The purpose of the paper is to define a predictive model for assessing risk associated with information systems (risk exposure) and to quantify the effect risk mitigation may have on reducing risk to an acceptable level. The goal is to provide decision-makers with the best possible information about the probability of incurring a loss so they can make informed decisions on how to best address the risk. Therefore, it is crucial that decision-makers understand and accept the risk assessment process and that the information resulting from the assessment is in a form they understand.