Empirical Asset Pricing

1. **Cross-sectional asset pricing**

   (a) Is a negative relation between average returns and size (market capitalization) by itself a violation of CAPM? Discuss and refer to the relevant literature

   (b) Suppose you found a negative relation between average returns and total firm assets (as measured in the balance sheet), controlling for the betas on the market factor, would this finding be troublesome for CAPM? Discuss and refer to the relevant literature

   (c) How would you test the hypothesis that an aggregate volatility factor is priced in the cross-section of returns? Give a detailed answer

   (d) Based on sensible economic intuition, if an aggregate volatility factor is priced, what type of cross-sectional asset pricing equation would you expect to hold in equilibrium? Explain and provide the signs of the relevant coefficients in the equation

2. **Predictability**

   (a) Coval and Stafford (2007, JFE) find that forced sales by mutual funds generate price pressure on stock prices. That is, if a fund sells a stock to meet redemptions, the stock price drops for a few months, but then it recovers in the next eighteen months. Using the identity that decomposes returns into expected return and dividend news, to which type of news would you impute the initial drop in stock prices that is documented by Coval and Stafford (2007)?

   (b) Would you change your answer to the previous question if Coval and Stafford (2007) had found that, after the initial price drop, the stock price remains constantly low?

3. **Equity premium puzzle**

   (a) Suppose that the economy is composed of two group of individuals: workers, who do not participate in the stock market and whose income derives from wages and salaries, and investors, who are fully invested in the stock market and whose income entirely derives from stocks. Would this fact contribute to solve the equity premium puzzle? Explain