Name: ______________________

Midterm exam
266: Fi. Markets and Institutions
Spring 2010
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Directions:

You have the full class period to do the exam. unless other arrangements have been made.

All parts are worth 3 points.

The exam is printed on both sides of the paper.

1. Quantities

   (a) What is the approximate value of U.S. nominal GDP?

   (b) What is the approximate value of mortgage debt of the U.S. household sector?

   (c) What is the approximate value of total assets of the largest commercial bank in the United States?

(d) Short-term interest rates in the U.S. peaked at around what level in about 1980?

2. Portfolio Theory.

   (a) What is systematic risk?

(b) What is the expected return on asset A in Table 1.

Table 1

outcome	pr.	Returns	
		A	Market
1	0.25	0.01	0.05
2	~~0.70~~ 0.75	0.08	0.07

Note: the table characterizes two possible outcomes and their probabilities.

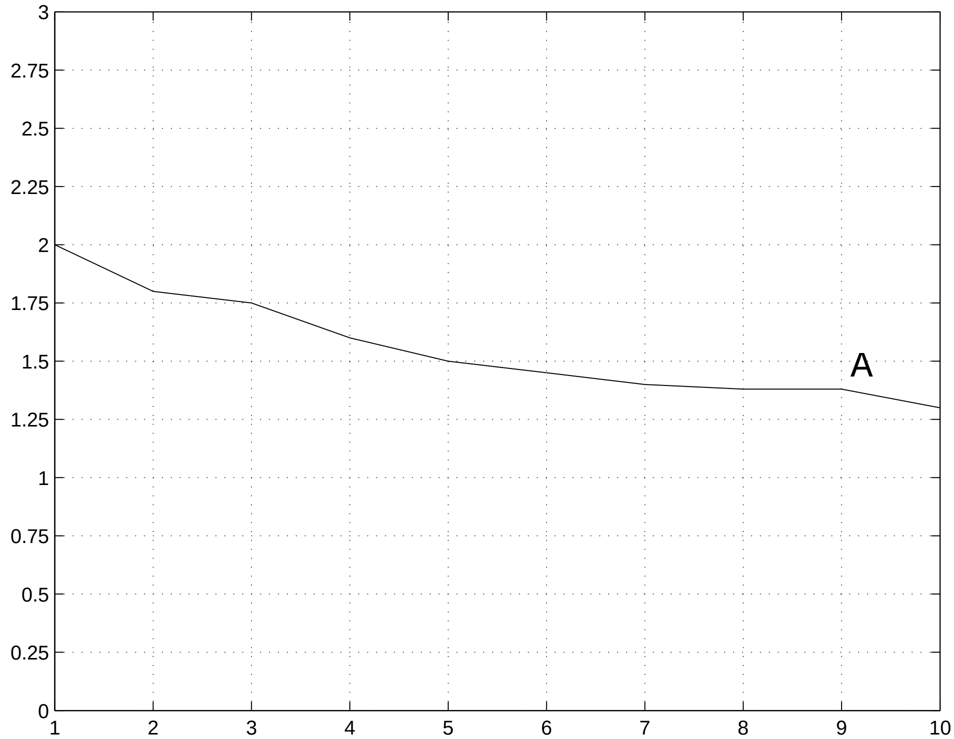
(c) What is the covariance of the return on asset A with that on the market portolio (see Table 1)?

(d) (This part does not use Table 1). Suppose that the expected return on the market portfolio is 9 percent, the risk free rate is 3 percent, and you consider an asset with a CAPM beta of 1.3. According to the CAPM, what is the expected return on this asset?

(e) Your investment advisor suggests that you place significant funds with ABC investment manager. ABC has reported consistent returns considerably higher than the general stock market returns for each of the last 12 years. Portfolio theory says that you should follow this advice since ABC gives a high expected return with low variance. Agree/Disagree. Explain.

3. Term structure

Fig. 1: Yield curve



(a) Fig. 1 shows a standard yield curve, but without axis labels. If this is a standard yield curve, what is the interpretation of, say, point A?

(b) Is this yield curve broadly consistent with the U.S. yield curve at the present time?

(c) What is the implied 2-year forward rate 3 years in the future from this curve?

(d) According to the expectations theory of the term structure, if the yield curve in Fig. 1 is observed, the market expects short-term interest rates to rise or fall?

(e) If interest rates behave as they have on average over many years, what way will short-term rates tend to move in the future when the yield curve looks like that in Fig. 1.

4. Stock market

   (a) What is a stop order?

   (b) What is the primary difference between the role of a market maker on the NASDAQ vs. a specialist on the NYSE?

(c) Why might the bid-ask spread on the stock of XYZ corp. be larger on average than the bid-ask spread on MMO corp. stock?

(d) Some experts argue that allowing short sales might very important in counteracting the tendency toward stock market bubbles. Why might this be the case?

5. Commercial banks.

   (a) What is the main liability on the balance sheet of most commercial banks?

   (b) By intermediating the flow of credit, commercial banks mitigage information problems that might otherwise hinder the flow of credit from those with funds to lend to those who need to borrow. Agree/disagree. Explain.

(c) Fill in the blank on the following balance sheet.

Balance Sheet: Binda Bank

A		L	
Reserves	6	Deposits	20
Securities	30	Borrowings	
Home Mortgages	15	<1 year	25
Commercial loans	20	≥ 1 year	20
Physical capital	5		
		Net worth	______

Note: Amounts in $millions.

(d) The bank decides to grow and does so by attracting $100 million in deposits and acquiring $100 million in 30-year fixed rate mortgage debt. What does the balance sheet look like now?

Balance Sheet: Binda Bank

A		L	
Reserves	______	Deposits	______
Securities	______	Borrowings	
Home Mortgages	______	<1 year	______
Commercial loans	______	≥ 1 year	______
Physical capital	______		
		Net worth	______

Note: Amounts in $millions.

(e) The risk managers of the bank worry that the balance sheet expansion in the previous part increased the bank's duration gap. What does this mean and why might it be important?

6. Crisis.

   (a) Explain one feature shared by Wall Street and household balance sheets in the years leading up to the crisis that probably made the crisis more serious.

   (b) The S&P 500 index in the current crisis has so far mirrored the pattern of the Nikkei index during the Japanese asset price bubble of the 1990s. Agree/disagree. Explain.