Optimal Execution and Option Valuation

Abstract

In this talk we discuss the problem of "optimal execution" that arises in finance when dealing with the trade of a very large amount of an asset. In this case the price is affected and the revenue is not as high as expected. By optimization methods, it can be determined a best way to do the trade and gain the highest benefit over an interval of time. We will provide and explain some solutions to the problem.

The impact on price observed in the previous problem is also observed in the derivative market. Particularly, in option valuation, this problem could generate arbitrage opportunities that are not considered in the Black-Scholes model.