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| **ASSIGNMENT # 03** |

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| Date of Submission: | **15th JUNE 2020** |  |  |
| Course Name: | **FinancialRiskManagement** |  |  |

**MBA**

**Q1)** Calculate the effective maturity/ duration of a one year 10 percent coupon bond

**Duration:**

Duration is defined “the measure of the sensitivity of the price of a [bond](https://www.investopedia.com/terms/b/bond.asp) or other [debt instrument](https://www.investopedia.com/terms/d/debtinstrument.asp) to a change in [interest rates](https://www.investopedia.com/terms/i/interestrate.asp). A bond duration is easily confused with its term or [time to maturity](https://www.investopedia.com/terms/t/termtomaturity.asp) because they are both measured in years is known as Duration.

**How Duration Works**

Duration measures how long it takes in years, for an investor to be repaid the bond price by the bond total cash flows. At the same time the duration is a [measure of sensitivity of a bond or fixed income](https://www.investopedia.com/terms/i/interest-rate-sensitivity.asp) portfolio price to changes in interest rates.

**Solution:**

* Time duration = 1 year
* Coupon bond = 10%

**i)** Year. Payment. Present value by discounting 10%

1 110 100

**ii)** Year. Payment. Present value relative value

1 110 100 100/100= 1

**iii)** Year. Relative value year 1 relative value

1 1 1\*1 = 1

**The effective maturity of a 1 year 10% coupon bond is = 1**

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