JOIM

www.joim.com

PRACTITIONER'S DIGEST

The "Practitioner's Digest" emphasizes the practical significance of manuscripts featured in the "Insights" and "Articles" sections of the journal. Readers who are interested in extracting the practical value of an article, or who are simply looking for a summary, may look to this section.

OPTIMAL PORTFOLIO CHOICE WITH ABSORBING MARKOV CHAINS: APPLICATION TO MARKETS THAT MAY POTENTIALLY DECOUPLE   PAGE 4

Andrew Ang, Henry Shen, Jeff Shen and Rui Zhao

In the long history of capital markets, various markets have decoupled from the financial system and during these decoupling events, investors have lost most, if not all, of their invested capital. In the 20th century, Austria, Russia, and China were major markets that ceased to exist. A recent example of decoupling is Russia, which was declared "uninvestable" in March 2022 by major index providers, its foreign reserves frozen, and major Western countries imposed sanctions. When Russia decoupled, investors effectively lost access to their Russian investments at zero value.

We model the process of decoupling with a Markov chain data generating process. For simplicity, we consider asset allocation over an emerging market country that may potentially decouple, and the emerging market index. There are "bull" and "bear" market regimes, with returns having lower means and high volatilities in the bear market regime. In the bear market, there is a probability that the emerging market may potentially decouple by transitioning to a third absorbing state regime where investors lose all their capital. The investor receives a constant payout from the investment portfolio over a finite horizon, and rebalances.

Besides being able to compute optimal allocations when a market may potentially decouple, the model allows investors to compute certainty equivalents-the compensation required to not invest in the market that may potentially decouple. Calibrating the model to China as a hypothetical example of a market that may decouple, investors need large compensation to not invest. Even for very large decoupling probabilities, the optimal allocation to China is some way from zero. Intuitively, the investor has access to an additional source of return and greater diversification benefits as long as the market has not yet decoupled.

Megan Czasonis, Mark Kritzman and David Turkington

Investors believe that to minimize the risk currencies add to a portfolio they should hedge according to the portfolio's betas relative to the currencies to which it is exposed, which they typically estimate from monthly returns. However, the effectiveness of currency hedging depends not on monthly betas but instead on a notion called co-occurrence, which is the co-movement of the cumulative returns of the portfolio and the currencies over the investor's hedging horizon. If the portfolio or currency returns have non-zero autocorrelations or lagged cross-correlations at any lag, beta-based hedging will fail to give a good estimate of the most effective hedge ratios for longer horizons. One might, therefore, resort to estimating hedge ratios from return intervals that match the investor's hedging horizon, but this approach is also likely to fail because the co-occurrence of longer-horizon returns is highly non-stationary. Given these challenges to beta-based hedging as it is commonly practiced, investors might consider an alternative approach called full-scale hedging. This approach explicitly considers the full sample of portfolio and currency returns by using a numerical search algorithm to find the currency hedge ratios that minimize risk or maximize expected utility. Full-scale hedging considers the full distribution of co-occurrences throughout the return history as opposed to a single summarization of it, and it allows for a more nuanced description of investor utility. Evidence suggests that full-scale hedging produces meaningfully different hedge ratios than beta-based hedging and that it has the potential to reduce portfolio risk more effectively.

Ted Daverman, Joshua Kazdin, Michael Pensky and Fiona Sloof

In this paper, we discuss the impact of extreme weather on US families with a specific focus on household finances. We first derive a life-cycle model of consumption, then introduce climate change oriented consumption shocks as an additional expense which is proportional to labor income. Our key finding is that exposure to shocks associated with natural disasters may lower lifetime wealth by interrupting savings contributions. We test this model by demonstrating that households living in counties which experience a high amount of natural disasters suffer lower contributions to long-term savings between 1970–2020. We suggest this is driven in part by temporarily lowered income and increased labor market turnover. We conclude with a discussion on how climate change may accelerate a retirement crisis and recommend suggestions for how the financial industry can help households address this challenge.

Victor Haghani, Vladimir Ragulin and Richard Dewey

Our research in single name stocks suggests that retail trading likely explains the phenomenon of outsized overnight returns at both the level of the overall stock market, and that of individual stocks. We find that the effect exists at the index level as previously reported, but more strikingly in a suggestively

clustered pattern of individual stocks returns, particularly those known as "Meme" stocks. The effect is also prominent in other investments such as Bitcoin that appeal to retail investors.

This research is important for three reasons. First, Retail traders are potentially missing out on billions of dollars of returns due to mistimed trades. Second, there is speculation that the overnight effect might have implications for the long-term valuation of the entire equity market. And finally, assuming our findings are correct, this is one of the most consistent, significant and overlooked anomalies in finance.