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Performance evaluation of optimized portfolio insurance strategies

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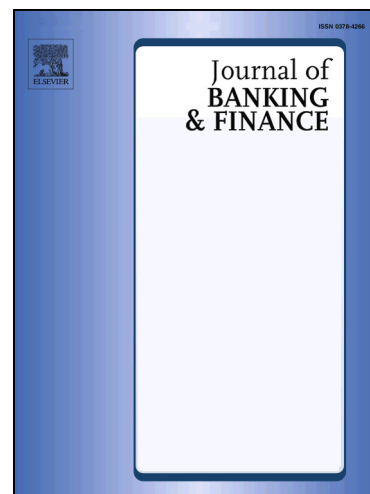Please cite this article as: Zieling, D., Mahayni, A., Balder, S., Performance evaluation of optimized portfolio insurance strategies, *Journal of Banking & Finance* (2014), doi: http://dx.doi.org/10.1016/j.jbankfin.2014.03.027

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Abstract

We use S&P 500 index return data for the time period 1985-2013 to evaluate the performance of portfolio insurance strategies. We shed light on the question if the performance of a constant proportion portfolio insurance (CPPI) strategy can be improved by means of a time-varying multiplier which depends on the estimated future volatility. Neglecting any inter-temporal hedging demand, the theoretical foundation of the strategies is given by maximizing the expected utility of a HARA investor in a diffusion model setup. If the risk premium is assumed to be proportional to the variance, the optimal strategy is a CPPI strategy. Otherwise, the multiple is time-varying (PPI). It turns out that even time-varying multiple strategies based on a rolling window of historical volatility estimates give a significant improvement of CPPI strategies. The out–performance is robust w.r.t. alternative performance measures and is also true for proportional transaction costs and adequate trigger trading.