

# S<sup>3</sup> → Single Sheet Series

By Aman Jha.

\*  $SI = \frac{P \cdot r \cdot T}{100}$

\*  $A = P + SI$   
 $\Rightarrow P + \frac{P \cdot r \cdot T}{100}$   
 $\Rightarrow P \left(1 + \frac{r \cdot T}{100}\right)$

\* CI :-

$A = P(1+i)^n$

$CI = A - P$   
 $= P(1+i)^n - P$   
 $= P((1+i)^n - 1)$

\* Effective rate :-

$E = (1+i)^n - 1$

\* Depreciation or Scrap Value :-

$A = P(1-i)^n$

\* Single Cash Flow (SCF) vs equity.

SCF → Single Amount deposited initially and interest is compounded on that for a period and we get fixed value.

Annuity → A Installment which follows below three conditions are considered as annuity :-  
 → Constant amount  
 → regular  
 → finite period.

\* Annuity Due :- (AD)

→ immediate installment starts at the beginning.

\* Annuity Regular :- (AR)

→ if installment starts at the end of the period

→ If it's silent, we take annuity regular.

\* Present Value :-

→ PVSCF  $\Rightarrow PV = \frac{CF}{(1+i)^n}$

→ PVAR  $\Rightarrow A_i \times PVAF(n, i)$

PVAF Trick

$\Rightarrow 1+i \div = = = n \times i \rightarrow \boxed{1+i}$

→ PVAD  $\Rightarrow [A_i \times PVAF(n-1, i)] + A_i$

→ Isme n-ek kam lena hai

\* Future Value :-

• FV of SCF →

$FV = CF(1+i)^n$

• FVAR →  $A_i \times FVAF$

$FVAF \rightarrow \frac{(1+i)^n - 1}{i}$

• FVAD :-

$FVAD = A_i \times FVAF \times (1+i)$

$FVAD = A_i \times \frac{(1+i)^n - 1}{i} \times (1+i)$

# Other Concept :-

→ Present Value of Perpetuity

$PVP = \frac{A_i}{i}$

→ Perpetuity ka matlab

→ Installments

- Constant

- Regular

- Infinite

→ Present Value of growing perpetuity

$PVGMP = \frac{A_i}{i-g}$

g → growth rate.

→ Net present value

NPV = Present value of cash inflows (-) PV of cash outflow

if NPV > 0, accept the project

→ Real rate = Nominal rate (-) inflation

→ CAWR →

Book se

dekh lo

\* THANK YOU \*

\* Leasing → PV of lease rentals are compared with cost of asset to make decision.

\* CED → Here, PV of future value benefits are compared with purchase value of asset to decide whether to purchase or not.

\* Valuation of Bonds :-

Benefit

→ Annuity

every year interest

↓

PV (PVAR)

→ Single

maturity value at the end.

↓

PV (single CF)

→ PV of total Benefit.

→ Then, compare with issue price