MF 728: Fixed Income

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Problem set # 1

Due: Wednesday, February 9th, by 2pm.

1. **CDS Pricing** Assume that the risk-free interest rate is 2% for all maturities and suppose that the CDS spreads for contracts that are starting today are given by the table below. Also, assume that the expected recovery $R = 40\%$.

Maturity	premium (bps)
1y	100
2y	110
3y	120
5y	140

   (a) Assume that hazard rate is piecewise-constant and bootstrap the CDS curve using the information above.

   (b) What would be a fair spread for a 4y CDS, that starts today.

   (c) If you had bought a 5y CDS exactly one year ago with the contractual spread of 80bps, what would you charge me to buy it off you today.

   (d) Working with the 4y CDS in (1.b), compute the dv01 of the CDS with respect to the CDS curve in Table 1.

   (e) Compute the dv01 wrt the interest rate curve.

   (f) Compute sensitivity wrt R.