

# Yield to maturity essay



**ASSIGN  
BUSTER**

Scenario: A coworker of yours was discussing her investments with a broker. Your coworker was confused because she had purchased a 10% bond but the broker kept repeating that it had a 9% yield to maturity. Explain the concept of yield to maturity. This paper will explain the concept of yield to maturity in reference to bonds. It will allow for understanding of the difference in the stated rate of the bond and the yield to maturity. Explanation of this concept will allow the coworker in the scenario to understand what the broker is meaning by his statements.

Yield to maturity (YTM) is the amount an investor can expect to receive from a long term bond if held to maturity and all coupons are reinvested at the same rate back into the bond. “ YTM is considered a long-term bond yield expressed as an annual rate” (Investopedia, 2010). Redemption value, time to maturity, time between interest payments and coupon yield are all taken into consideration when calculation the YTM of a bond, per the Dictionary of Finance and Accounting (2006).

A coupon is the interest rate stated on a bond when it is issued and is typically paid semi-annually (Investopedia, 2010). According to the Dictionary of Finance and Accounting terms, calculation of YTM is the same as calculation of IRR, and it is calculated by trial and error to find the discount rate at which the present value of the future bond payments would equal the present price of the bond (2006). This requires the use of a business calculator. The formula used to calculate the YTM, according to Block & Hirt (2005) is: [pic][pic]

The advantage of calculation of YTM is that it allows an investor to compare options easily. Keep in mind when making an investment in a bond is that the interest rate may change due to external forces, but the YTM is set at the time of purchase and doesn't change as long as you hold the bond until the maturity date and reinvest all coupons back into the bond (Shelton, 2010). If a bond's current yield is less than its YTM, then the bond is selling at a discounted price (Shelton, 2010).

If a bond's current yield is more than its YTM, then the bond is selling at a premium price (Shelton, 2010). If a bond's current yield is equal to its YTM, then the bond is selling at par (Shelton, 2010). In this scenario, the coworker purchased a bond with a 10% coupon. If this was a \$1, 000. 00 bond, the coupon payments would be \$100. 00 a year. However, the broker keeps telling her that the YTM is 9%. This means if she reinvests all of the coupons into the same bond at the same rate and holds it until maturity it will yield 9%. This bond is selling at a premium.

## References

<http://www.investopedia.com/terms/c/coupon.asp>

[http://www.credoreference.com/entry/barronsfin/yield\\_to\\_maturity\\_ytm](http://www.credoreference.com/entry/barronsfin/yield_to_maturity_ytm)