EHL Finance&Real Estate Research Seminar

- Lausanne - November 24th 2016

Discussion on:

"Factor-Based v. Industry-Based Asset Allocations: The Contest"

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Motivation of the Article

- **Factor-based portfolio strategies** (aka “smart beta”) have become increasingly popular in the investment industry due to their **transparency, simplicity and cost efficiency;**

- Yet, despite their advocated superiority over traditional portfolio approaches, little is known about the risk-return characteristics of multi-factor portfolios;

- The aim of this article is to compare the performances and risks of **(trendy) factor-based asset allocations** to those of **(classical) sector-based asset allocations**, with or without short sale restrictions.

Empirical study design

- Monthly gross returns of 10 US stock industry/sector-based indexes and 10 US stock factor-based indexes
  - Individual L/S legs of size, value, profitability, investment and momentum FFM equity factors
- Four-trial contest between **factor** and **sector** investing
  - Horizontal/vertical distances to MV efficient frontier
  - Jensen's alpha difference tests (MV, MSR and EW portfolios)
  - Sharpe ratio equality tests (MV, MSR and EW portfolios)
  - CRRA and CARA based Certainty Equivalent Return equality tests (MV, MSR and EW portfolios)
- In and out-of-sample comparison tests
  - In-sample tests run on five periods (full, recessions, expansions, bear and bull markets)
  - Out-of-sample tests rely on 60 (120)-monthly rolling estimation windows
- Long-short and long-only cases are considered separately

Main Results of the Article

- Find that **factor investing is the best strategy when short-sales are allowed**, especially in “good times”, e.g expansion and bull market - **risk premia harvesting explanation**

- Show that **sector investing is the best strategy when short sales are forbidden**, especially in “bad times”, e.g recession and bear market - **diversification benefits explanation**

- Reveal that sector-based GMV never underperformed its factor-based counterpart (long-short and long-only cases)

Comments, Remarks and Questions

- Are your factor and sector opportunity sets comparable?
  - Important defensive risk factors are missing (Low-volatility, BAB and QMJ factors)
  - Please provide the market betas of your factor and sector indices

- Are factor and sector indexes orthogonal?
  - Factor investing and sector investing are just different ways of grouping same universe stocks
  - Sectors should then be spanned by using some set of factors (and vice and versa)
  - Please show correlations between your factors and sectors
  - Graph also the underlying asset efficient frontiers in conjunction with the factor and sector based frontiers

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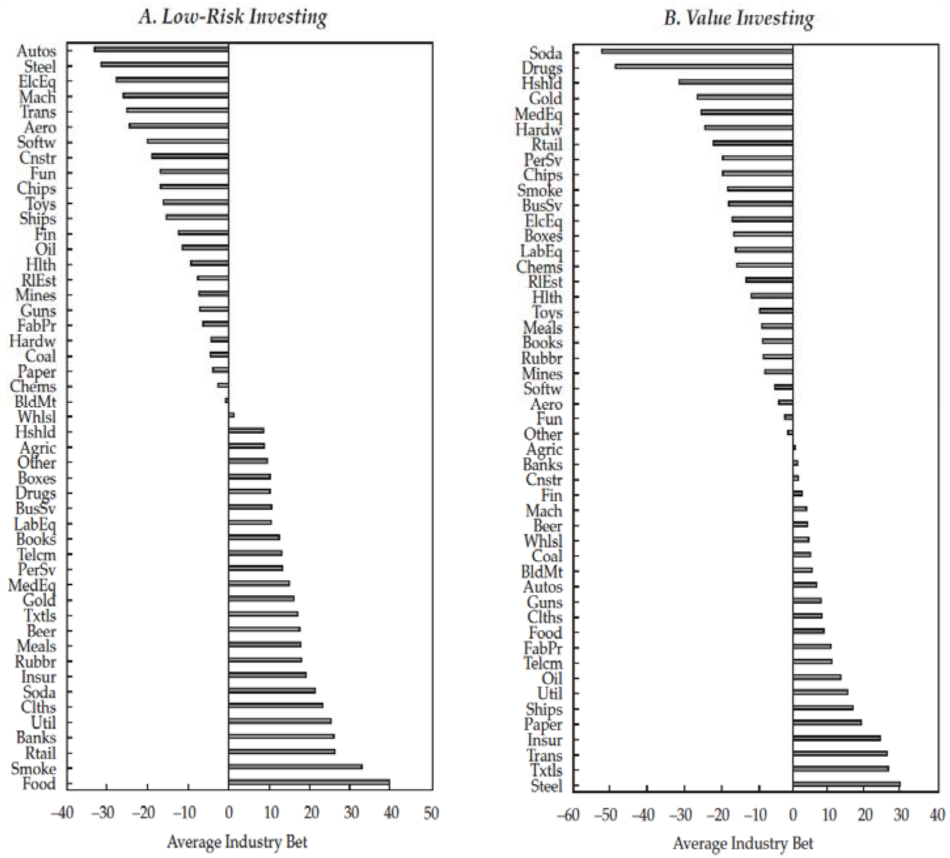
Comments, Remarks and Questions

- Why not working with sector-neutral factors/factor-neutral sectors?
  - Factor performances are driven by industry/sector bets

Figure 1. Industry Bets in Regular Low-Risk Investing: Which Industries Are Long vs. Short?



Source: Asness et al. (2014)

Comments, Remarks and Questions

- Are your results robust to transaction costs?
  - Provide at least the turnover and the breakeven transaction costs of the different strategies (see Kritzman et al., 2012)
  - Note that while buffer rebalancing strategies may reduced significantly the turnover of factor-based asset allocation strategies, IPOs, SEOs and share repurchases may lead to non-negligible transaction costs for sector-based asset allocation ones

- What about other international equity markets (see AQR with 23 individual countries and the global market)?

- Please correct several typos in order to ease the readibility and interpretation of your results
  - P12, vertical distance is for same risk-counterpart, not return one
  - P43, conclusion, "factor-specific returns may involve more idiosyncratic risls than factor specific returns?" **- Sorry I don't understand**

Relevant Literature

- Asness C., A. Frazzini and L. Pedersen, (2014), "Low-Risk Investing without Industry Bets", *Financial Analysts Journal 70*, 24-41.
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- Asness C. and L. Pedersen, (2014), "Betting against beta", *Journal of Financial Economics 111*, 1-25.
- Idzorek T. and M. Kowara, (2013), "Factor-Based Asset Allocation vs. Asset-Class-Based Asset Allocation", *Financial Analysts Journal 69*, 1-11.
- Kritzman M., S. Page, and D. Turkington (2012), "Regime Shifts: Implication for Dynamic Strategies", *Financial Analysts Journal 68*, 22-39.

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Thanks for your attention...

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