

Solution Sheet on Problem Set 4

**Fixed Income**

Deadline: 16.12.2021

**Solved by: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

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| **Task** |  | **Points Earned** |
| 1. **Forwards to Interest**   a)  Different types of interest rates  (9 points) |  |  |
| b)  Z-Bond prices  (7 points) |  |  |
| c)  Forward Rate (3y to 20y) (4 points) |  |  |
| 1. **Fix.Inc. Calculus**   a)  Coupon bond price (4 points) |  |  |
| b) Yield-to-maturity  (4 points) |  |  |
| c) Bond Duration’s  (6 points) |  |  |
| d) Scenarios: description (6 points) |  |  |
| e) Scenarios: YTM (10 points) |  |  |
| f) Scenarios: prices (10 points) |  |  |
| **3. Yield Curve** a) Yield curve patterns (4 points) |  |  |
| b)  Z-bond prices (6 points) |  |  |
| c) Yield curve fit (8 points) |  |  |
| d) 7 year z-bond (5 points) |  |  |
| e) Semi-annual coupon bond (5 points) |  |  |
| f) Level, slope & curvature (6 points) |  |  |
| g) Different Spreads (6 points) |  |  |