In actuarial mathematics we are often interested in distribution of a random vector. Sometimes these distributions might be too complicated. In this thesis we are going to study how to find an approximation of the random vector for which the distribution would be easier to obtain. Especially we will look for approximations of sums of random variables. We will find out how this problem could be solved with knowledge of a dependency structure known as comonotonocity. For approximation of the random vector we will take his comonotonic counterpart. That would be more risky way but with knowledge of the dependency structure of the comonotonic random vector we will be able to obtain its distribution. In the last part of this thesis we will illustrate the use of findings about comonotonocity on examples.