BONDS

- "package" < annuity (coupons) : C ← total <u>yearly</u> coupon payout
  principal (face value) : $P = \$1,000$

- coupon rate : NOT AN INTEREST RATE!
  ↳ fraction of face value paid out as coupons PER YEAR.

- bond price : B

- Yield : interest rate that makes
  $B = PV$ (cash flows) ~~R~~

- Yield is a <u>nominal</u> <u>annual</u> rate that must be compounded as many times as there coupon payments in a year.

Y → B

N = 15 · 2 = 30 (coupon payments, cpn. periods)

$$i/Y = \frac{Y}{2} = \frac{7.5\%}{2} = 3.75\%$$

$$PMT = \frac{C}{2} = \frac{1{,}000 \cdot 9\%}{2} = \$45$$

FV = $1,000 (principal)

CPT PV = −$1,133.72

$B \longrightarrow Y$

$N = 10 \times 2 = 20$

$i/y = ?$

$PV = -\$850$

$PMT = \frac{C}{2} = \frac{1{,}000 \cdot 8\%}{2} = \$40$

$FV = P = \$1{,}000$

CPT i/y : 5.23%

"per [cpn payment] period" = 6 mos.

WE MUST ANNUALIZE!

yield = $2 \times 5.23\% = 10.46\%$!!

INFLATION

"basket" D_0 D_1

$$\frac{D_1}{D_0} > 1 \qquad \frac{D_1}{D_0} = 1 + h$$

inflation rate

"nominal \$" \$1 $1+R$

"ct. purchasing power" \$1 $1+r = \frac{1+R}{1+h}$