MODEL-FREE SUPERHEDGING DUALITY

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Abstract

In a model free discrete time financial market, we prove the superhedging duality theorem, where trading is allowed with dynamic and semi-static strategies. We also show that the initial cost of the cheapest portfolio that dominates a contingent claim on every possible path $\omega \in \Omega$, might be strictly greater than the upper bound of the no-arbitrage prices. We therefore characterize the subset of trajectories on which this duality gap disappears and prove that it is an analytic set.

References

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