

Name: _____

Midterm exam I
266: Fi. Markets and Institutions
Spring 2017
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Directions:

You have 70 min. to do the exam (unless other arrangements have been made).

Some questions offer a bit of choice on which parts you do, so read carefully. If you answer too many parts, we will grade the first ones and ignore extras.

Where computations are required, full points will be given for the correct answer. For incorrect answers, partial points will be given if warranted. For example, the proper formula with the relevant values plugged in will get near full points.

You may write on the backs of the exam pages and request additional paper.

If your answer extends outside the space provided, you must label clearly where the additional portion is located.

All parts of all questions are worth equal value.

The last page of the exam is marked, 'The End.'

1 Definitons. Do 5 of 6.

1.1 Asymmetric information in financial markets

1.2 S&P 500 stock index.

1.3 Limit order to buy a stock.

1.4 Par value of a bond.

1.5 Stock broker.

1.6 Primary market (for a financial instrument)

2 **Facts.** Give answers to the following questions. Be sure to state units when appropriate.

2.1 The U.S. Treasury yield curve in the U.S. generally slopes [pick one: up/down], implying that yields on longer-maturity bonds are generally [pick one: higher/lower] than yields on shorter maturity bonds.

2.2 Typical yields on municipal debt in the U.S. have historically tended to be [pick one: higher/lower] than yields on U.S. Treasury Debt. In the aftermath of the crisis, typical yields on municipal debt have often been [pick one: higher/lower] than yields on 10-year Treasury debt.

2.3 U.S. stock indices have fallen in value by more than 30 percent [pick one: once/twice/many] times this century.

2.4 What is the approximate value for U.S. nominal GDP?

2.5 Nonfinancial corporate business debt as a share of GDP has [pick one: generally risen/generally remained steady/fluctuated widely with no clear trend] since 1950.

2.6 Late on election night in Nov. 2017, Paul Krugman wrote for the New York Times, ‘It really does now look like President Donald J. Trump, and markets are plunging. When might we expect them to recover? ...I guess people want an answer: If the question is when markets will recover, a first-pass answer is never.’ In reality, the recovery took [pick one: less than a day/a decade/a millenium]

3 Pricing a bond. We have a coupon bond with 2 years remaining to maturity. Principal value is \$100; annual coupon is \$2.23; yield to maturity is 3 percent.

3.1 The price of the bond today is what?

3.2 What is the coupon rate on this bond, in percent?

3.3 What is the current yield on this bond, in percent?

4 Expectations theory of interest rates. Suppose the current 1-year spot rate is 1 percent, the 2-year spot rate is 3 percent, and the 3-year spot rate is 3 percent, or $i_{1,t} = 0.01$, $i_{2,t} = 0.03$, and $i_{3,t} = 0.03$.

Note: In this question, you may use the standard approximate formulation (based on $\ln(1 + z) \approx z$).

4.1 Under the expectations theory of the term structure, what do market participants expect the 1-year rate to be 1 year from now? And 2 years from now?

4.2 Suppose the Fed causes the 1-year spot rate to increase to 2 percent ($i_{1,t} = .02$), but expectations of future 1-year rates in years 2 and 3 remain as in the previous question. What is the new value for the 3-year spot rate $i_{3,t}$?

(Note: If you did not get the previous part, you may just posit values for $i_{1,t+1}^e$ and $i_{1,t+2}^e$.)

4.3 Market expectations derived using the expectations theory of the term structure usually prove to be accurate predictors of the future. True/False and explain.

5 Stock valuation.

5.1 Suppose that a company is expected to pay an annual dividend of $d_{t+1}^e, d_{t+2}^e, d_{t+3}^e, \dots$, in years $t+1, t+2, t+3, \dots$. Give a formula for the value of the share price today, at time t , using our standard discounted present value relation and assuming a constant interest rate for discounting.

5.2 The Gordon growth model of stock prices is consistent with the present value formula you've just given, but makes certain simplifying assumptions. What additional assumption does the Gordon model make about dividends?

5.3 The stock of LAX corp. is currently selling for \$20 per share. LAX is expected to pay an annual dividend of 65 cents per share. Analysts expect the price of LAX shares to be \$23 in one year. Using these expectations, what is the expected rate of return for holding LAX over the next year?

6 The secondary market for equities.

6.1 Adam Smith was a great advocate of markets as a way to facilitate efficient exchange in economies, but he believed that companies that were owned broadly by shareholders who traded shares on a stock market were doomed to failure. Why?

6.2 Smith may have been wrong about publicly traded companies, at least for a few major economies, but in most economies around the world financing through publicly traded shares plays a much smaller role than in the U.S. [pick one: true/false]

6.3 According to Patricia Little, there are very strict regulations regarding communication of financial information to investors coming from publicly owned firms. Ms. Little said that on the whole these restrictions are good or bad, and why?

7 Most debt financing in economies around the world is provided by banks.

7.1 Explain some features of well-designed loan contracts that help overcome asymmetric information problems in bank lending.

7.2 Since the financial crisis economic problems in Europe have left many European banks in a weakened financial condition. What would it mean to create a 'bad bank' to help return European banks to health? And what are the benefits that some folks argue might come from this step?

Congratulations. The End.