

Model uncertainty in energy and in financial optimization

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Abstract:

We consider pricing principles for energy and financial contracts, such as superreplication pricing, acceptability pricing, indifference pricing and ambiguity pricing. While superreplication pricing is based on shifting all risks to the counterparty, for the other pricing principles the issuer retains some risk and this makes the price quite model dependent.

We discuss the dependency of the price on the model and show how model uncertainty can be built into the pricing mechanism. We illustrate this by some examples, especially one from management of hydrostorages in an Alpine Region.