Econ 340: Financial Markets and Institutions
Final Exam, Fall 2008

Answer the following essay questions in two to three blue book pages each. Be sure to fully explain your answers using economic reasoning and any equations and/or graphs needed to make your point.

Essay Questions:

1. Asymmetric Information and Financial Crises (45 points, 40 minutes)
   (a) (15 points) Mishkin and Eakins (textbook) argue that many of the stylized facts of financial market structure can be explained as a response to both transactions costs and asymmetric information. Define Asymmetric information and the problems that it creates for financial markets. Explain how the structure of the U.S. financial system is due to the pervasive problems associated with asymmetric information.
   (b) (30 points) Over the past year and a half, banks, hedge funds, and investment banks (now defunct) have written off billions (or trillions) in bad loans. Like many other financial crises, the current crisis started with a significant increase in lending using a relatively new lending channel (securitized mortgage loans made by non-banks) with little or no regulatory oversight. The Federal reserve has attempted to calm markets by increasing liquidity and serving as a lender of last resort. And the U.S. government has “rescued” Fannie Mae and Freddie Mac along with AIG and numerous investment banks, commercial banks, and now possibly the big three automakers.
   Provide a detailed explanation of the causes and consequences of the current US financial crisis. Be sure to address at least the following topics and to use equations, graphs and models where necessary:
   i. The role of asymmetric information and regulation in the current crisis.
   ii. Why did a credit crunch emerge?
   iii. Does the Fed and Treasury acting as a lender of last resort and the Federal government “bailing out” borrowers lead to any additional problems? If so, how can those problems be reduced? What steps should be taken to prevent the next financial crisis?

2. Stock Returns and Equity Premiums (15 points, 15 minutes)
   The financial crisis and the stock market collapse has led many investors to re-evaluate their assessment of risk. Investors may now decide that holding equity is riskier than it was say one or two years earlier.
   What is the required rate of return? Explain carefully how and why a change in the required rate of return can affect stock values and returns. If, following the stock market volatility of the past year, investors have reevaluated the riskiness of stocks and raise their required rate of return, what happens to stock prices?

3. Extra Credit (10 points)
   Role your own. Write a really good question and provide a really good answer! Rolling a repeat of one of the questions above will not generate any extra credit.
Answer the following essay questions in two to three blue book pages each. Be sure to fully explain your answers using economic reasoning and any equations and/or graphs needed to make your point.

**Essay Questions:**

1. **Asymmetric Information and Financial Crises (50 points, 40 minutes)**

   (a) (25 points) Mishkin and Eakins (textbook) argue that many of the stylized facts of financial market structure can be explained as a response to both transactions costs and asymmetric information. Define Asymmetric information and the problems that it creates for financial markets. Explain how the structure of the U.S. financial system is due to the pervasive problems associated with asymmetric information.

   (b) (25 points) Over the past year, US and European commercial banks, hedge funds, and investment banks have written off close to 300 billion in bad loans. According to the IMF, losses could eventually total more than half a trillion dollars. Like many other financial crises, the sub-prime mortgage crisis started with a significant increase in lending using a relatively new lending channel (securitized mortgage loans made by non-banks) with little or no regulatory oversight. The Federal reserve has attempted to calm markets by increasing liquidity and serving as a lender of last resort. And the U.S. congress has crafted a number of plans to help reduce foreclosures including everything from freezing adjustable rates to allowing Fannie Mae to buy riskier mortgages.

   i. Explain how an increase in loan losses in the banking sector could lead to a US style financial crisis.

   ii. As the FED has pushed down short term interest rates, what has happened to the value of the U.S. currency? Compare and contrast the effects of a change in the value of the domestic currency in the US sub-prime crisis with the effect of a depreciation in the domestic currency during a crisis in an emerging market economy.

   iii. Does the Fed acting as a lender of last resort and the Federal government “bailing out” borrowers lead to any additional problems? If so, how can those problems be reduced?

2. **Stock Returns and Equity Premiums (20 points, 15 minutes)**

   The subprime mortgage crisis has led many investors to re-evaluate their assessment of risk, not only on mortgage backed securities, but also on their equity holdings. Investors may now decide that holding equity is riskier than it was say one or two years earlier.

   What is the required rate of return? Explain carefully how and why a change in the required rate of return can affect stock values and returns. If, following the stock market volatility of this past summer, investors have reevaluated the riskiness of stocks and raise their required rate of return, what happens to stock prices?

3. **Extra Credit (15 points)**

   Role your own. Write a really good question and provide a really good answer!
Econ 340: Financial Markets and Institutions
Final Exam, Spring 2007
Bonham

Answer the following essay questions in three to four blue book pages or less. Be sure to fully explain your answers using economic reasoning and any equations and/or graphs needed to make your point.

Essay Questions:

1. Asymmetric Information, and Financial Crises (40 points)
   Consider the case of a developing economy with a recently privatized banking sector.
   
   i. Explain how a weakened banking sector (extremely low bank capital), rising foreign interest rates (The Federal Reserve has raised interest rates 17 times from a low of 1% in June 2003 to 5.25% in June 2006.), and Asymmetric Information can contribute to the onset of both a currency and financial crisis.
   
   ii. What features of a developing economy financial market make it more difficult for the country’s central bank to protect their currency?
   
   iii. Once a currency crisis occurs, explain the three different channels by which a devaluation increases asymmetric information and leads to a financial crisis.
   
   iv. Once a crisis occurs, what action should a lender of last resort take?

2. Equity Risk and Return (20 points)

   Discuss the following:

   (a) Which type of risk can be eliminated by diversifying your portfolio? Which type of risk remains after a portfolio is diversified? Do investors receive compensation for all types of risk?

   (b) Write down an equation representing the expected return on an individual security, and explain how the market’s price of risk affects the expected return on the security.

   (c) Suppose that Microsoft has a $\beta = 1.5$, and the return on 1-year Treasury bills is 6%. If the market return is expected to be 10% this year, what do you expect the return on Microsoft to be? Why?

   turn page for MC
Answer the following essay questions in two to three blue book pages or less. Be sure to fully explain your answers using economic reasoning and any equations and/or graphs needed to make your point.

Essay Questions:

1. Interest Parity, Asymmetric Information, and Financial Crises (45 points, 45 minutes)
   
   (a) (20 minutes/points) The Federal Reserve has raised interest rates 17 times from a low of 1% in June 2003 to 5.25% in June 2006. Using a model of interest parity, explain how an increase in the interest rates paid on dollar deposits may lead other central banks to raise their interest rates to protect their currencies.

   (b) (25 minutes/points) Consider the case of a developing economy with a recently privatized banking sector. Explain how a weakened banking sector (extremely low bank capital), rising foreign interest rates, and Asymmetric Information can contribute to the onset of both a currency and financial crisis. What features of a developing economy financial market make it more difficult for the country’s central bank to protect their currency?

2. Equity Risk and Return (25 points, 25 minutes)
   
   Discuss the following:

   (a) How is total risk of an individual stock measured? What two types of risk make up total risk?

   (b) Which type of risk can be eliminated by diversifying your portfolio? Which type of risk remains after a portfolio is diversified? Do investors receive compensation for all types of risk?

   (c) Write down an equation representing the expected return on an individual security, and explain how the market’s price of risk affects the expected return on the security.

   (d) Suppose you manage a 10 million dollar stock portfolio that moves one-for-one with S&P 500 stock market index. If you are concerned that the FED’s interest rate hikes may continue and lead to a drop in your portfolio, explain how you would hedge your portfolio. How would your answer differ if you only wanted to hedge part of the portfolio?

   turn page for MC
Answer the following essay questions in two to three blue book pages or less. Be sure to fully explain your answers using economic reasoning and any equations and/or graphs needed to make your point.

Essay Questions:

1. Interest Parity, Asymmetric Information, and Financial Crises (40 points, 45 minutes)

   (a) (15 points) The Federal Reserve has raised interest rates 16 times since June 2004. Explain how an increase in the interest rates paid on dollar deposits may lead other central banks to raise their interest rates to protect their currencies.

   (b) (25 points) Consider the case of a developing economy with a recently privatized banking sector. Explain how a weakened banking sector (extremely low bank capital), rising foreign interest rates, and Asymmetric Information can contribute to the onset of both a currency and financial crisis.

2. Equity Risk and Return (20 points, 10 minutes)

   Discuss the following:

   (a) How is total risk of an individual stock measured? What two types of risk make up total risk?

   (b) Which type of risk can be eliminated by diversifying your portfolio? Which type of risk remains after a portfolio is diversified?

   (c) Do investors receive compensation for all types of risk?

   (d) Write down an equation representing the expected return on an individual security, and explain how the market’s price of risk affects the expected return on the security.
Answer the following essay questions in two to three blue book pages or less. Be sure to fully explain your answers using economic reasoning and any equations and/or graphs needed to make your point.

Essay Questions:

1. Asymmetric Information and Financial Crises (30 points, 30 minutes)

   (a) (15 points) Mishkin and Eakins (the textbook) argue that many of the structural aspects of the U.S. financial system can be explained in terms of transactions costs and asymmetric information problems. Define asymmetric information and the problems that it creates for financial markets. Explain how the structure of the U.S. financial system can be explained by the problem of asymmetric information.

   (b) (15 points) Explain the root cause and progression of recent financial crises in other parts of the world (Thailand, Malaysia, South Korea, Indonesia, Japan, Russia, Brazil, Mexico, Argentina, ...)?

2. Stock Returns and Equity Premiums (25 points, 25 minutes)

   During the 1990s, the equity premium declined significantly. One possible reason for that change is a decline in investors required rates of return.

   What is the equity premium? What is the required rate of return? What factors may have lead to a decline in the required rate of return during the 90s? Explain how these factors lead to declining equity premiums. Explain carefully how and why a decline in the required rate of return affects stock values and returns. If above average returns during the late 90s were due to declining equity premiums, explain why investors expecting above-average returns in the future may be disappointed.
Essay Questions:

1. (Asymmetric Information and Financial Crises)
   a. (15 points) Mishkin and Eakins (the textbook) argue that many of the structural aspects of the U.S. financial system can be explained in terms of transactions costs and asymmetric information problems. What are their arguments? Are they convincing?

   b. (15 points) Explain the root cause and progression of recent financial crises in other parts of the world (Thailand, Malaysia, South Korea, Indonesia, Japan, Russia, Brazil, Mexico, Argentina, ...)?

   c. (5 points) In what ways, if any, are Mishkin's and Eakin's concerns about asymmetric information problems in securities markets exemplified by the Enron bankruptcy scandal?

2. (IRP and hedging)
   Over the past 16 months, the U.S. Federal Reserve has cut its fed funds rate (short term interest rate) target 11 times to its current 1.75% rate. Suppose at their next OMC meeting, the FED decides to increase its short term interest rate target by 200 basis points.
   a. (15 points) Write down an equation representing interest parity, and provide an intuitive explanation for the equation. That is, explain how market forces ensure that interest parity holds.

   b. (10 points) Use your interest parity model to explain the impact of the Fed's move on the value of the dollar. Provide both a graphical and intuitive explanation of your results. Suppose the Bank of Japan (BOJ) wishes to maintain the yen/dollar exchange rate at its level prior to the Fed's policy move. What action is the BOJ likely to take?

   c. (10 points) As a manager of a bank's portfolio, how would you hedge against the risk your bank faces from changes in Fed policy?

Multiple Choice 2 points each

1. If the inflation rate in the United States is higher than that in Germany and productivity is growing at a slower rate in the United States than in Germany, then, in the long run,  
   a. the German mark should appreciate relative to the dollar.

   b. the German mark should depreciate relative to the dollar.

   c. the dollar should depreciate relative to the German mark.
Econ 340: Money, Banking and Financial Markets Final Exam, Fall 2001

Essay Questions:
The U.S. economy entered a recession in March of 2001, but there are a number of signs that we are near the bottom of the business cycle. This view is reinforced by the expectation of substantial fiscal stimulus (deficit spending) being discussed in Washington.

1. (20 points) Using a S&D for loanable funds model, illustrate and thoroughly explain how a business cycle expansion (accompanied by expansionary fiscal policy) would affect interest rates on short term government bonds. Assuming a constant expected return on the overall stock market (and constant \( \beta \)), predict the impact on the required return on a risky stock or portfolio based on the CAPM.

2. (20 points) While inflation has been declining over the past year, as the economy begins to accelerate out of the business cycle trough, bond traders will expect rising inflation over the next few years. Using your answer to the question above, and a model of the term structure of interest rates, explain how the business cycle expansion (accompanied by expectations of rising inflation) will affect interest rates on intermediate and longer term government bonds.

3. (30 points) Given your answers to questions 1 and 2 above, explain the interest rate risk faced by a bank. How would you hedge against such interest rate risk using financial futures? How would you hedge against this risk using options? Which method would you recommend. Why?

Multiple Choice 2.5 points each

1. US Treasury Bills:
   (a) pay no interest and are sold at a discount.
   (b) are very illiquid.
   (c) have substantial default risk.
   (d) are loans from the Federal Reserve System.

2. Corporate Bonds:
   (a) are very liquid.
   (b) are issued by the Federal Reserve System.
   (c) typically have higher yields to maturity than similar government bonds.
   (d) are only sold at a discount.

3. The present value of $200 received in two years with interest rate \( i \) is:
   (a) \( \frac{200}{1 + i} \)
   (b) \( 100 \times (1 + i) \)
   (c) \( \frac{200}{(1 + i)^2} \)
   (d) \( 200 \times (1 + i)^2 \)
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3. The present value of $200 received in two years with interest rate $i$ is:
   (a) $200/(1 + i)$
   (b) $100 \times (1 + i)$
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