

Seminar 1  
– Written opposition to group B3 ‘Valuing Bonds’ -

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**Seminar 1**  
**Group B4 opposing Group B3**  
**MT1370**  
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**By Marlon Gerard Silos**

Group B3 presentation is about valuing bonds. They focus on what a bond is and the basic concepts and qualities of a bond. What type of bonds there is and the guidelines to valuing a bond. They finished the report with a Matlab example and their own drawn conclusions.

The report is synoptic. The report is built up in a way that it is easy for the reader(s) to follow. They go into explaining in a way that for people who have no clue about bonds get a basic understanding and for those who know something to expand their knowledge.

But we have some comments:

- Overall what we are missing in this report is footnotes for the illustrations used in the report.
- On page 6 when giving the current yield formula it would be best to use instead of  $Y_c$   $Y_t$  as you use  $B(t,T)$ . the current time here is ‘t’ not ‘c’. Use that also to formulate your explanation better. You wrote: “The current yield is calculated by dividing the coupon with current price of the bond”. It is better to add to that at time ‘t’: “The current yield is calculated by dividing the coupon with current price of the bond at time t”.
- On page 6 could you explain what you mean by  $Y_{tc}$ .
- On page 6 it would be helpful for the non economic readers to define what the letter ‘r’ in the formula represent;
- On page number 7 there is no explanation for the formulas used there.
- On page number 7, under the ‘Modified duration’ explanation it is mentioned that the Modified duration is equal Macaulay duration divided by  $(1+(\text{bond yield}/k))$  and you use in the formula itself:  $(1+y)$ . it would be better to use an uniform letters for the formulas or explain how you get from  $(1+(\text{bond yield}/k))$  to  $(1+y)$ .
- Also on page 7 when explaining convexity and saying it is the second derivative of the price yield line. It would be best to show the convexity formula and use a graphical illustration to show this derivative and a mathematical explanation getting to that graph.

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- On page 8 in the second paragraph you describe an U.S. treasury as an zero coupon bond, but an U.S. treasury bond isn't a zero coupon bond. It is a negotiable, coupon-bearing debt obligation issued by the U.S. government and pays interest every 6 months at a fixed coupon rate.
- On page 10 the one before last paragraph you mention that the risk free rate can be replaced by the coupon rate, but you can't just replace  $r$  for  $i$  in the formula without changing the formula itself. What you said is only possible when  $i = r$ .
- On page 11 you mentioned that the investor doesn't have to give any thought to any kind of changes in interest rates, but if when calculating the present value of the face value given you use an interest rate, when the market interest rate increases or decreases the real value of the face value will decline or increase. The investor might want to sell the bond further or might be hesitating to buy the bond. So isn't the investors still looking at the market interest rates changes during the lifetime of the bond as a basis for knowing the inflation or deflation.
- At page 11 you mentioned at the last row that you get exact the value invested in the bond plus the last coupon payment, but isn't it so that you get the face value of the bond plus the last coupon payment.