

Determine the amount and number of regular payments for the coupon bonds depicted below:

|               |        |
|---------------|--------|
| Zeta          | \$1000 |
| 5% coupon     | 3-year |
| Paid annually |        |

|                    |        |
|--------------------|--------|
| Tao                | \$1000 |
| 2% coupon          | 8-year |
| Paid semi-annually |        |

|              |        |
|--------------|--------|
| Beta         | \$5000 |
| 3.2% coupon  | 8-year |
| Paid monthly |        |

Payment amount:

# of payments:

Total amount paid:

Total profit over bond's life:

Profit %:

Payment amount:

# of payments:

Total amount paid:

Total profit over bond's life:

Profit %:

Payment amount:

# of payments:

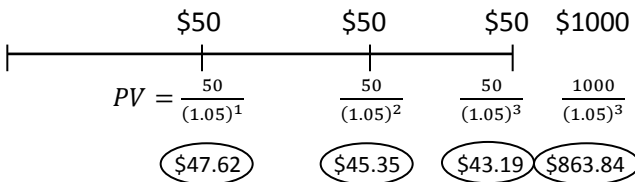
Total amount paid:

Total profit over bond's life:

Profit %:

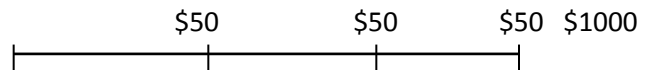
You know that as the interest rate changes, the value of the bond changes. However, the amount of the regular cash payment does not change. For Zeta, it's always \$50 per year. The price (value) of the bond changes based on PV, but the regular cash payments are determined by the terms written on the bond initially.

At 5%, bond Zeta is worth \$1000 when you buy it:



The sum of the circled PVs is \$1000. This is the value of the bond.

Find the bond's value when the rate changes to 3.5%:



----- Reading Companion Below -----

*Paragraph 1: "Understanding the price..."*

What does this paragraph say about bond prices?

Why might this incentivize investors to sell bonds before maturity?

*Paragraphs 2-3: Measuring Return with Yield*

What is a bond yield?

What is the formula?

yield =

Remember: A yield is a %, so an answer is that the yield is 8% or the yield is 12.5%, etc.

If Bond A has a 5% coupon and a \$1000 par value, determine its payments: \_\_\_\_\_

Assume the price of the bond is \$1000. Determine its yield:

Assume the price of the bond is \$1100. Determine its yield:

Assume the price of the bond is \$950. Determine its yield:

If Bond W has a 4.2% coupon and a \$1000 par value, determine its payments: \_\_\_\_\_

Assume the price of the bond is \$1000. Determine its yield:

Assume the price of the bond is \$1080. Determine its yield:

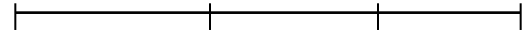
Assume the price of the bond is \$875. Determine its yield:

Go back to Bond Zeta on the first page.

Determine the yield at a rate of 5% when the price of the bond is \$1000.

Determine the yield at a rate of 3.5% when the price of the bond changed.

Change the interest rate for bond Zeta to 7%. Draw the cash flow diagram, discount the cash flows, find the new value of the bond, and determine the yield of the bond.



Use the work you've done to fill in the table about Bond Zeta here.

| Interest Rate | 3.5% | 5% | 7% |
|---------------|------|----|----|
| Bond Price    |      |    |    |
| Bond Yield    |      |    |    |

Based on Zeta's yield at 3.5%, 5%, and 7%, what pattern do you observe between the interest rate of a bond and the bond's yield? Why does this make sense?

What would you predict about the yield for Zeta if the interest rate was 8%?