Peer-graded Assignment: Assignment for the second milestone: investment policy

1. **Knowing that equities, bonds and cash are primary assets (and so is any combination of them), would you say that it was appropriate to make such an assumption? Why?**

Accordingly, to the normality assumption, the distribution of the returns of primary assets are approximately symmetric. And the use of the standard deviation is good as a risk measurement.   
Knowing that the sum of normal distributed variables is also normal distributed, then the combination of the assets if normal distributed and approximately symmetric.

1. **Your client asks you the following questions: is there any relationship between the expected return of the SAAs and the size of the range that goes from the lowest to the highest expected return in 68% of the time? If yes, what is the nature of this relationship (positive, negative)?**

There is a risk-return trade-off. The higher the expected returns the higher the risk which need to be taken. Meaning a positive relationship.

So, in the same way we can see in the excel, the asset combination with the highest expected return have the highest risk.

1. **You are looking to confirm if the educated guess you made in the previous assignment regarding the investor profile (conservative, balanced or aggressive) was correct. In order to do so, you obtained the following information from your client:**

* **Davina Turner** says she does not want to earn less than USD 120,000 on a yearly basis in 68% of the time.
* **Erika Kozlov** wants an expected yearly gain of more than USD 3,500,000.
* **John Lam** is comfortable with the idea of earning a minimum yearly return of 1% in 68% of the time, but not less than that. He also likes the possibility of earning as much as USD 1,200,000 a year in 68% of the time.

**What is the appropriate SAA for your client?**

Devina turner should follow the conservative SAA – which is the first asset in the excel. The conservative profile is the one with the highest value of Lowest expected return in 68% of the time to give her at minimum the 120k$

Erika Kozlov should follow the aggressive profile since it is the only way to get an expected value of more than 3.5M$

John Lam should be a balanced profile, since he still wants a high expected return, but want the Lowest expected return to be above 1%.

Based on the information you gave me, my recommendation is that you follow a Conservative strategic asset allocation.

We should guarantee a minimum return of 120K$ at 68%. So, in my opinion, we could take a bit more risk in the conservative profile, to increase the expected return and still have a >120$ minimum return.

Given the maximum deviations allow to the conservative profile, I would put the cash to a minimum allowed of 10% and increase the stocks to the maximum allowed of 41%, so 47% to bonds.

this still give a minimum return of 145k$ (2.42%) and the expected return increases from 5.92% to 6.42%.