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Systemic Influences on Optimal Equity-Credit Investment

We introduce an equity-credit portfolio framework taking into account the structural interaction of market and credit risk, along with their systemic dependencies. We derive a closed-form expression for the optimal investment strategy in stocks and credit default swaps (CDSs). We exploit its representation structure and analyze the mechanisms driving the optimal investment decisions. The transmission of market risk premia is the key mechanism through which systemic influences affect the optimal investment strategy. We develop a novel calibration procedure and find that systemic dependencies are statistically significant when the model is fitted to historical time series of equity and CDS data. An empirical analysis with data of companies in the DJIA reveals the critical role of systemic risk in portfolio monitoring. The talk is based on joint work with Agostino Capponi (Columbia University).