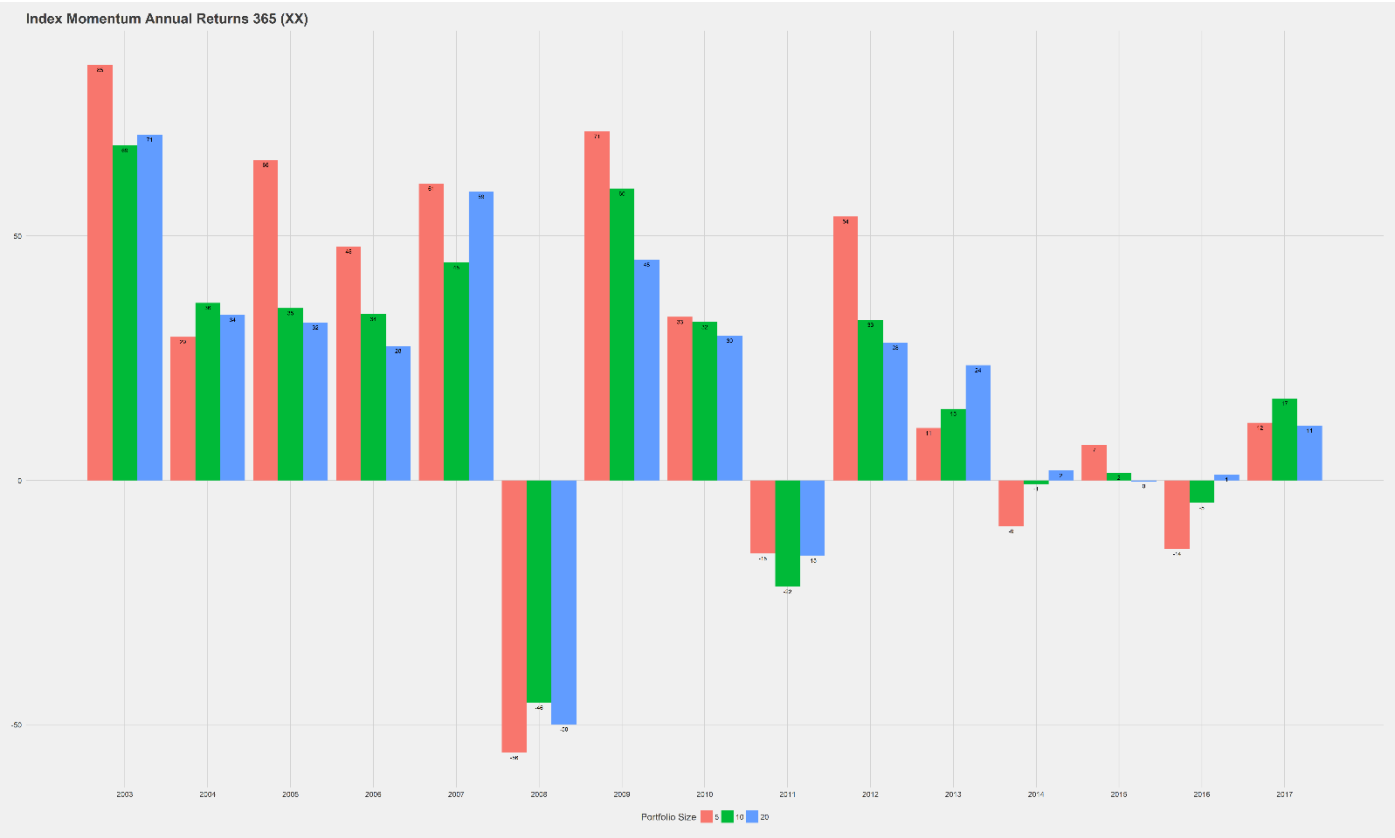
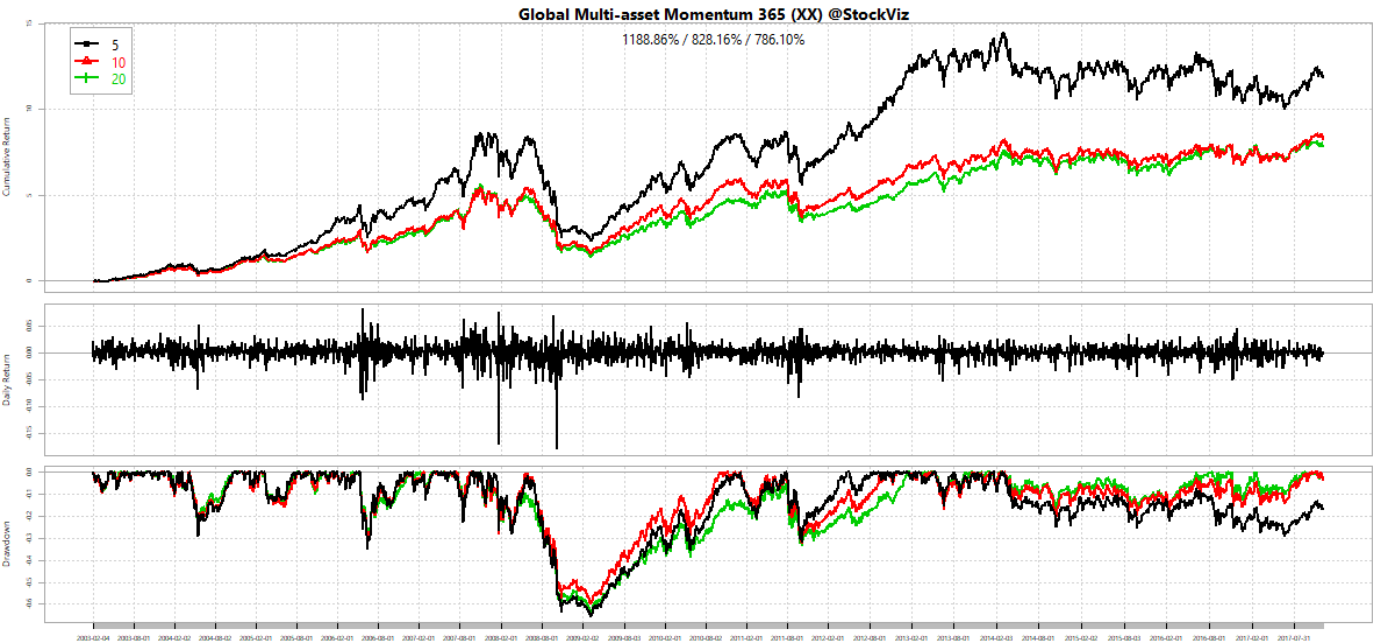
We applied a relative momentum trading strategy over the universe of NASDAQ-OMX USD TR indices. The goal was to understand what doesn't work for momentum over different asset classes. We ran the algorithm over different look-back periods (365 and 182 days), position sizes (5, 10, 20) and filters (with and without ID and EMA5).

Counterintuitively, 182-day momentum works better than 365-day momentum and a 5-position portfolio outperforms the others.

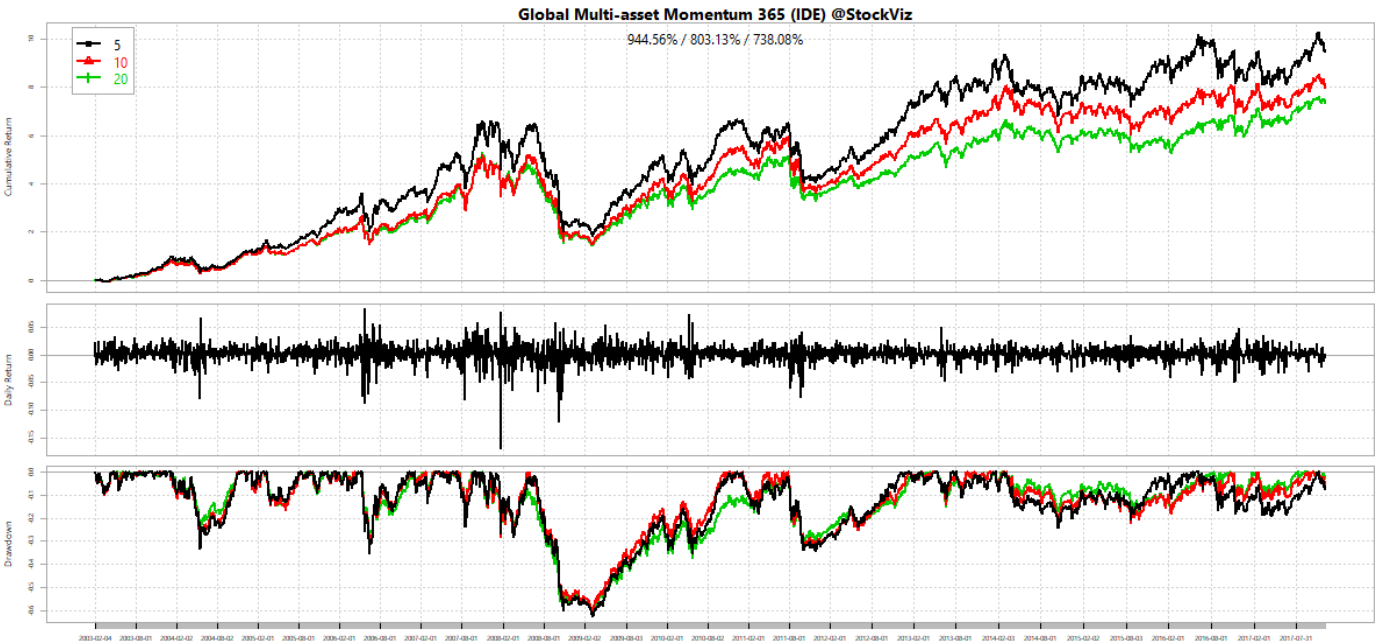
We also wanted to check if these signals can be used to time Indian market entry/exits. Turns out, we cannot.

Returns tend to be lumpy, as expected.

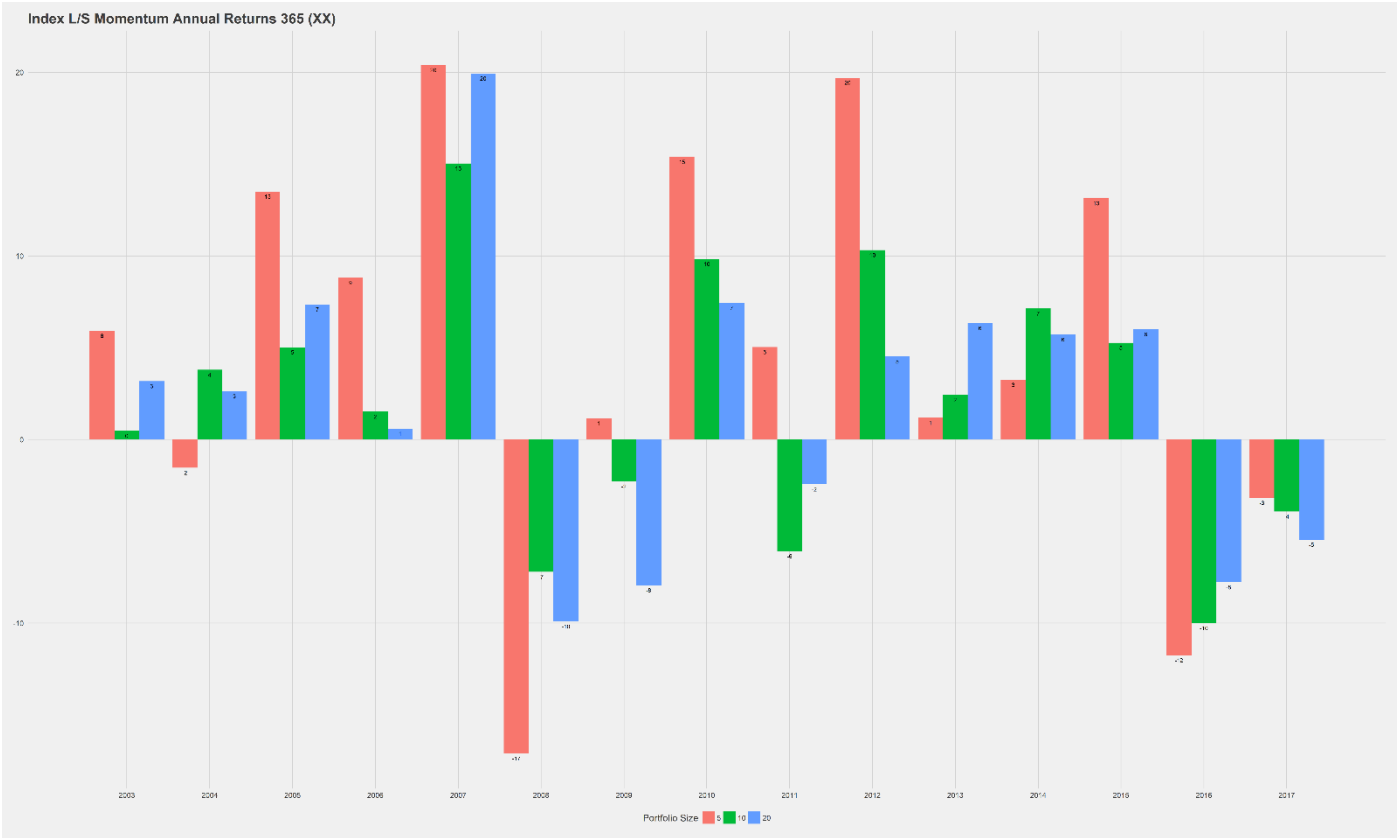
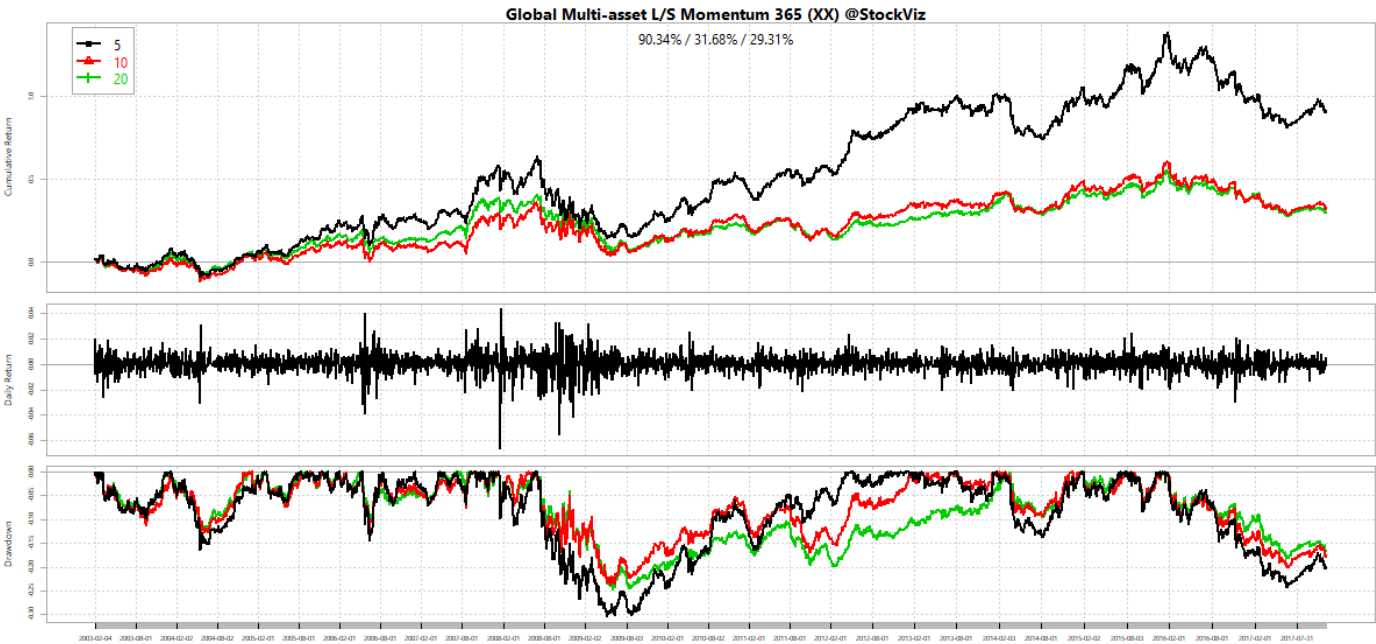
Raw, long-only relative momentum (365-day lookback)



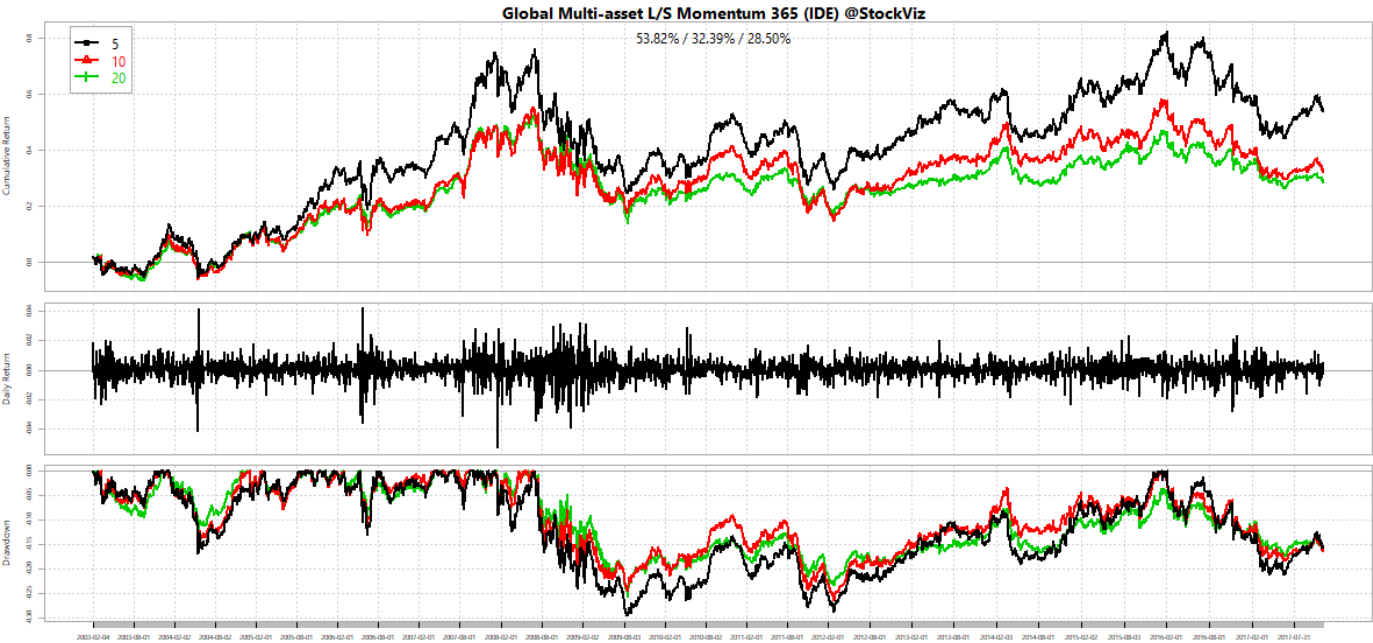
ID+EMA5, long-only relative momentum (365-day lookback)



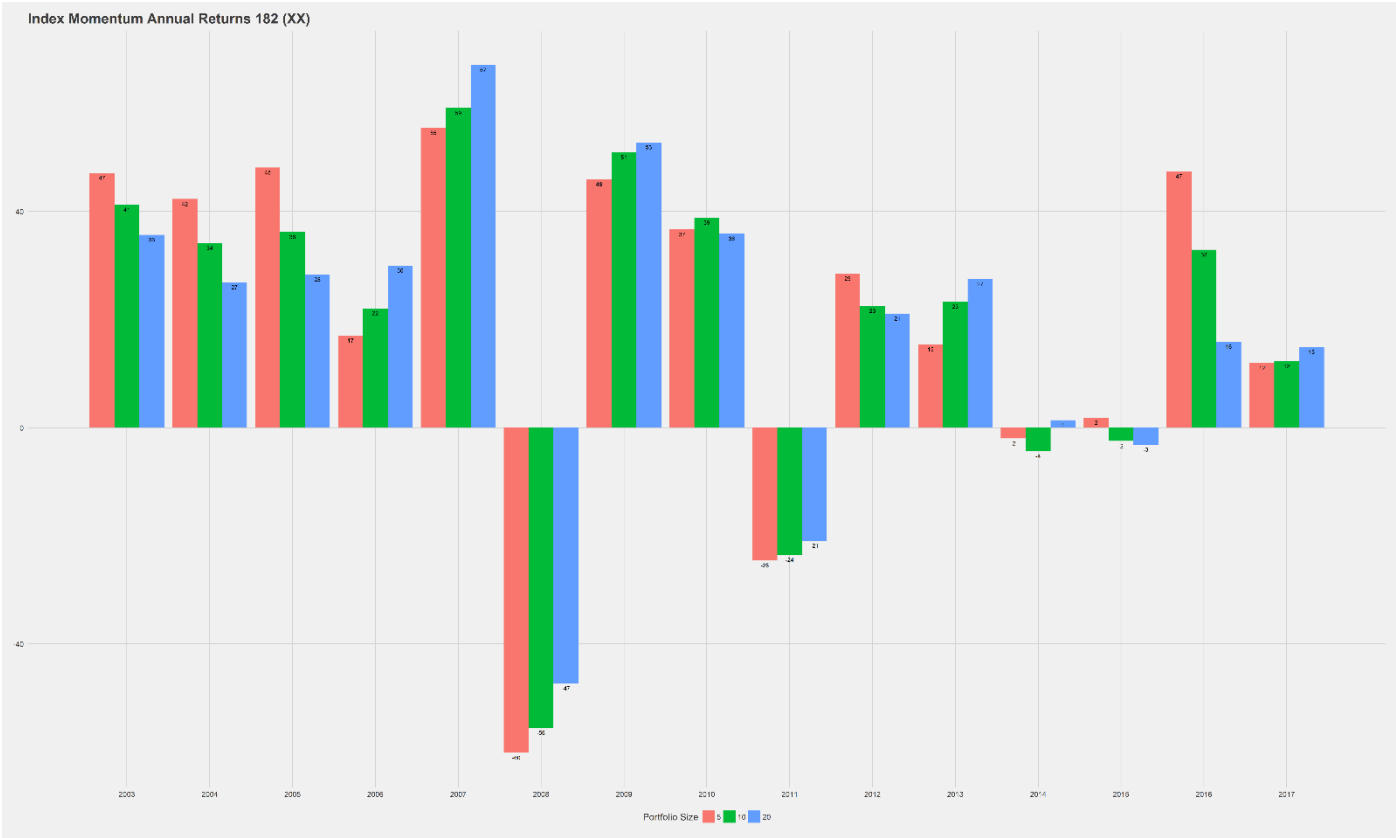
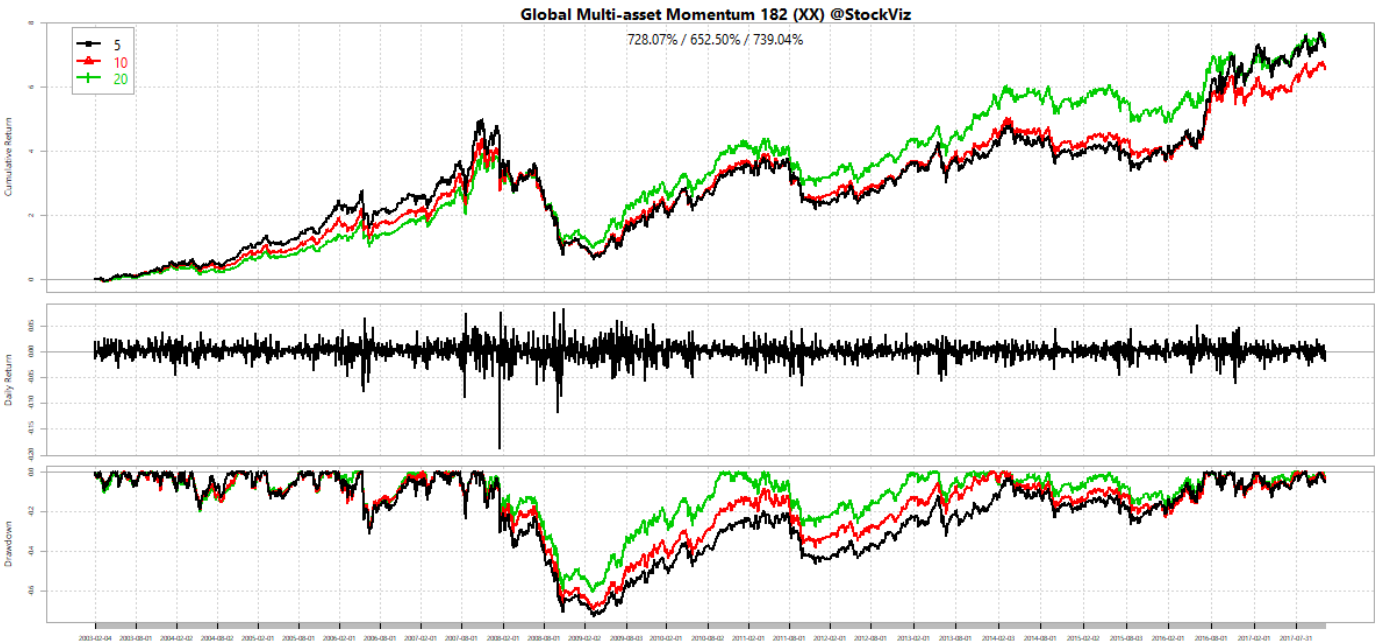
Raw, long-short relative momentum (365-day lookback)



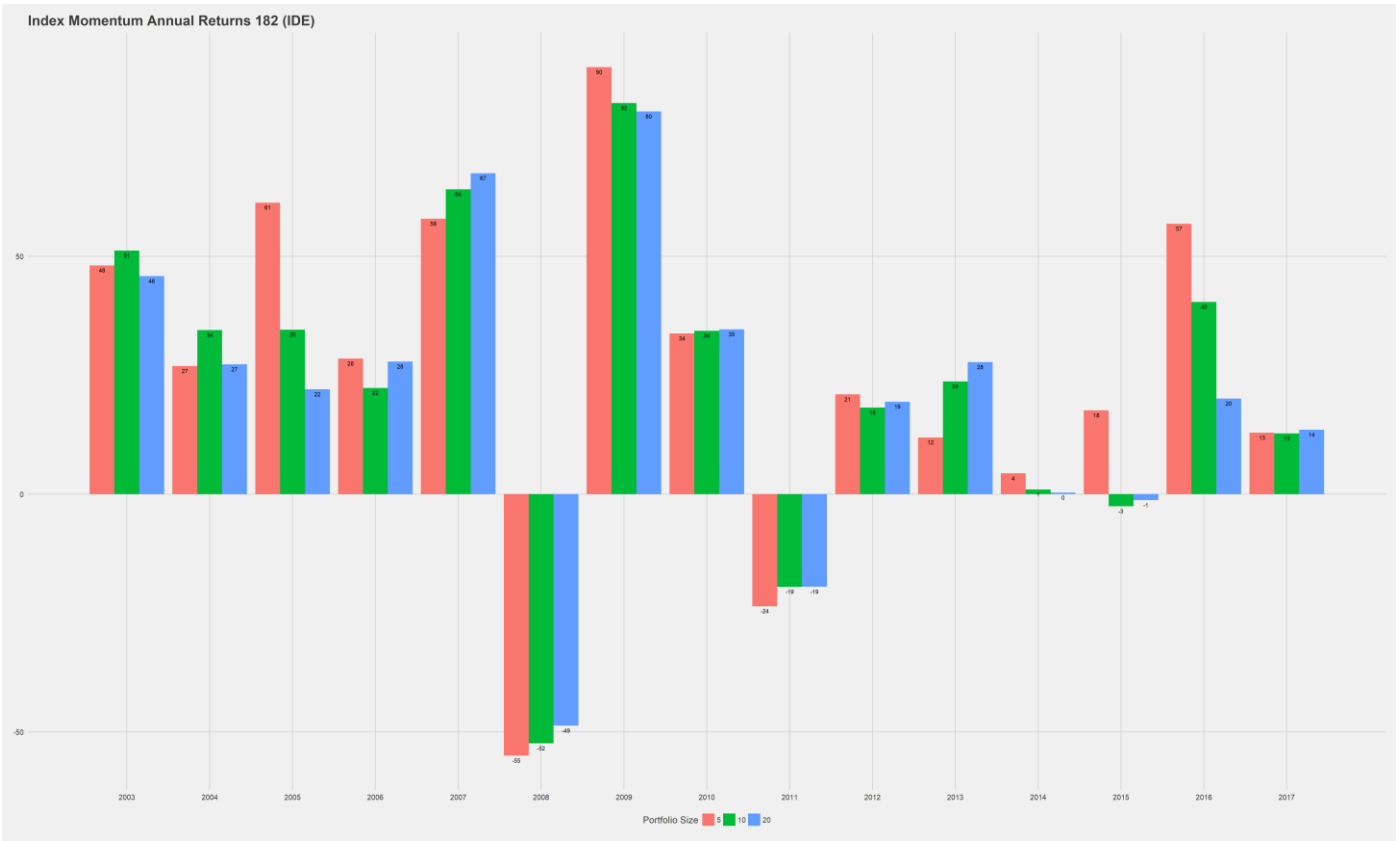
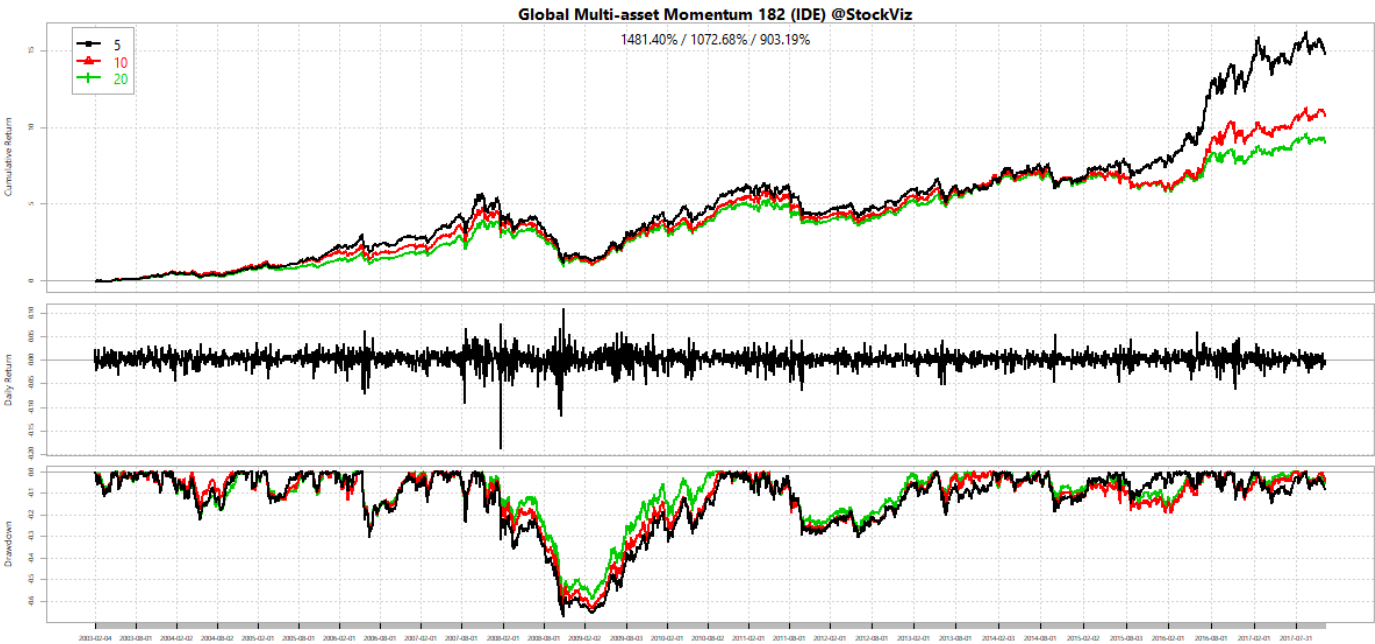
ID+EMA5, long-short relative momentum (365-day lookahead)



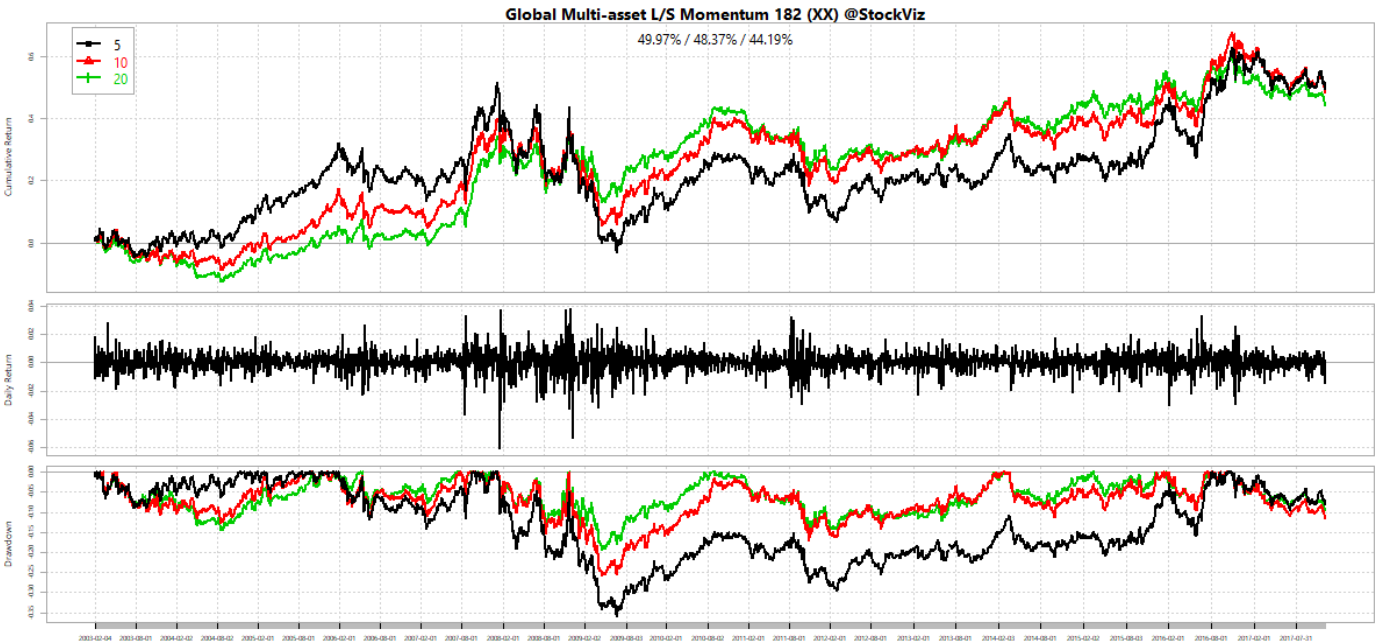
Raw, long-only relative momentum (182-day lookback)



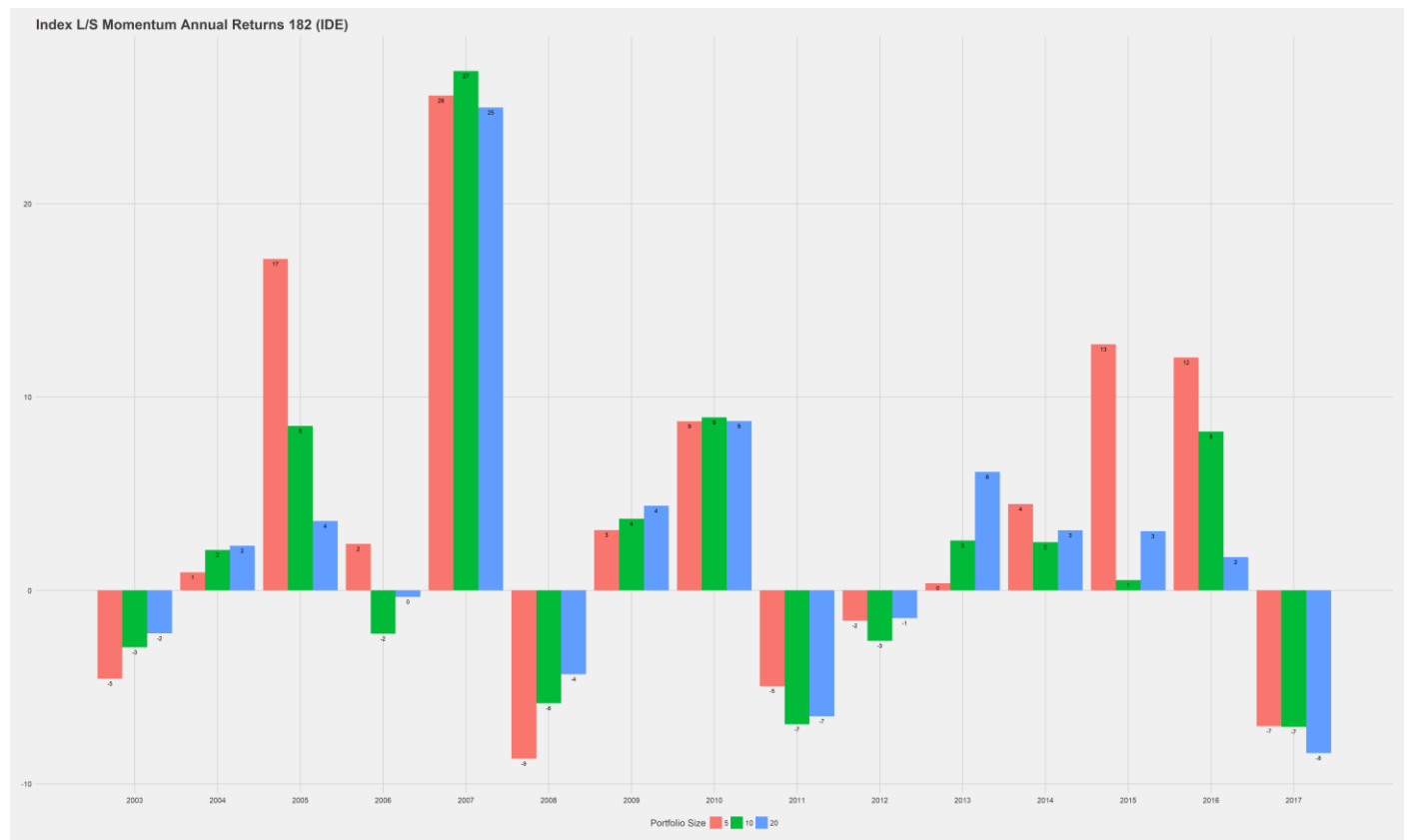
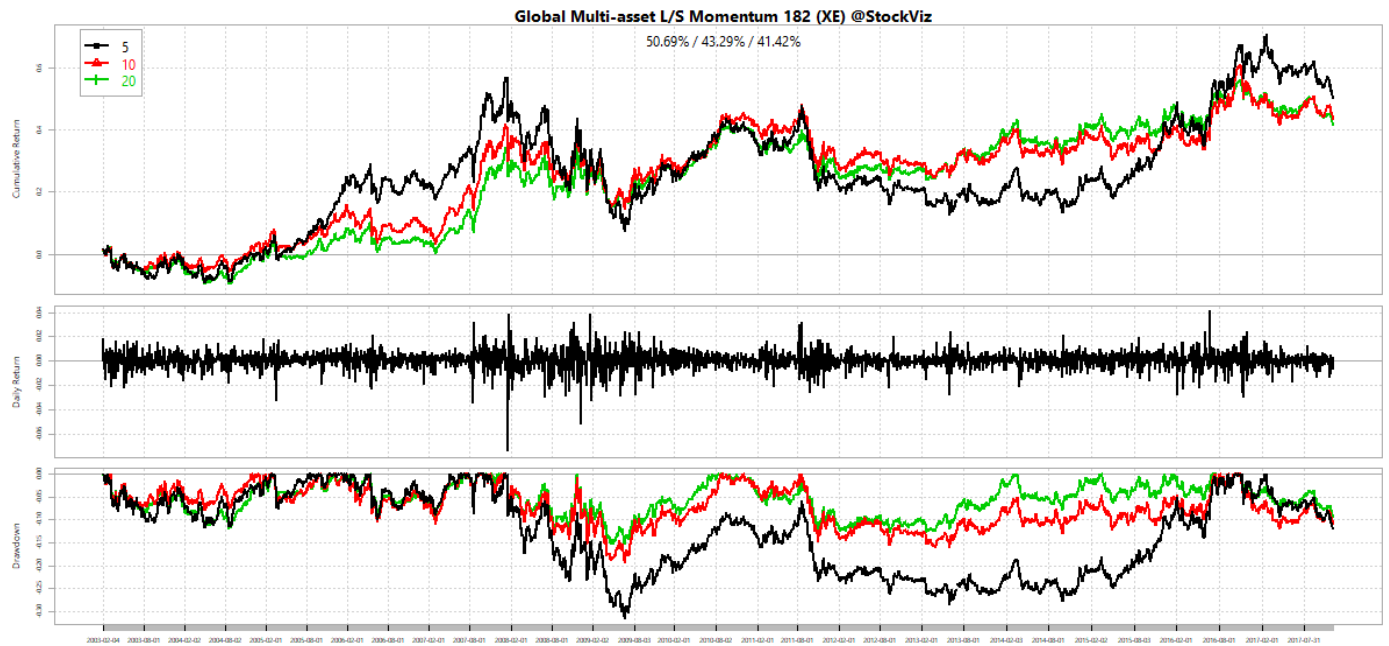
ID+EMA5, long-only relative momentum (182-day lookback)



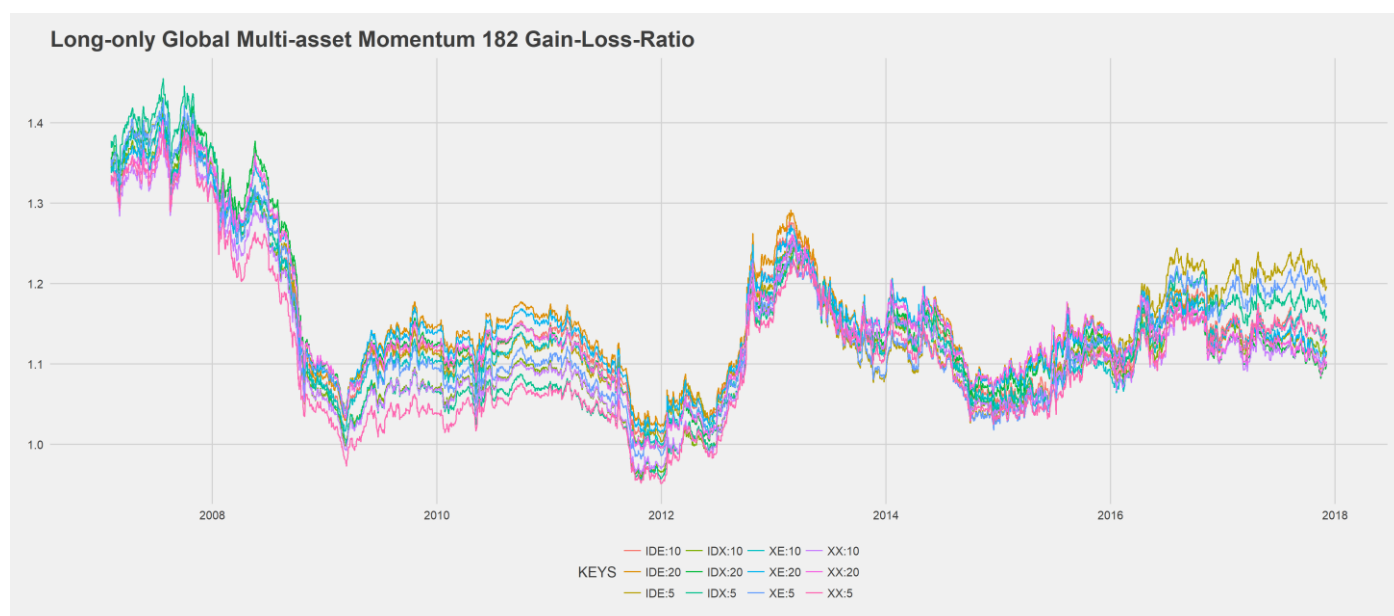
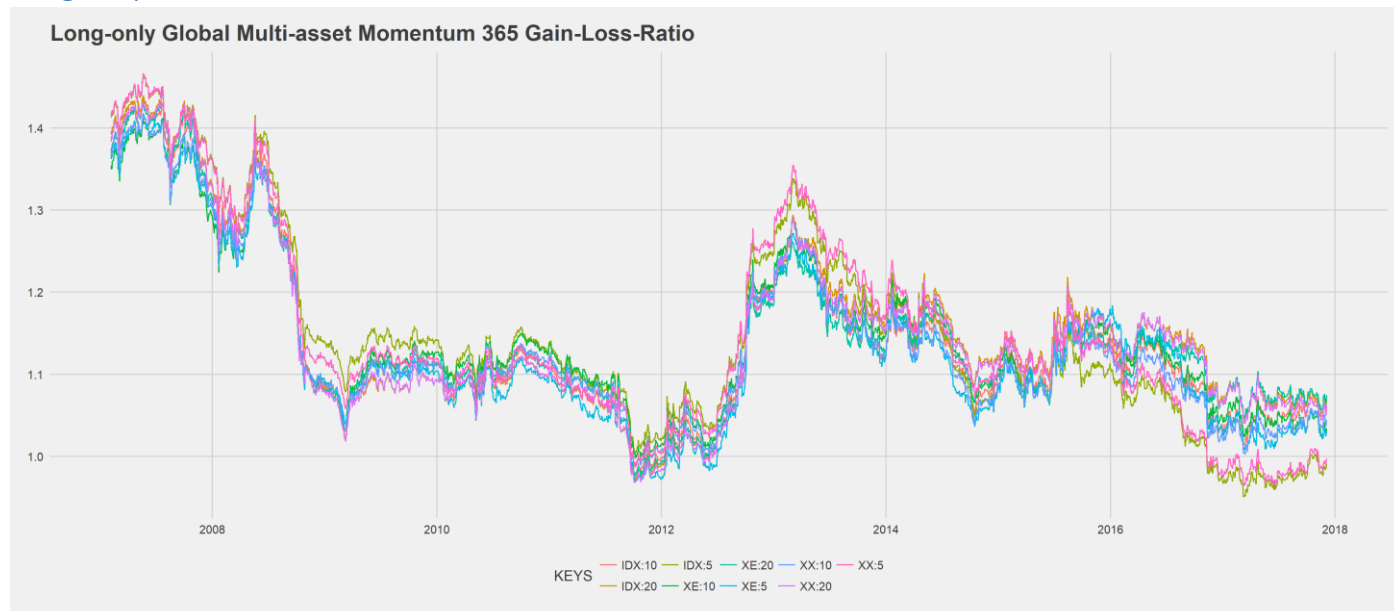
Raw, long-short relative momentum (182-day lookback)



ID+EMA5 Long-short relative momentum (182-day lookahead) with different portfolio sizes

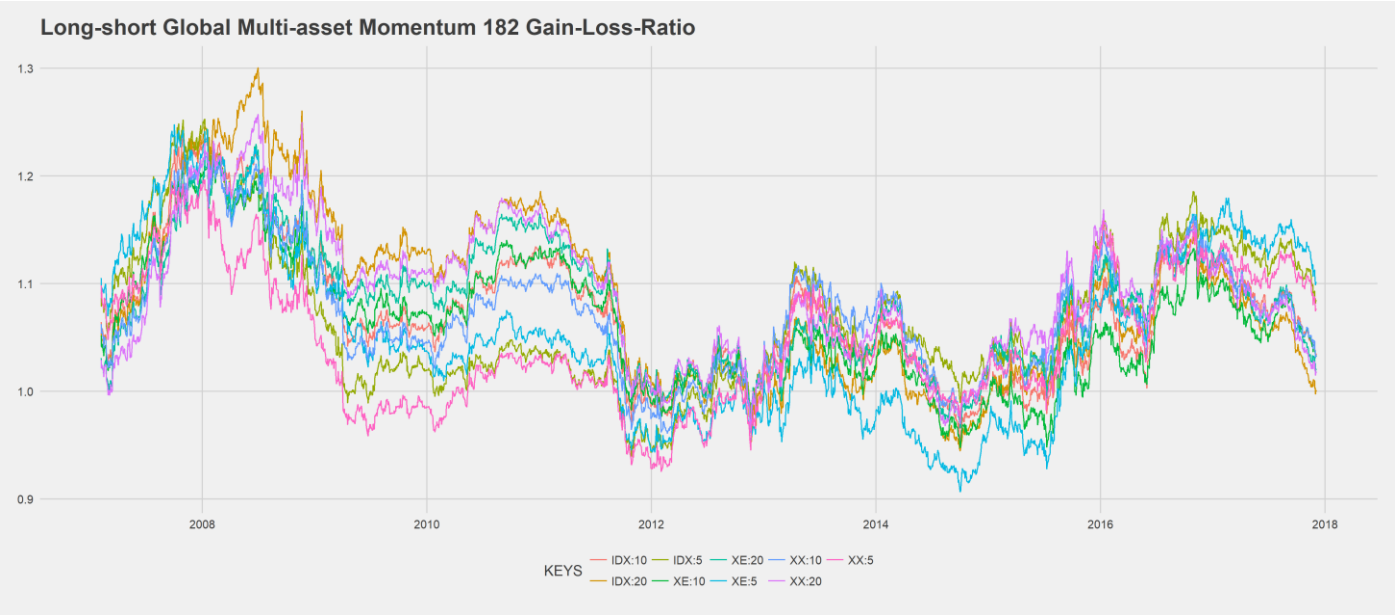
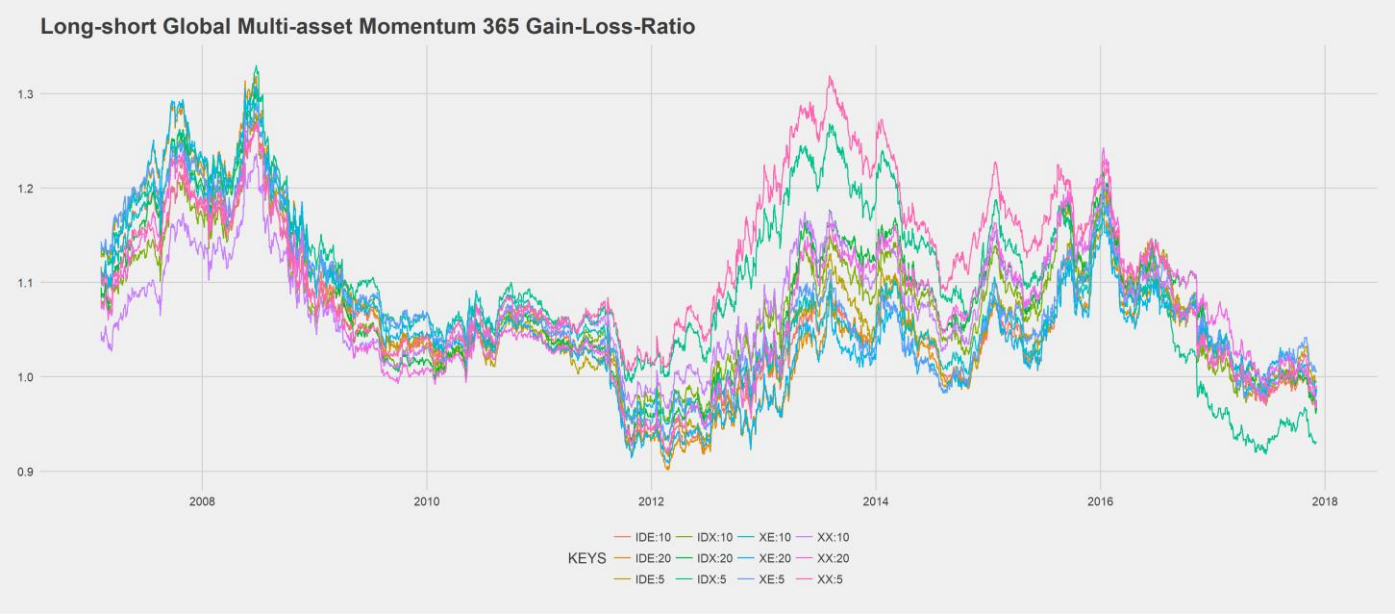


Long-only Gain-Loss Ratio

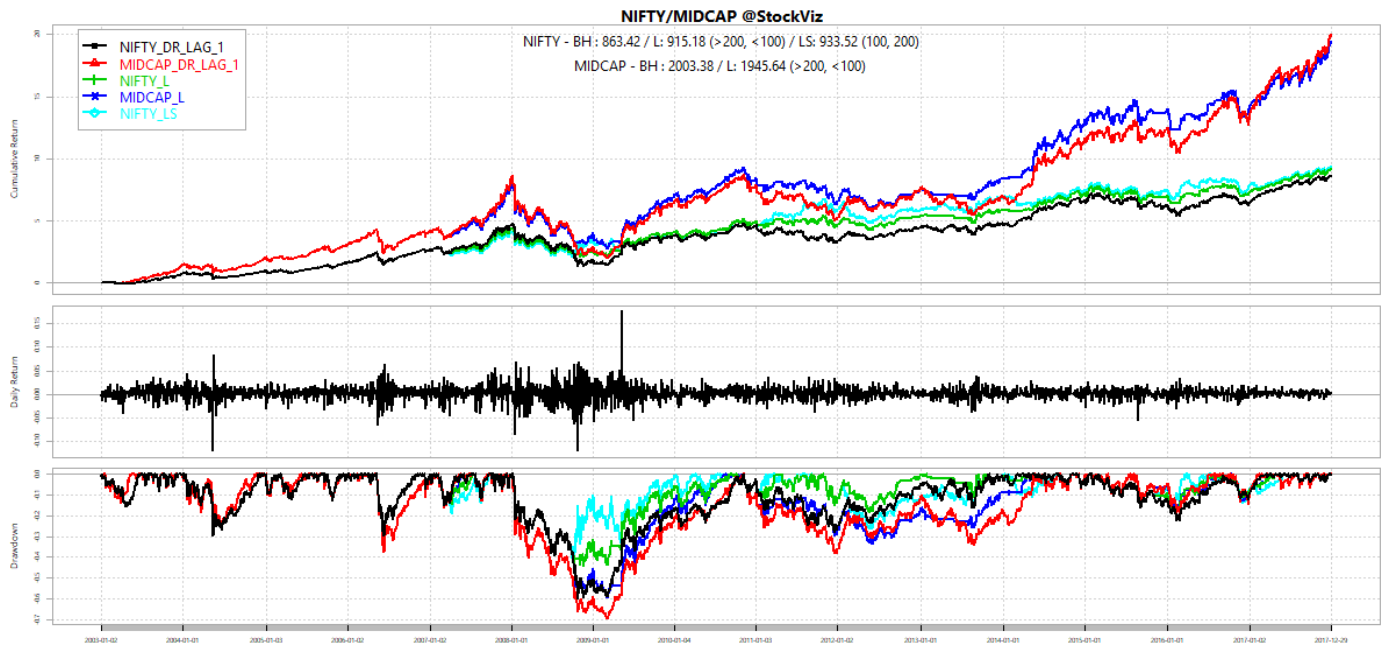


Counterintuitively, 182-day momentum has better gain-loss characteristics compared to 365-day momentum – and the 5 position portfolio out-shines the rest.

Long-short Gain-Loss Ratio



Momentum scores for timing Indian entry and exits



We assume that NIFTY can be both long and short but MIDCAP can only be long or zero. The NIFTY L/S does hold out hope for shallower drawdowns and a slightly better gross performance. However, we expect most of this advantage to be eaten away by transaction costs. Here are annual returns:



In the scenarios tested, a MIDCAP buy-and-hold strategy out-performs other strategies.