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A Dynamic AutoRegressive Expectile for Time-Invariant Portfolio Protection Strategies☆

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Abstract

"Constant proportion portfolio insurance" is a popular technique among portfolio insurance strategies: the risky part of a portfolio is reallocated with respect to market conditions, *via* a fixed parameter (the multiple), guaranteeing a predetermined floor. We propose here to use a conditional time-varying multiple as an alternative. We provide the main properties of the conditional multiples for some mainstream cases, including discrete-time rebalancing and an underlying risk asset driven by a Lévy process, while evaluating conditional and unconditional gap risks. Finally, we evaluate the use of a Dynamic AutoRegressive Expectile model for estimating the conditional multiple in such a context.

Keywords: CPPI, Expected Shortfall, Expectile, Quantile Regression, Dynamic Quantile Model.

JEL: G11, C6, G24, L10.

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