Using Bonds Market Data for TP
What is Yield to Maturity (YTM)

YTM is the **total annualized return** you can expect if you:

- Buy a bond at its current market price
- Hold it until maturity and reinvest every coupon at the same yield
- Receive all coupon payments and principal on schedule

It is the return relative to the **current bond price** (today's price) not to the original issue price or face value.

YTM combines two sources of return:

- **Income:** the coupon payments you receive over time
- **Capital gain or loss:** the difference between what you paid (buying at a discount or premium) and what you receive at maturity

$$YTM = \frac{[Coupon + (Face\ Value - Price) / Years\ to\ Maturity]}{[(Face\ Value + Price) / 2]}$$

Why is YTM useful for TP?

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Every bond's YTM is set by supply and demand — it shows the return third parties parties require *today* to lend to that issuer.

YTM captures the market's collective view of:

- The issuer's risk => credit risk premium
- Term structure => time to maturity
- Currency
- Expected interest-rate direction, and
- Required compensation for time and uncertainty.

In short, **YTM is the market's price of financing** — a snapshot of the expected return at a given moment, wrapping **risk, time, and rates** into one number.

Why is YTM Better Than the Coupon or Current Yield?

Measure	What it tells you	What it misses
Coupon Rate	Fixed interest as % of face value	Ignores that bond price changes — if you pay more or less than face value, your actual return is different
Current Yield	Income relative to today's price	Ignores capital gain/loss when the bond matures

Determinants of YTM

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Interest Rate

There is an inverse relationship between bond prices and interest rates. When interest rates rise, bond prices fall, which increases YTM, and vice versa.

Bond Price

Bonds bought below face value generally have a higher YTM to compensate for the difference between purchase price and face value, and viceversa.

Maturity

Longer maturity bonds are more sensitive to changes in interest rates, affecting their YTM.

Coupon Rate

Coupon payments influence the bond's cash flow profile and indirectly affect YTM.

Credit Risk

The issuer's credit quality impacts the required return, thus affecting YTM.

Market Conditions

Market conditions and investor sentiment can influence bond prices and hence YTM.