**Midterm Exam – What to Expect**

FINE 7110 – Investments

Fall 2021

1. I will ask you to look up the adjusted closing prices of several stocks and the S&P 500 Index on Yahoo! Finance. You will calculate the continuously compounded returns, the standard deviation of those returns (and annualize them), the correlations of each stock with the S&P 500, and the beta of each stock (using the absolute return of the stock and the absolute return of the S&P 500). You will use the CAPM to determine the expected return for each stock. You will need to use Excel to put together a correlation matrix and from that, a variance/covariance matrix. You will be asked to find the minimum standard deviation for several portfolio expected returns and the weights in each stock that make up these portfolios. You might also be asked to find the MVP and/or the MVE. You will not need to do any graphing. There will be no macros involved.
2. I will give you the expected returns, standard deviations, and correlation of two risky assets. I will also give you the risk-free rate. You will need to find the MVE portfolio. I will then give you any necessary information regarding an individual’s utility function and you will be asked to maximize that person’s utility by investing some money in the risky assets and some money in the risk-free asset. I may ask you some additional questions about these assets and the portfolio(s) they can make.
3. I will ask you to estimate the beta for a stock by regressing the stock’s excess returns on the market’s excess returns. I will ask you some questions about the beta estimate that you derived. I will choose one of the same stocks from problem 1 (above) so that you will have already found that stock’s (and the S&P 500’s) prices on Yahoo! Finance. I will give you the necessary historical risk-free rates of return.
4. I will ask you to calculate the expected return for a stock using the Fama-French Three-Factor Model. Again, this will be one of the stocks that you already downloaded data for in problem 1 (above). I will ask you some questions about your results. I will provide you with all the Fama/French data you will need.
5. I will give you closing prices for all the stocks in a market. You will need to calculate the value(s) of a market index using various weighting systems. I may ask you some questions about the indexes.
6. There will be several multiple choice questions dealing with the required readings and topics that were discussed in class. Some of these questions will be quantitative.

You will be expected to come to the exam with a laptop that has Excel and its add-ins installed on it. You will also need to be able to access the internet (Yahoo! Finance). You must start the exam with a clean, brand-new Excel spreadsheet and may **not** copy and paste from any other spreadsheets, including spreadsheets on our class website. If you do, it will be considered a violation of the honor code. You may refer to the following during the exam: your textbook, any written notes you took during class, the cases from the case packet, and anything on our class website. Though you may look at anything on our class website, you may not copy and paste from it. The only websites you may visit during the exam are Yahoo! Finance for the purpose of downloading data, and our class website. You will turn in the hard copy of the exam with all your answers on it. You will also upload (to Canvas) a single spreadsheet which will have all your Excel work on it. You should use a different worksheet (clearly labled) for each problem. You will have four hours to complete the exam.

**Required Readings** – there will be some multiple choice questions based on material found in some or all of these required readings:

Readings found on class website:

Perspectives on the Equity Risk Premium by Siegel

The CAPM: Theory and Evidence by Fama and French

New Facts in Finance by Cochrane

Understanding Momentum by Campbell

Understanding Risk and Return, the CAPM, and the Fama-French Three-Factor Model

Cases

Maverick Capital

Martingale Asset Management

Barclays Global Investors and Exchange Traded Funds

Applying the Capital Asset Pricing Model