Problem set 1
266: Fi. Markets and Institutions
Spring 2016
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Directions. You are to do this problem set on your own.

Due Date/time. Your work is due by beginning of class (10:30am) Thursday, February 18. You can hand the work in to me at the beginning of class. If you put the work under my office door or in my mailbox, it must be in before I leave for lecture at about 10:20 am.

Questions. If you have questions, email me or the TAs, raise them in class, or come to office hours.

Grading. All parts have equal value.

Note: Be sure to note the proper units (e.g., millions, billions, etc.) in the following answers.

1 Calculating returns. Suppose that I can buy a financial instrument that will pay me $100 four months from now.

1.1 I pay $99 today for the asset. What is the annualized rate of return on my investment?

1.2 The price falls so that I only have to pay $93 for the asset. What is the annualized rate of return on my investment?

1.3 What is the implied relationship between the price of the asset and the return?

1.4 Suppose instead I pay \$101 for the asset, what is the annualized rate of return?

1.5 What is a reason I would ever pay more than \$100 for this asset?

2 Corporate bonds.

2.1 Describe the payments associated with a simple, ‘plain vanilla’, corporate bond with a maturity of 10 years.

2.2 Take a plain vanilla coupon bond with face value of \$100, a coupon rate of 3%, and 2-years remaining maturity. (Note: assume annual coupon payments.) The bond is currently selling for \$108. What is the yield to maturity?

2.3 Many corporate bonds are not 'plain vanilla.' Describe two major examples of features bonds may have that allow the payoff from the bond to be changed at either the discretion of the bond holder or the bond issuer.

2.4 Suppose we add a feature to a bond that gives the bond issuer some discretion over the payments stream. This should raise or lower the price of the bond? And why?

2.5 What is the key feature of CoCo bonds that makes them attractive to banks? Hint: You might want to start with this piece on the CFE website: `http://cfe.econ.jhu.edu/2011/03/cocos-the-movie/`

3 Reality

3.1 What is the 2-year and 10-year yield (in percent) on the following government securities.

Country	2-year yield	10-year yield
U.S.		
Germany		
Japan		
Brazil		

Note: Your answer will depend on the day and time you look these up.
Put the date and approximate time here: ________________

Hint: You can get these from Bloomberg machine. Go to page WB, for example. pick the 2-year and 10-year maturities.

3.2 What was the annualized percent change in the following stock indices between Dec. 31, 2008 and Feb. 15, 2016 and between Dec. 31, 2015 and Feb. 15, 2016.

	return		
index	since Dec. 31, 2015	since Dec. 31, 2008	country
S&P 500			
DAX			
Nikkei			
Bovespa			

Hint: There are a lot of places to get this information online. You can also get the information from Bloomberg, page WEI. To annualize the rate of return for this year, for example, assume that by Feb. 15, $(46/365)^{th}$s of the year had passed.

3.3 Each of the above indices is a major index for a particular country. Fill in the country column in the above table.