CFRM 501 - Investment Science
Assignment 5

Due: November 30, 2020 - 11:59 pm

Late submissions will receive an automatic grade of zero.

Question 1: Derive equations (1), (2), (3), (4), and (5) in the Week 8 Lecture Slides.

Question 2: Consider the single factor model:

$$r_j - r_0 = \beta_j(r_m - r_0) + \epsilon_j$$

and let $\boldsymbol{w}_m$ be the weights of the market portfolio. Multiply both sides of this equation by $w_{m,j}$ and take a sum as j goes from 1 to n. Use conclusions about CAPM to derive an inconsistency, but argue that if the ϵ_j's are independent then the inconsistency tends to disappear as n becomes very large.

Continued Reading: Chapters 6, 7, and 9 of Asset Management by Andrew Ang must be completed before the final exam (December 14, 2020).