

Present Value Practice

1. Which of the following is worth the most? the least?
 - a) an annuity paying \$40,000 per year (end-of-year) for each of the next 30 years
 - b) \$1,000,000 receivable exactly 12 years from today
 - c) \$500,000 today

Assume a discount rate of 7%.

2. A 30 year, \$100,000 Treasury bond that was sold exactly 20 years ago carried a coupon rate of 10.0%. The yield to maturity on a new 10 year Treasury bond today is 6%. What price would an efficient market place on the older bond?
3. You have just inherited an annuity from your rich, dead uncle. Since “uncle” didn’t think that you were terribly responsible, he stuck you with a \$50,000 per year annuity (payable at the end of each year—starting 365 days from today). The payments will run for the next 50 years.

Not having to work these days, you have plenty of time to lay on the couch and watch Jerry the Jerk. During a commercial break you see an ad from a group, Mercantile Capital, that says it pays cash for future payment contracts such as lottery payments, structured lawsuit settlements, perverted uncle bequeaths, etc. You give MC a call and they offer you \$1,000,000 for your annuity. Just sign over the future payments (\$2.5 million in total) to them, and they will give you a cashier’s check for \$1,000,000.

Are they giving you a good deal, or are they thinking that they can easily shaft anyone dumb enough to be at home during the middle of the day watching Jerry the Jerk?

- 4. You receive a letter from Shady Shyster Lake Estates. These nice folks indicate that if you'll just drive down (100 miles) and spend a pleasant day at their beautiful resort they'll give you a \$5,000 bond.**

[Small Print: the bond is a 40 year, zero-coupon guaranteed by the company. There is a small, \$100 transfer and recording fee payable at the time of your visit.]

Info that may or may not be relevant: 30 year Treasury bonds are yielding 6.5%, and good junk bonds are yielding 9% and above.

On a purely monetary basis, is it worth it to make the trip to SSLE? You have no interest in a lake lot, a time share; have no money to buy either; and have other, equally pleasant things to do with your time.

- 5. You have calculated that by the time your son or daughter is ready to start college in 18 years, it will cost \$33,000 per year for her/him to attend. You figure that it will take him/her six years to earn a degree. How much money would you have to set aside today to finance his/her college education? Assume that you can earn 7% on your money.**