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| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  |  |  |  | ratings | | last sale | |
| Issuer Name | Symbol | Callable | Sub-Product Type | Coupon | Maturity | Moody's® | S&P | Price | Yield |
| [WALMART INC](http://finra-markets.morningstar.com/BondCenter/BondDetail.jsp?ticker=C104227&symbol=WMT.GP) | WMT.GP |  | Corporate Bond | 7.55 | 2/15/2030 | Aa2 | AA | 145.285 | 2.388 |

Coupon rate is 7.55%, so coupon is 7.55% \* 1000 = 75.5$, or interest payment, obligations to the firm.

Each bond is like a contract with a value of $1000, standardized, can be bought and sold at market price. $1000 is called face value, or par value, unchanged, will be redeemed at the maturity of the bond contract.

Price is 145.285, think about this is the percentage, so 145.285% of the par value ($1000), so the market price of the bond is 145.285$\*1000 = 1452.85, so the bond is selling at premium. Yield =2.388%, meaning your return is 2.388% if you hold the bond from today to maturity.

So if you pay at market price of 1452.85 and get paid of 75.5 each year as coupon payment for the next 10 years, your annual return is 2.388%.

On 2/15/2030, you will get paid the last coupon plus the par value of 1000 dollar.

Cash flow this bond:

Each year, receive 75.5, lasting for 10 years, and 10 years later, receive 1000 dollar, for this, you need to pay 1452.85.

Rate(nper, pmt, pv, fv),

Nper =10, pmt =75.5, pv = -1452.85, fv =1000,

Rate(10, 75.5, -1452.85, 1000) = 2.4%

Since we know the yield is 2.388%, how much should the bond be selling for?

Rate = 2.388% Nper =10, pmt =75.5, pv = ?, fv =1000

Abs(pv(rate, nper, pmt, fv)) = abs(pv(2.388%, 10, 75.5, 1000)) = price =1454.407

         IBM 5 year 2% annual coupon bond is selling for $950. How much this IBM bond’s YTM?  **3.09%**

**Rate (Yield to maturity, YTM) ? rate(5, 20, -950, 1000)**

**Nper 5**

**Pmt (coupon payment = coupon rate \* par) 2%\*1000=20**

**Pv -950**

**Fv 1000**

IBM 10 year 5% annual coupon bond offers 8% of return. How much is the price of this bond?   **798.7**

**Rate (Yield to maturity, YTM) 8%**

**Nper 10**

**Pmt (coupon payment = coupon rate \* par) 5%\*1000=50**

**Pv ? abs(pv(rate, nper, pmt, 1000)) = abs(pv(8%, 10, 50, 1000))**

**Fv 1000**