

Name: _____

Final exam
266: Fi. Markets and Institutions
Spring 2015
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Directions:

You have 2 hours (120 min.) to do the exam unless other arrangements have been made.

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

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

Each part of each question is of equal value.

NOTE: Some questions involve choice about which parts of the question you must complete. This is signified, e.g., by (Do 3 of 4). If you do more parts than required, we will grade the parts in order and then ignore any extras.

1 [**Do 6 of 7**] Definitions. Briefly define the following terms.

1.1 Insurable interest

1.2 Adverse selection

1.3 Short sell

1.4 American put option

1.5 Credit default swap

1.6 Annuity

1.7 Syndicate (investment banking)

2 Real-world facts. Remember to state the correct units.

2.1 What is the approximate value of U.S. nominal GDP?

2.2 Under the LSAP programs, the Fed purchased and now holds about what value in securities?

2.3 After being elevated for many years, the unemployment rate has recently fallen into a range traditionally viewed as normal. Pick one: [True/False]

2.4 About what is the yield on 10-year U.S. Government Treasury securities at present?

2.5 About what is the value of total assets of insurance companies and pension plans in the United States?

2.6 The total capitalization of North American stock markets is about what?

3 Real interest rates.

3.1 What do we mean by the term *real interest rate*?

3.2 Why do we believe that investors should care mainly about real interest rates, as opposed to nominal interest rates?

3.3 The real interest rate on short-term government securities in the U.S. currently [positive/negative]? (pick one of the words in [])

4 Monetary policy. In the *normal times* before the financial crisis, if inflation and employment began to fall to undesirably low levels, the Fed would lower the federal funds rate and keep it low for a time before returning it to the normal or neutral level.

4.1 Explain why, all else equal, we might expect the Fed's action just described to put downward pressure on longer-term interest rates.

4.2 List three main channels through which Fed actions such as the one just described may tend to put upward pressure on inflation and the pace of economic activity. (Note: you needn't explain the channels; that is in the next part.)

4.3 Briefly explain the economic reasons underlying the stimulative effect of two of the channels listed in the previous part.

4.4 Explain how the Fed employed forward guidance in recent years in an effort to make financial conditions more accommodative.

4.5 Explain why in normal times we would not generally expect to see the Federal Funds rate trading above the Fed's discount rate.

4.6 Why has the Fed recently begun to consider raising its target for the federal funds rate sometime this year?

5 Exchange rates. Between July 2014 and March 2015, the Dollar vs. euro exchange rate moved from roughly 1.35 to 1.05 \$/€.

5.1 The move in the value of the dollar implied that euro denominated goods and assets became [more/less] expensive from the perspective of U.S. residents. (pick one of the words in)

5.2 Exchange rate changes of the magnitude just described are quite rare in practice. [true/false] (pick one of the words in)

5.3 In light of the present yields on U.S. and German short-term government securities and under the uncovered interest rate parity (UIP) theory, the dollar is expected to [appreciate/depreciate] in value versus the euro over the next few months? (pick one of the words in)

Note: The German bonds are denominated in euros.

5.4 Oil is priced internationally in dollars—that is everyone pays the dollar price. If the dollar price of oil had been unchanged between July 2014 and March 2015, what percent change in the euro price of oil would have been implied by the change in the exchange rate?

Note: Compute the percent change in the euros it would have cost to convert euros to dollars at the spot exchange rate in order to buy a barrel of oil.

5.5 In practice, the price of oil fell from roughly \$100 per barrel to \$50 per barrel over the period we've been discussing. Thus, in light of the move in the exchange rate and price of oil, what was the percent change in the euro price of of oil?

6 Hedging and derivatives.

6.1 What do we mean when we talk of hedging the risk involved in holding some particular asset?

6.2 I own part of Little Guy Auto Parts, a parts supplier whose main client is GM corporation. Explain how I might use credit default swaps on GM bonds to hedge the risk I face in holding equity in Little Guy Auto Parts.

- 6.3 Suppose one barrel of crude oil costs \$60 on the spot market at present. The following table represents the view of market participants about the likely spot price of oil in 6 months.

Price of oil in 6 months		
outcome	prob.	price (\$)
1	.1	100
2	.4	80
3	.3	60
4	.2	40

What is the expected price of one barrel of crude oil in 6 months?

- 6.4 What should be the price of a European call option on one barrel of crude oil with a strike price of \$85, an expiration date in 6 months, and presuming that the appropriate annualized interest rate to using in discounting the risky payoff of the option is 4 percent.

7 [Do 3 of 4 parts] Risk, reputation, etc.

7.1 How do reinsurance markets help insurance companies manage risk?

7.2 How do financial institutions use the concept of duration in managing interest rate risk?

7.3 Suppose you are running a firm that originates mortgages that are to be bundled and sold in the form of asset backed securities. You offer an incentive scheme to your workers that are originating the mortgages in which they get large bonuses for originating a large volume of loans. Explain how these contracts might raise the operational risk you face.

7.4 Since the financial crisis, major financial firms have carefully avoided impropriety and even the appearance of impropriety in order to rebuild their reputation and public trust. True/False and justify your answer.