The risk in the within horizon: a test applied to Dollar Cost Averaging.

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Dollar Cost averaging refers to an investment methodology in which a set dollar amount is invested in a risky asset at equal intervals over a holding period. Our paper compares the advantages and risks of this strategy from a saver's point of view. Many theories focused on the inefficiency of this strategy compared to the lump sum in terms of performance even if DCA is often used in the real world for its straightforwardness. Besides we offer a comparison of DCA based on the risk the investor bears during the entire investment horizon and not only at the end of the period. This risk in the within horizon is measured in particular with First Passage Time Probability and Expected Minimum Portfolio Value applied to portfolios simulated with Monte Carlo and different types of Bootstraps (block, stationary and residual sampling).

Keywords: Dollar Cost Averaging, First Passage Time Probability, Bootstrap simulation