Assignment

[Name of the Writer]

[Name of the Institution]

**Unit 9 Discussion**

There is an inverse relationship between bond prices and yields. This inverse relationship will be demonstrated by calculating bond prices to show that interest rates move inversely: if yields rise, then bond prices fall. Bonds will be sold either at a premium or a discount. With this in mind respond to the following question.

You currently own a 30 year Treasury bond paying a 4% annual coupon rate. The market interest rates for like securities rose to 5%. Would your bond sell for a premium or a discount? Why?

What would the market value of your bond be? Prove your answer by showing your work, the appropriate factors, or the factors that would be used for the fx calculator.

**Solution:**

* F = Face / Par value of bond,
* r = Yield to maturity (YTM) and
* n = No. of periods till maturity
* C = Periodic coupon payment

Let Principal amount be $1000

The present value of semi-annual coupons:

(40/0.05)\* [1- 1/(1.025)^60] = $618.17

The present value of $1000 principal:

$1000/(1.025)^60 = $227.28

Therefore, the market value of the bond:

$618.17 + $ 227.28 = $845.45

Due to interest rate risk (Yield to maturity or market interest rate > Coupon rate), the bond would be sold at discount. The returns on the current investment are compared by the investors constantly to gain profit. The coupon rate is fixed whereas the market rate is changing and investors are attractive for making more profit. Investors have many opportunities to invest but it is important for him to carefully weigh the options of investment.