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REDESIGN OF THE CAPITAL ASSET PRICING MODEL¹

Keywords: Interest Rates, U.S. T-Bills, U.S. Treasury Bonds, Investment-Grade Corporate Bonds, Capital Asset Pricing Model (CAPM), Risk

Low United States Treasury rates means the risk-free rate used in investment models is low. The Capital Asset Pricing Model (CAPM) is a model used to estimate the return of a particular stock. The CAPM uses the risk-free rate in two sections of the model and with the risk-free rate being so low, research and experiments will be used to see if the CAPM can be improved, changed, or create a new model. Various variables will be run through the CAPM model and many different educated changes will be run through the CAPM. The methodology used will be replacing the risk-free rate with an Investment-Grade A to AAA rated Corporate Bonds. Running different experiments on the CAPM show that the risk-free rate has minimal effect on the expected return of a security. Contribution for further research shows that we can look at the lower significance of the risk-free rate, where we can then look at using some AAA Corporate Bonds in place of the Treasury for risk-free and not have a big swing in risk. There are many assumptions built into the CAPM and this research will analyze a redesign of the CAPM while holding the assumptions steady. We show the expected return of the chosen equity market (S&P) is the biggest driver in producing the expected return of a particular stock. The findings will show that the CAPM is weighted toward market risk.

It is recommended for practitioners to review and think about different models and formulas when valuing an equity for investors. Using the CAPM can be useful but may need to be looked at differently for the current interest rate environment. Researchers can use my recommendations and experiments to formulate their own findings and tweak the experiments to find different outcomes based on their views and risk tolerance. Society can benefit from the knowledge regarding interest rates and how it affects savings, investments, and borrowing. However, society is made up of many unsophisticated investors, just an opinion, and/or people that do not research and just follow trends. The purpose is to bring this CAPM research to other interest rate issues and bring the research to classrooms. Learning from the CAPM and bringing the research into other interest rate topics will hopefully help advice students going into finance as well as students just needing to learn finance. Academia can use the research on setting curriculum that can help improve interest rate knowledge and create further discussion and research

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regarding the CAPM redesign. Further research can be sought to dive into other economic and finance issues from a low, zero, or negative interest rate philosophy and policy.