The Black-Scholes Model

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Abstract

The Black-Scholes model and its many variants are a fundamental PDE in continuous-time finance.

1 Introduction: Terminology & Basic Concepts

Mathematical Finance is a developed applied field in mathematics that attracts many people from the management sciences, social sciences (Economics), physics and mathematics.

The Black Scholes was a model developed by two economists in 1973 that began a revolution in Finance. Another individual, Merton had also developed the model using the Feynman-Kac.

Definition 1.1 (Option)**.** *What is an option? I have no idea man.*

I must take some time to define some finance topics in order to proceed without confusing anyone.

2 Outlining the Black Scholes Model

We begin by outlining some basic concepts about stochastic differential equations and Brownian motion.

3 Applied Example Using Python

Here, I will use the formula that we have derived to do a brief numerical example using Python.