



Discussion of paper “A Macro Risk-Based Approach to Alternative Risk Premia Allocation” by Blin, Ielpo, Lee, and Teiletche (2017)

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Passion to Perform

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Summary



- One of the few attempts in the literature to evaluate active allocation among alternative risk premia strategies and provide an allocation framework
- The framework allows investors to combine a pure risk-based approach with a set of views in a B-L framework; views are employed to dynamically “tilt” the allocated risk budget.
 - benchmark is the ERC portfolio – industry standard
- Expected return views are formulated through the estimation of the sensitivity of alternative risk premia to a set of macro risk factors, as well as through a measure of carry.
- 12 alternative cross-asset risk premia strategies are considered , data starts in 1999 or later
- The macro risk factors encompass 4 dimensions (regimes) :
 - Growth – recession risk
 - Inflation – inflation shock
 - Market Risk Sentiment – market stress
 - Steady Growth regime is declared if none of the above are identified.

The Model : Estimation of macro-sensitivities



- The macro sensitivity of alternative risk premia strategies is estimated in two steps
 1. Identification of macro-economic regimes
 2. Estimation of the strategy performance in the different regimes

- Regime identification is based on a two-state hidden Markov model using the OECD economic activity index (for Growth), the OECD consumer price index (for Inflation), and the MSCI World Index (for Market Risk Sentiment). A sequential approach then follows to assign the macro regimes which:
 - *Does not take into account any interactions between the macro-variables and assigns regimes hierarchically (recession -> inflation -> market risk -> steady growth)*
 - *May be impacted by parameter estimation issues in the hidden Markov model (biased regimes).*

- The historical sensitivities of the alternative risk premia strategies to the macro factors are calculated as Regime-conditional Sharpe ratios and Hit Rates.
 - *Consider instead using dynamic linear models assuming continuous distributions of the latent states to avoid the threshold bias affecting discrete state space models.*

Allocation Framework



- Methodology rationale : allocation decision encompasses 2 dimensions, as with traditional assets:
 - Strategic allocation - robust long term asset allocation
 - Dynamic allocation – tilting the strategic allocation in order to capture shorter term alphas

- The final weighting mechanism combines the Strategic and Dynamic allocation components:
 - The strategic allocation is derived by taking into account the Sharpe and Hit ratios under each regime, further adjusting for risk dimensions of the individual strategies and practicalities of implementation. The final regime-conditional scores of each premium are weighted by the long- term probabilities of each regime in order to obtain a final risk budgeting.
 - The dynamic allocation is based on the estimation of active returns stemming from both Carry and current macro regimes (which are now measured using Nowcasting indicators) – simply adding their z-scores.

- The authors use macroeconomic data that are available with a lag and are subject to multiple revisions to derive the strategic allocation risk budgets.
 - *Benefit of longer history but estimation issues*
 - *Nowcasting indicators can be built (at daily frequency) with decent history for certain markets*
 - *Are Carry returns independent from macro-economic regimes?*

Empirical Results Supportive of Further Research



- “Strategic”: represents the simulation based on a fixed risk budget allocation. For “Dynamic”:
 - “Carry only”: strategic allocation complemented by dynamic allocation using the carry signal only
 - “Nowcasters only”: same as above but using the Nowcasting signal only
 - “Combination” : dynamic allocation signal is a combination of both Carry and Nowcasting signals.

	Strategic	Dynamic		
		Carry only	Nowcasters only	Combination
Ann Returns	10%	10.60%	11.10%	11.90%
Ann Vol	5.60%	5.70%	5.60%	5.70%
Sharpe	1.42	1.49	1.6	1.73
Max DD	9.70%	12.80%	8.10%	8.70%
Calmar	0.81	0.66	1.11	1.13
Tracking Error	-	2%	1.50%	2.20%
IR		0.32	0.76	0.89