

# Implementation of multi-asset spread option pricing methods

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October 26, 2015

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## 1 PROJECT OUTLINE

In my project I study and implement two different multi-asset spread option pricing methods which have been introduced in [1] and [2]. According to the authors both the second-order boundary approximation method [1] and the improved comonotonic upper bound method [2] are considered to be extremely fast and accurate. Therefore I compare their relative performances as a function of the basket spread characteristics. Since there exists no exact closed-form solution for the fair price of a multi-asset spread option I additionally implement a Monte Carlo scheme to verify my results.

## 2 REFERENCES

- [1] Minqian Li, Shi-Jie Deng (2010). *Mullti-asset spread option pricing and hedging*. Quantitative Finance.
- [2] Deelstra G., Petkovic A., Vanmaele M. (2010). *Pricing and hedging Asian basket spread options*. Journal of Computational and Applied Mathematics 233.