

**Sticlaru, Gabriel**, *C++ classes to model financial instruments*

**Abstract:** Our purpose is to use C++ to model financial instruments: Bonds, Stocks, Forwards, Futures, Options and Swaps. This paper concentrates on Options and presents a hierarchy of classes to model European Options, based on Black Scholes extended mathematical model, we calculate the price for Call and Put Option and some measures for sensitivities of the price: delta, gamma, vega, theta and rho.

**Keywords:** financial instruments, European Options, Black and Scholes model, C++ classes.