

Problem set 1
266: Fi. Markets and Institutions
Spring 2017
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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) on the date listed on the online syllabus. You can hand the work in to me at the beginning of class or drop it by office hours (Daily Grind) before class.

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 7 months from now. Assume that the asset will pay in full.

1.1 I pay \$98 today for the asset. What will be the annualized rate of return on my investment?

1.2 The price falls so that I only have to pay \$94 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 \$100.50 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 2%, and 3-years remaining maturity. (Note: assume annual coupon payments.) The bond is currently selling for \$105. What is the yield to maturity?

2.3 Many corporate bonds are not 'plain vanilla.' For each of the following, explain the listed feature of a bond and state whether, all else equal, adding this feature to a plain vanilla bond should increase or decrease its value:

2.3.1 Callable bond. circle one: increase/decrease

2.3.2 Convertible bond. circle one: increase/decrease

2.3.3 Convenanats on a bond. cirle one: increase/decrease

2.3.4 AT1 CoCo bonds. cirle one: increase/decrease
Hint: Try googling this term.

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		
Sweden		
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 many places, including from a 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. 14, 2017 and between Nov. 6, 2016 and Feb. 15, 2017.

index	return		country
	since Nov. 6, 2016	since Dec. 31, 2008	
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 since the election this year, for example, assume that each day is $(1/365)^{th}$ s of a year.

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