



## Internship

### **Risk analysis of triple AAA bonds compared to a globally diversified stock portfolio**

RiskCo is a young and dynamic company that develops software products for and in collaboration with financial organizations. Our R & D department is looking for an enthusiastic intern who has an academic background in actuarial science, econometrics, financial economics or mathematics and who has interest in solving the following problem:

Pension funds have to work with an interest rate to value future claims of their clients. This interest rate needs to be equal to the return of the wealth. Before the introduction of the FTK (financieel toetsingskader) a fixed interest rate of 4% was assumed, in fact an arbitrary value that was assumed to be sufficient. In the present situation, pension funds have to take into account an interest rate based on the term structure, which is supposed to be risk free. At the moment, the interest rate is historically low, which provides a problem for the pension funds. In contrast, the stock market is flourishing. The question that now arises is whether a pension fund can reduce its risk and increase its yield by spreading its capital over a broad range of worldwide stocks. It is widely accepted that the long-term yield of a worldwide stock portfolio performs much better than a AAA-rated fixed income portfolio. How can we compare the risk of a AAA-rated bond with a globally diversified stock portfolio? What is the effect of inflation? This MSc project is aiming at these challenging questions by modeling bond and stock portfolios by using the software ProductXpress. For a reference, see: Bodie, Z., Kane, A., Marcus, A. - Investments, vol. 1/2 - 5th Edition (2003).

If this appeals to you, send a short letter of motivation and your CV to:

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