Collateralized CDS and Default Dependence

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In this paper, we have studied the pricing of a continuously collateralized CDS. We have made use of the "survival measure" to derive the pricing formula in a straightforward way. As a result, we have found that there exists irremovable trace of the counter party as well as the investor in the price of CDS through their default dependence even under the perfect collateralization, although the hazard rates of the two parties are totally absent from the pricing formula. As an important implication, we have also studied the situation where the investor enters an offsetting back-to-back trade with another counter party. We have provided simple numerical examples to demonstrate the change of a fair CDS premium according to the strength of default dependence among the relevant names, and then discussed its possible implications for the risk management of the central counter parties.

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