Risk can be defined in many ways.

Risk is, essentially, uncertainty: investors do not know with certainty what rate of return their investments will realize. Realized returns may differ from expected returns.

However, investors are generally more concerned with the negative side of risk. From an investment perspective, risk is the probability that realized returns will fall short of expected returns, and/or that losses will be incurred.

With the advent of **Modern Portfolio Theory**, risk became in many ways synonymous with standard deviation. This is suitable for most quantitative finance purposes, though many find this to not be a fully satisfactory definition. The returns of many investments do not follow a normal distribution, and stock returns are typically normally distributed, but have "fat tails".

In recent years, risk has become associated with the probability of a very large loss. **Value-At-Risk**
(VaR) and other metrics were created to quantify this type of risk in simple terms.