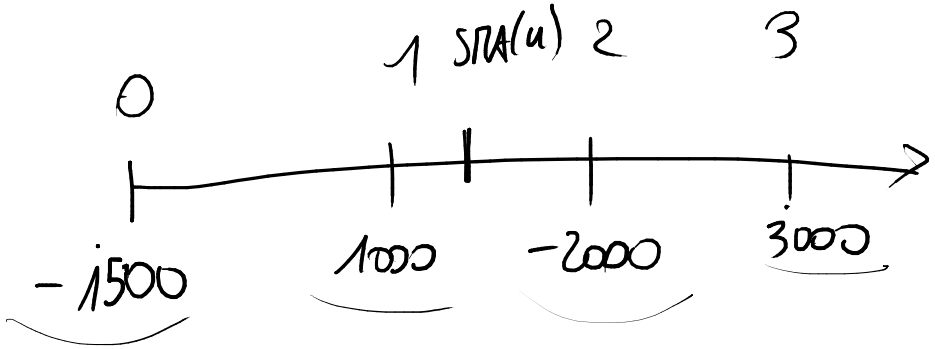


$$SNA(u) = \frac{0 \cdot 1500 + 2 \cdot 2000}{3500} = \frac{4000}{3500} = 1{,}14$$

$$SNA(u) < 1$$

$1{,}14 > 1$ non VALGONO Hp TEOREMA LEVI

NA TIR $\exists$ UNICO = 19,20%.

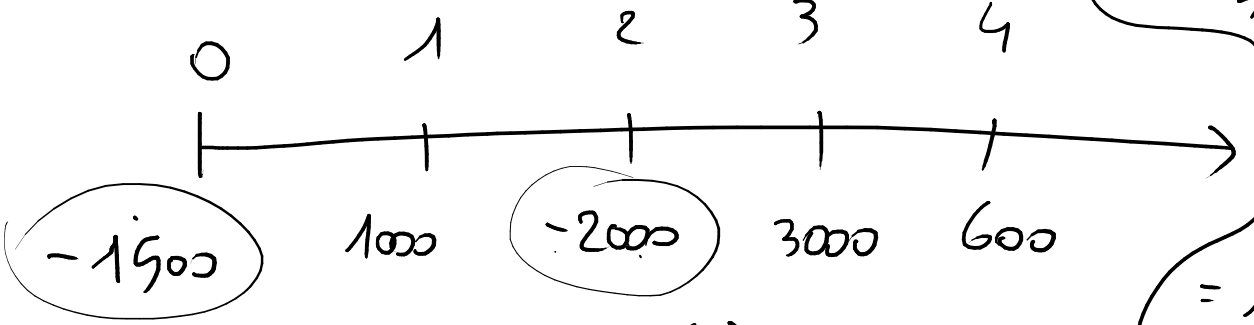
CONDIZ SUFF NA NON NECESSARIA

TEOREMA DI NORSTROM:

C.S. affinché TIR ∃ UNICO è che il SALDO CONTABILE CAMBI DI SEGNO 1 SOLA VOLTA –

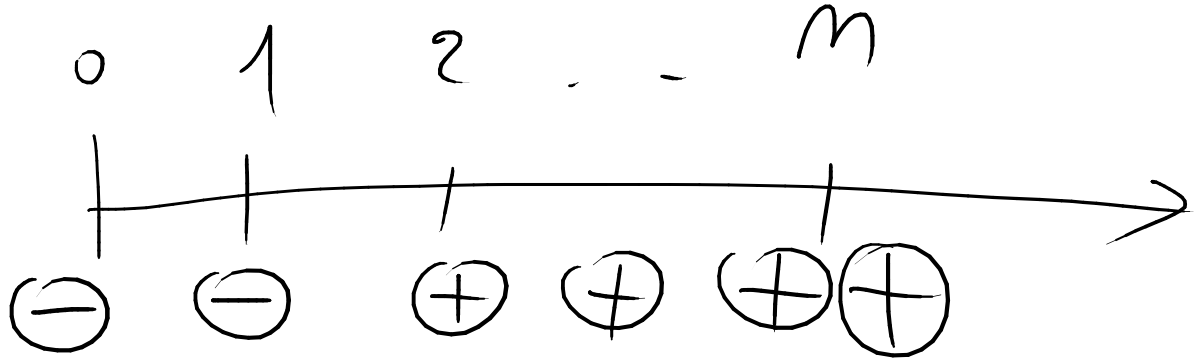
C.S. DI LEVI NON È VERIFICATA

LEVI EUCEE si
3500 < 4600
SPA(4) = 0.1500 + 2.2000 / 3500 = 1,14



S(0) = -1500
S(1) = -500
S(2) = -2500
S(3) = +500
S(4) = 1100

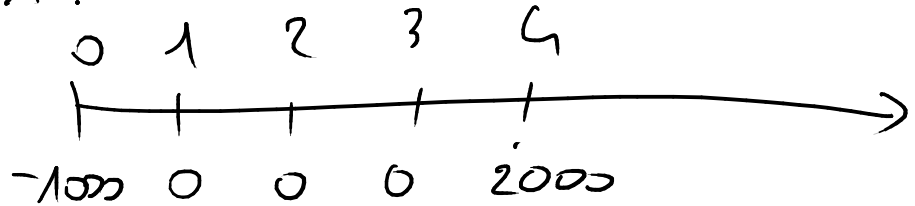
→ TIR ∃ UNICO × NORSTROM



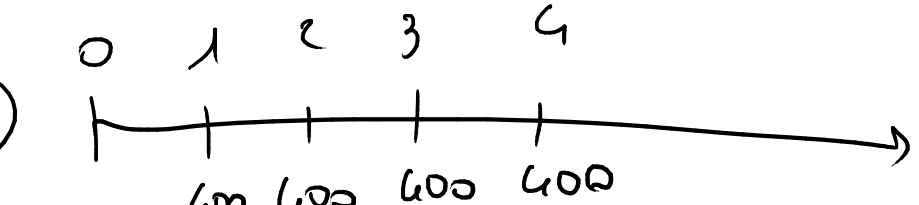
SE TUTTE LE USCITE PRECEDONO LE ENTRATE → TIR ∃ ed è unico xché SALDO CONTABILE CAMBIA SEGNO 1 SOLA VOLTA.

EX :

A)



B)



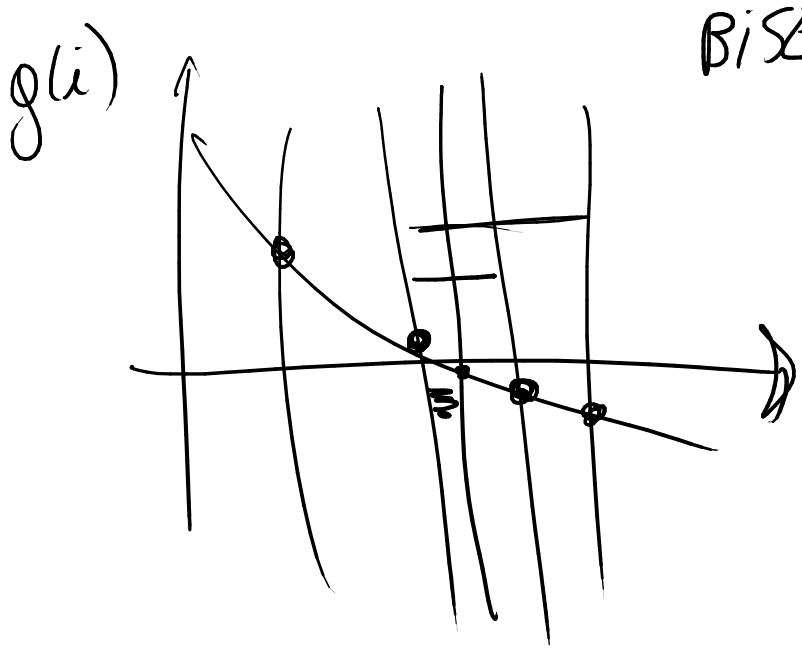
$$-1000 + \frac{2000}{(1+i_A)^4} = 0 \quad \text{TIR (A)}$$

$$-1000 + 400\, a_{\overline{4}|i} = 0 \quad \text{TIR (B)}$$

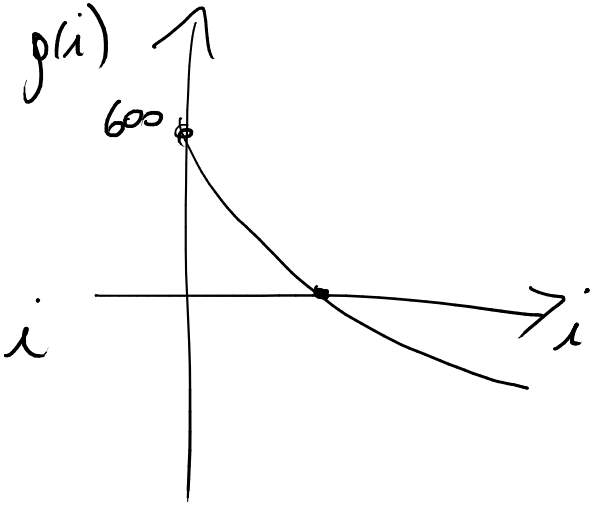
$$-1000 + 400 \cdot \frac{1-(1+i_B)^{-4}}{i_B} = 0$$

TIRA: $\frac{2000}{(1+i)^4} = 1000 \qquad (1+i)^4 = \frac{2000}{1000}$

$$i = \sqrt[4]{\frac{2000}{1000}} - 1 = \text{TIRA} = 0,19$$



BISEZIONE

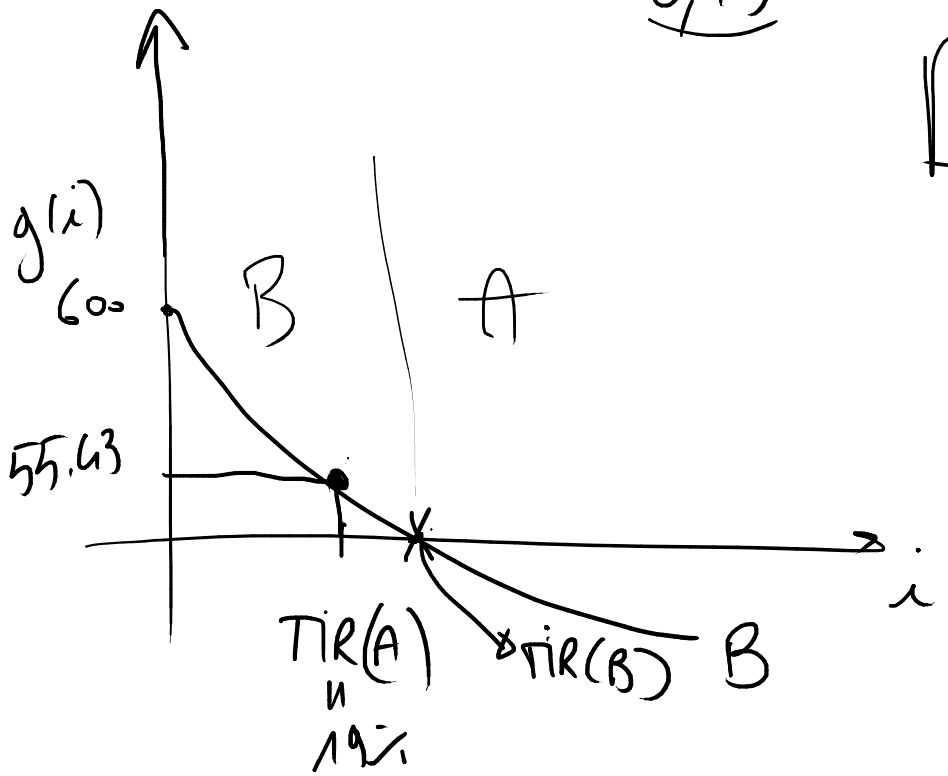


Prendo TIR A e lo sostituisco REA(B) = 0

$$Rea(B) = -1000 + 400 \cdot \frac{1-(1+0{,}19)^{-4}}{0{,}19} = 55{,}43$$

$B \succ A$

xché $TIR_B > TIR_A$



se $REA(B) > 0 \rightarrow TIR(B) > TIR(A) \rightarrow B \succ A$

$\quad\quad\quad < 0 \rightarrow TIR(B) < TIR(A) \rightarrow A \succ B$

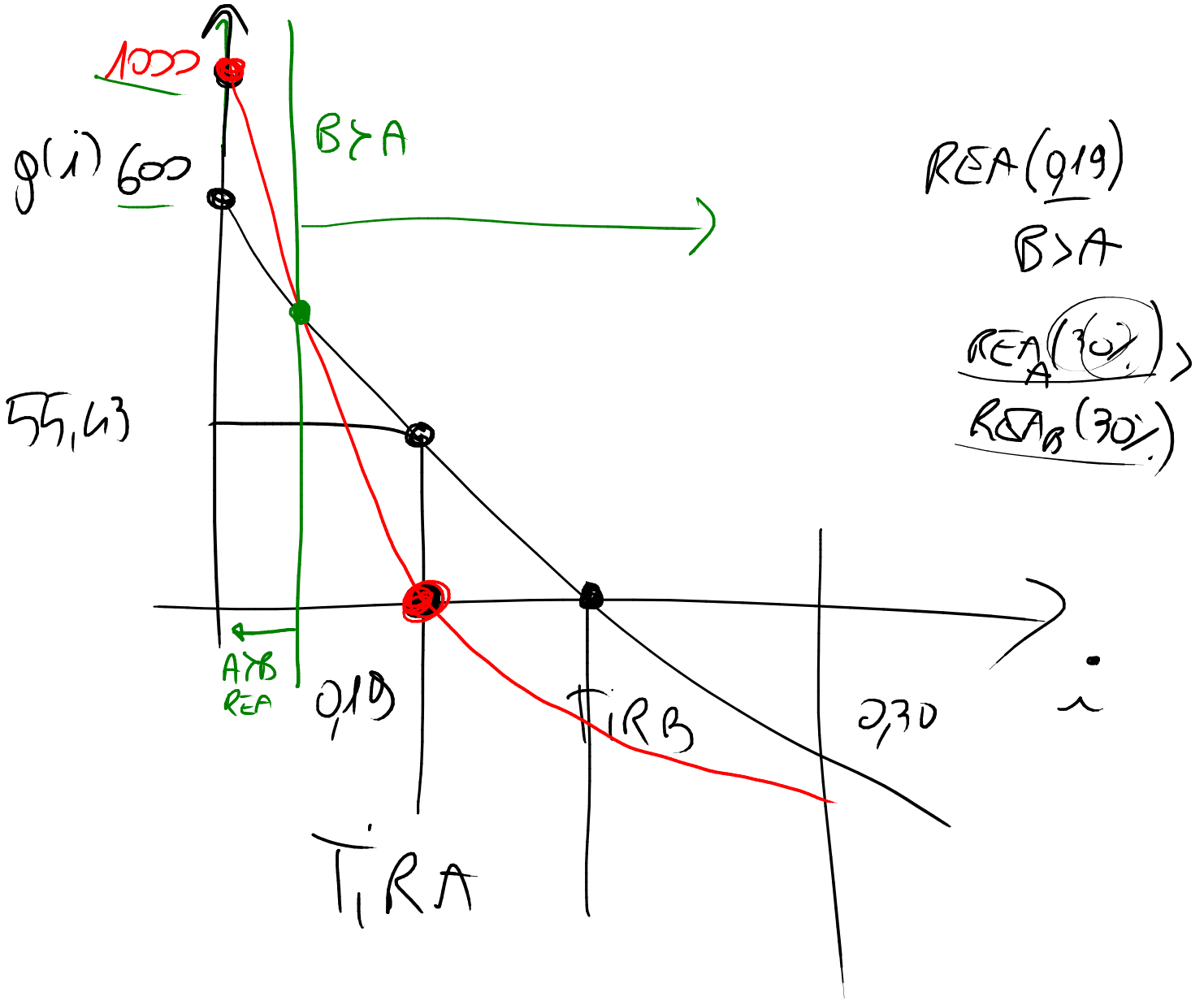
se $\quad\quad = 0 \rightarrow TIR(B) = TIR(A) \rightarrow A \sim B$

---

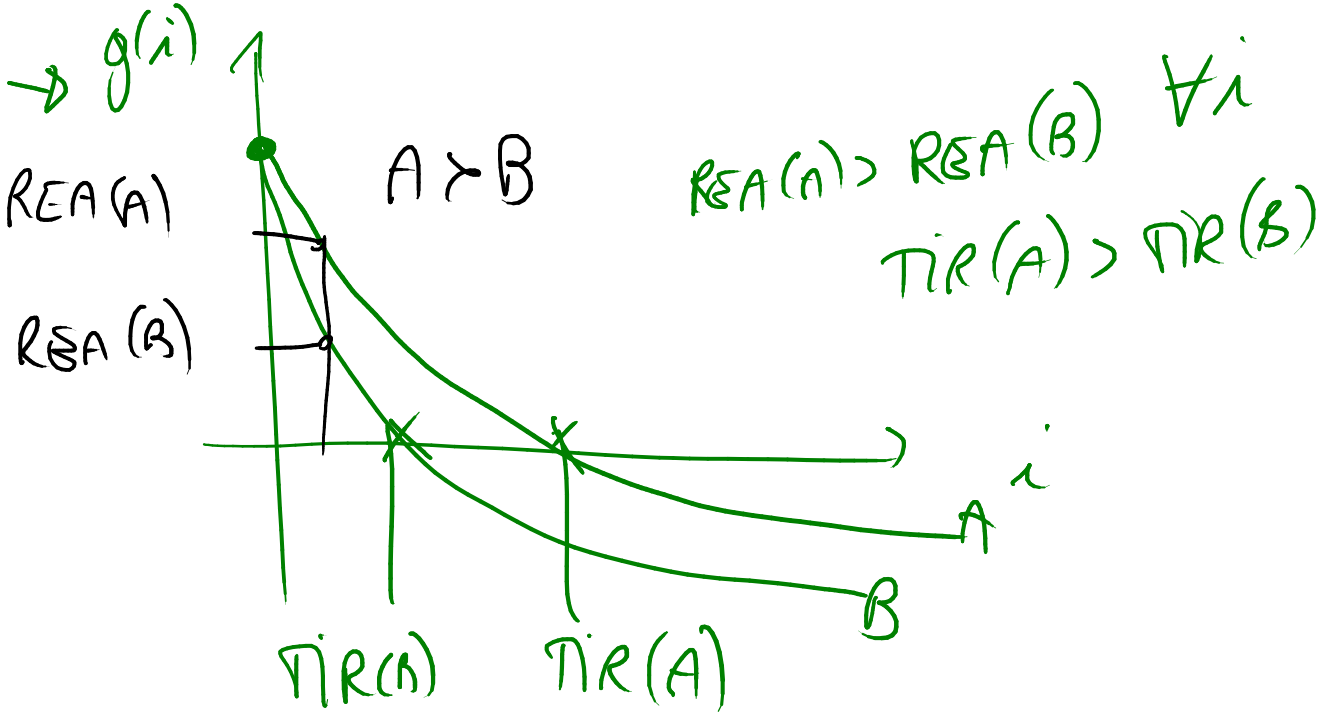
se TASSO (19%) $\rightarrow$ $REA(A) = 0$

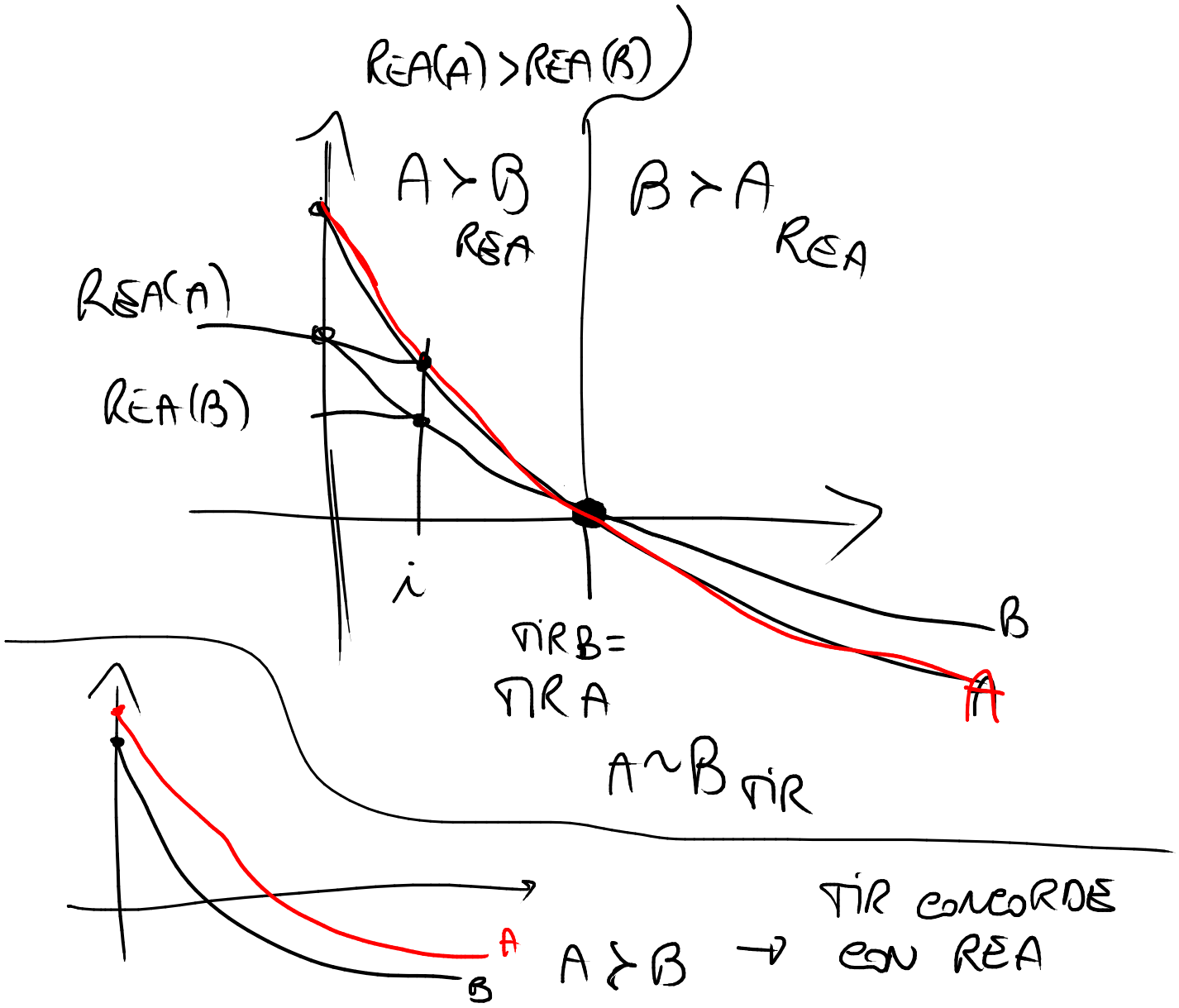
$REA(B) = 55,63$

$B \succ A$


1000
g(i)
600
B>A
55,43
A≯B
REA
0,19
TIRB
0,30
i
TIRA
REA(0,19)
B>A
REA_A(30%) >
REA_B(30%)

→ REA e TIR non danno sempre lo stesso ORDINAMENTO




REA(A) > REA(B)
A ≻ B
REA
B ≻ A
REA
REA(A)
REA(B)
i
TIR B =
TIR A
B
A
A ~ B TIR
A
B
A ≻ B → TIR CONCORDE
EN REA

TITOLI OBBLIGAZIONARI:

1) Definizione e caratteristiche
2) T.I.R.
3) STRUTTURA X SCADENZA DEI TASSI _ A PRONTI
   A TERMINE

ZCB = ZERO COUPON BOND = senza cedola

CB = COUPON BOND = con cedola

VALORE NOMINALE: IMPORTO DEL CAPITALE FATTURATO E SERVE X CALCOLO CEDOLA (interessi)

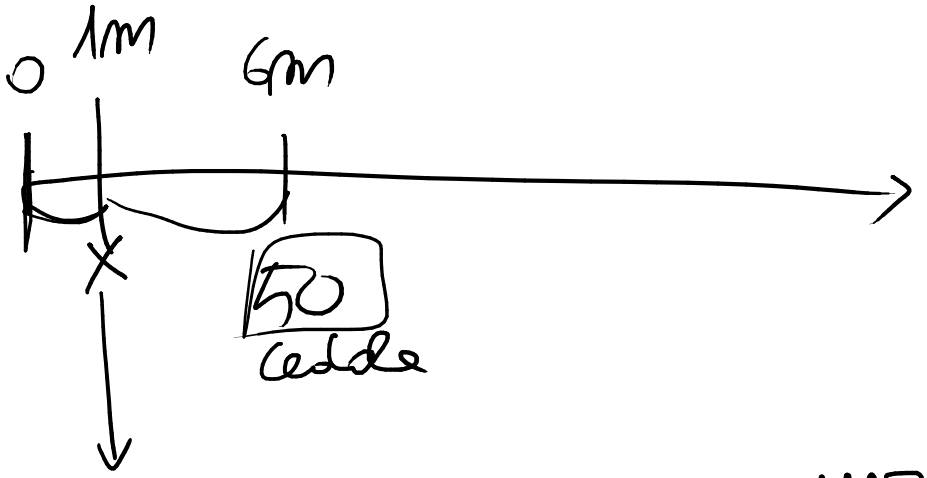
i = TASSO CEDOLARE = ANNUO = 10% = 1000

CEDOLA = $\frac{\text{TASSO cedolare} \times V.N}{\text{N° volte che viene PAGATA}}$

Cedola sem = 50 + 50

CORSO SECCO =

PREZZO DEL QUEL = CORSO SECCO + RATEO MATURATO

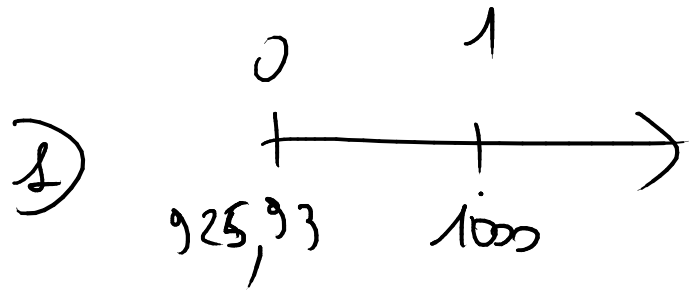


PAGO CORSO SECCO + RATEO MATURATO =

$$50 \cdot \frac{1}{6} = 8,3$$

900 + 8,3 = PREZZO PER QUEL 908,3

TIR :



SENZA CEDOLA

$$925{,}93 = \frac{1000}{(1+TIR)^1}$$

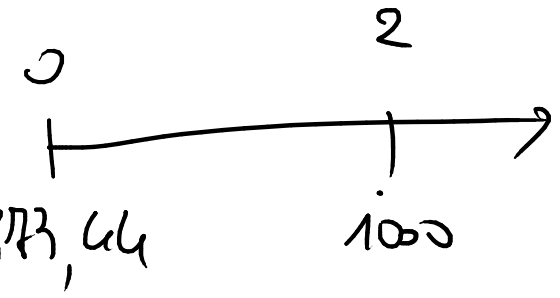
Reo = 0

$$L_0 = \frac{1000}{(1+TIR)^1} - 925{,}93$$

$$(1+TIR) = \frac{1000}{925{,}93}$$

$$TIR = \frac{1000}{925{,}93} - 1 = 7{,}99\%$$

(2)

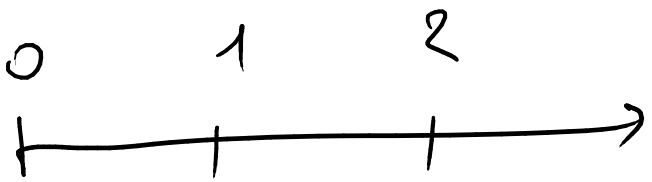


$$TIR(B) = \quad 873{,}44 = \frac{1000}{(1+i)^2}$$

$$(1+i)^2 = \frac{1000}{873{,}44}$$

$$i = \sqrt[2]{\frac{1000}{873{,}44}} - 1 = 6{,}99$$

③



$$887{,}55 = \frac{50}{(1+i)} + \frac{1050}{(1+i)^2}$$

$$\frac{1}{1+i} = t$$

$$887{,}55 = 50 \cdot t + 1050\, t^2$$

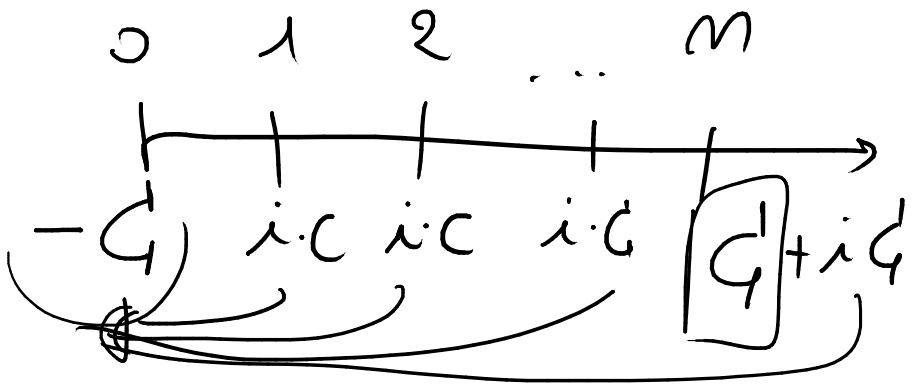
$$t_{1,2} = \frac{-25 \pm \sqrt{25^2 + 1050 \cdot 887{,}55}}{1050}$$

$$t_{1,2} = \frac{-25 \pm \sqrt{\cdot}}{1050} \rightarrow \begin{cases} 0{,}89 \\ < 0 \text{ non ACC} \end{cases}$$

$$\frac{1}{1+i} = 0{,}89 \Rightarrow i = \frac{1}{0{,}89} - 1 = 0{,}12$$

TIR. COST

RAPPORTO TRA TIR e TASSO CEDOLARE



C = PREZZO

C = VALORE DI RIMBORSO

$$C = iC \cdot a_{\overline{n}|TIR} + C(1+TIR)^{-n}$$

$i \cdot C$

TASSO CEDOLARE

VALORE NOMINALE

$$C\left[1-(1+TIR)^{-n}\right] = iC\,\frac{\left[1-(1+TIR)^{-n}\right]}{TIR}$$

$$1 = \frac{i}{TIR} \qquad i = TIR$$

SE ACQ ALLA PARI

PREZZO = valore rimborso

TIR = TASSO cedolare

SE ACQ SOPRA LA PARI

$P < V.R.$

TIR > TASSO cedolare

SE ACQ SOPRA LA PARI

$P > V.R.$

TIR < TASSO cedolare