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Subjective Pricing in Markets with Frictions

Based on a joint work with Cosimo Munari

The goal of every pricing theory in finance is to address the basic question: Which reasonable price(s) can be assigned to payoffs of financial contracts? In classical arbitrage theory, given a perfectly liquid market of basic securities priced in an arbitrage-free way, reasonable prices of a non-traded payoff are identified with *arbitrage-free prices*, that are prices that allow to enlarge the pre-existing market to the new payoff without introducing arbitrage opportunities. Our contribution can be place in that branch of the literature that aims to tighten the range of arbitrage-free prices by introducing a principle of subjectivity. Indeed, we assume that the buyer is prepared to accept a suitable amount of downside risk, and it is his task to identify his personal threshold to acceptability. Our reasonable prices are defined in terms of this minimal risk threshold and consistency with market prices. Moreover, our model allows for illiquid markets, with nonproportional transaction costs and portfolio constraints. We provide a direct and a dual description of reasonable prices based on superreplication prices and pricing densities. The dual characterization requires an appropriate extension of the classical Fundamental Theorem of Asset Pricing where arbitrage opportunities are replaced by weaker opportunities with acceptable risk-reward tradeoff.