

# Arbitrage-Free Pricing of XVA

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We review the framework for computing the total valuation adjustment (XVA) of an European option claim accounting for funding spread and collateralization in one period model, based on non-arbitrage arguments. The replicating portfolios of long and short positions in the claim, lead to the definition of buyer's and seller's XVA, which in turn identify a non-arbitrage interval.

This poster is a ongoing work towards a construction of an XVA framework for derivative pricing in discrete time.

## References

- [BCS15] M. Bichuch, A. Capponi, and S. Sturm. Arbitrage-Free Pricing of XVA – Part I: Framework and Explicit Examples. *ArXiv e-prints*, January 2015.
- [HF11] Alexander Schied Hans Föllmer. *Stochastic Finance: An Introduction in Discrete Time*. de Gruyter Textbook. De Gruyter, 3 edition, 2011.
- [Zho17] Tingwen Zhou. Arbitrage-Free Pricing of XVA for American Option in Discrete Time. Master's thesis, Worcester Polytechnic Institute, 2017.