

Simulation Discounted Cash Flow Valuation for Internet Companies: An Exploratory Case Study

Abstract

Discounted cash flow (DCF) analysis is the most accepted approach for company valuation. However, DCF approach presents a number of serious weaknesses when evaluating Internet companies. One of them being how to deal with high risk and uncertainty, which characterize future cash flows of these companies. Specifically DCF assumes that future cash flow streams are highly predictable. The effects of uncertainty are therefore tackled implicitly by discounting the expected value of the cash flows at a risk-adjusted interest rate. However, under uncertainty, future cash flows of these companies can no longer be characterized by a single value but rather by a range of values of its possible consequences. This paper proposes a Monte Carlo simulation DCF model for valuing an Internet company. The MC simulation DCF model assigns to each key cash flow a range of values in order to cope with uncertainty underlies each variable. The process leads to a probability distribution of the valuation criterion used, giving investors a quantitative measure of risk involved. The paper takes the case of a real Internet company to illustrate the approach and highlight the benefits and the difficulties, which are encountered.