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MANAGEMENT, LLC

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Is there a robust way to obtain specific exposure to a macro-variable and/or alternative asset classes using a portfolio of equities?

A common question in today's asset management industry is whether or not there is a robust way to obtain specific exposure to a macro-variable and/or alternative asset classes using a portfolio of equities. An algorithm such as this would have a variety of practical applications. Through our ongoing quantitative research at McKinley Capital, we have found a possible solution that uses closed-form mathematical solutions to construct "tracking" model equity portfolios which have maximal correlation to any macro variable/asset return, while minimizing correlation to selected secondary variables.

We believe that these model "tracking portfolios" have numerous possible uses, including 1) the potential for equity investors to gain exposure to illiquid or restricted asset classes such as private equity, 2) statistical arbitrage strategies between the model "tracking portfolio" and a highly-correlated macro-variable that could exploit performance divergence, and, 3) insight into macro factor loadings for equity factor portfolios (e.g.: how much interest rate sensitivity does a Value factor portfolio have?).

McKinley Capital's Director of Quantitative Research, Portfolio Manager, Elias Krauklis, has conducted extensive research on this technique. His research has developed a robust framework to construct baskets of securities which are highly cointegrated to macro-variables and or alternative asset classes, and could be a useful approach for investors, especially in an environment of uncertainty, lack of trends, and high volatility.

Opportunity #1: potential for equity investors to gain exposure to illiquid or restricted asset classes, such as private equity.

As asset managers, we have observed that asset owners can run into issues during the process of adjusting their asset allocation or exposure to an asset class. For example, when an investment commitment to private equity is formalized, the capital does not participate to those specific returns until it's called by the manager. A thoughtfully constructed

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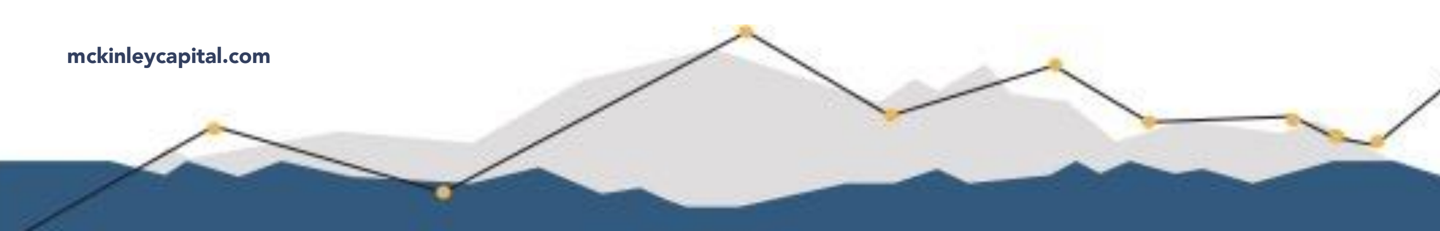
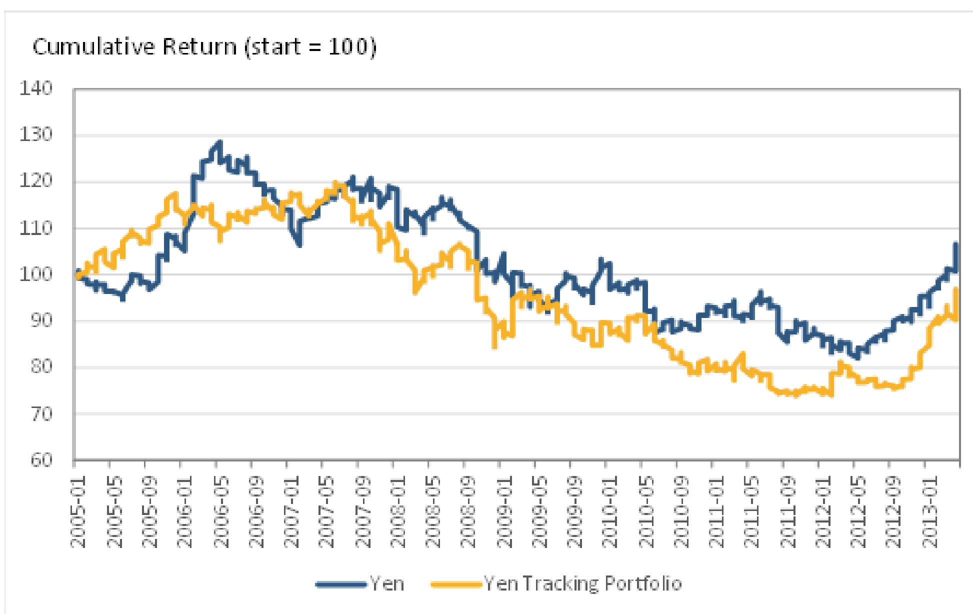


portfolio of equities that emulates private equity returns (e.g.: a model portfolio) would enable the asset owner to reduce the tracking error, with a tactical shift of capital in the illiquid asset class, before the capital is called.

Opportunity #2. Statistical arbitrage opportunities

When the model equity portfolio is created it can exhibit out-of-sample co-integration with the underlying macro variable. We believe that divergences between the two allow for a wide range of statistical arbitrage opportunities. Many traditional stat-arb strategies rely on co-integration, which is distinct from correlations, and describes a longer-term relationship in the spread between two variables over time, whereas correlation is more commonly used to describe a shorter-term relationship in the directional movement of two securities' return. When the performance of the macro-tracking model portfolio diverges from its underlying macro variable (such as the model Yen tracking portfolio* to the Yen itself shown below), an arbitrage trade could be present as the performance convergences back to levels more consistent with the historical relationship. Our view is that the short-term dislocations are generally caused by differing macro views among set of investors (i.e.: equity investors have different views than macro investors) that eventually reconcile. In many ways, this approach is similar to trading divergences of credit-equity in the same company/industry/country but can be applied to a much wider range of potential macro variables (commodities, interest rates, inflation expectations, currencies) as well as other asset classes.

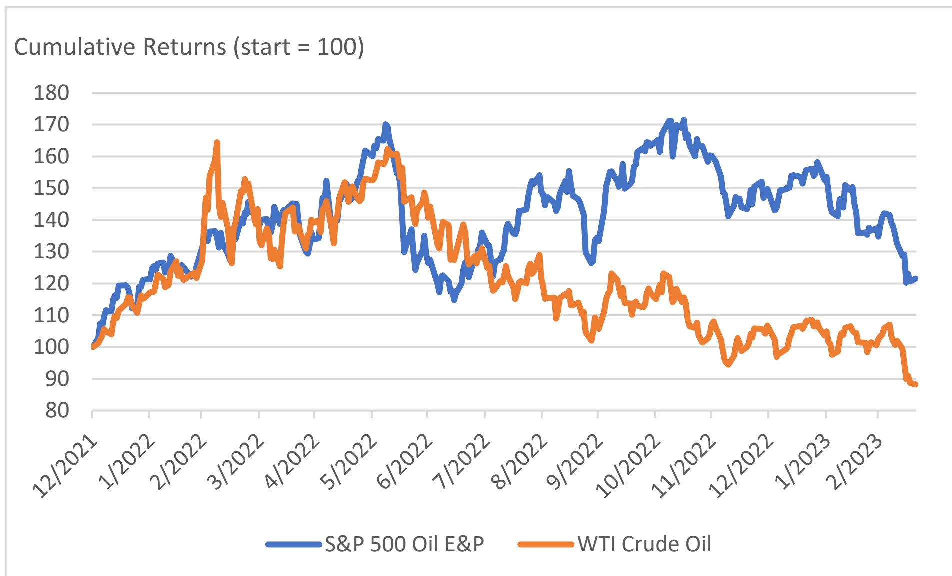


Source: McKinley Capital Management, LLC, Bloomberg. Yen Tracking Portfolio is rebalanced on a monthly basis. Past returns are not a guarantee of future results.

* The model Yen tracking portfolio shown above is not an actual McKinley Capital portfolio and no client assets are invested in this strategy. The views contained in this paper represent the views of the authors and McKinley Capital Management, LLC. This is not an offer to buy or sell a particular security. Past performance is not indicative of future returns.

Opportunity #3. Macro factor loadings for equity factor portfolios

Lastly, we believe that the macro tracking model portfolio can provide insights into how much macro exposure a given portfolio is carrying. If a portfolio has a high overlap in names/weights with an inflation breakeven tracking portfolio, it could indicate that the portfolio will have high sensitivity to changes in inflation expectations. In our view, the use of macro tracking portfolio to determine macro risk exposure is preferable to more naive approaches, which either do not probably adjust for secondary exposures (occurs when looking at single name Beta to macro variables) or changes in the portfolio constituents over time (occurs when looking at portfolio level Beta to macro variables). Controlling for secondary exposures is key when trying to obtain "pure" macro variable exposure, as equities which ostensibly should track a macro variable (e.g.: Oil E&P stocks and WTI Crude Oil) can have periods of large performance divergence driven by secondary factors which do not converge.



Source: McKinley Capital Management, LLC, Bloomberg.
Past returns are not a guarantee of future results.

McKinley Capital Management, LLC is a global growth asset manager with 30 years experience capturing the convergence of quantitative and qualitative investment methodologies into a singular investment process that identifies fast-growing opportunities in global equities. For more information on this topic, or other investment research, please contact our investment team at info@mckinleycapital.com or 1 907 563 4488. For more McKinley news, please follow us on Linkedin and Twitter.

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