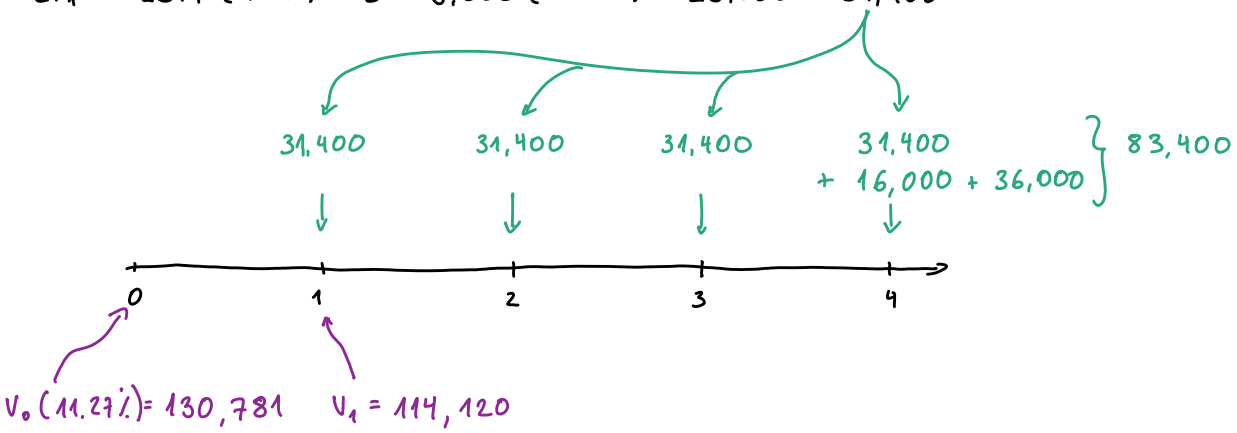
QUESTION 1 (A)

ECONOMIC INCOME = CF + Δ MV

(− ECONOMIC DEPRECIATION)

CF_1 = EBIT (1 − T) + D = 8,000 (1 − 0.2) + 25,000 = 31,400



ECON. DEP'N = $V_0 - V_1$ = 16,661

EI (YEAR 1) = 31,400 − 16,661 = 14,739

QUESTION 2 (B)

$$\text{ECONOMIC RoR}_3 = \frac{EI_3}{V_2} = \frac{10,772}{95,581} = 11.27\% = \text{WACC}$$

(FOR ALL PERIODS)

$EI_3 = CF_3 - (V_2 - V_3) = 31,400 - (95,581 - 74,953) = 10,772$

QUESTION 3 (B)

EP = NOPAT − $WACC

$NOPAT_2 = EBIT_2 (1 - T) = 8,000 \times 0.8 = 6,400$

$\$WACC_2 = WACC \times CAPITAL_1 = 11.27\% \times 111,000 = 12,510$

$EP_2 = 6,400 - 12,510 = -6,110$

QUESTION 4 (B)

$$MVA = \sum_{t=1}^{\infty} \frac{EP_t}{(1+WACC)^t} = NPV$$

	1	2	3	4
NOPAT	6,400	6,400	6,400	6,400 + 16,000 = 22,400
CAPITAL	136,000	111,000	86,000	61,000
($\times$ 11.27%) $WACC	15,327	12,510	9,692	6,875
EP	-8,927	-6,110	-3,292	15,525

PV = -5,219

QUESTION 5 (C)

$$RI_t = NI_t - r_e \times B_{t-1}$$

B_{t-1}: BOOK VALUE OF EQUITY

r_e: COST OF EQUITY

$$RI_4 = 21,261 - 0.13 \times 42,262 = 15,767$$

$$\sum_{t=1}^{t=4} = \frac{RI_t}{(1+r_e)^t} = -5,219 \quad (NPV = MVA)$$

V_0 (USING CAPITAL BUDGETING) = 130,781

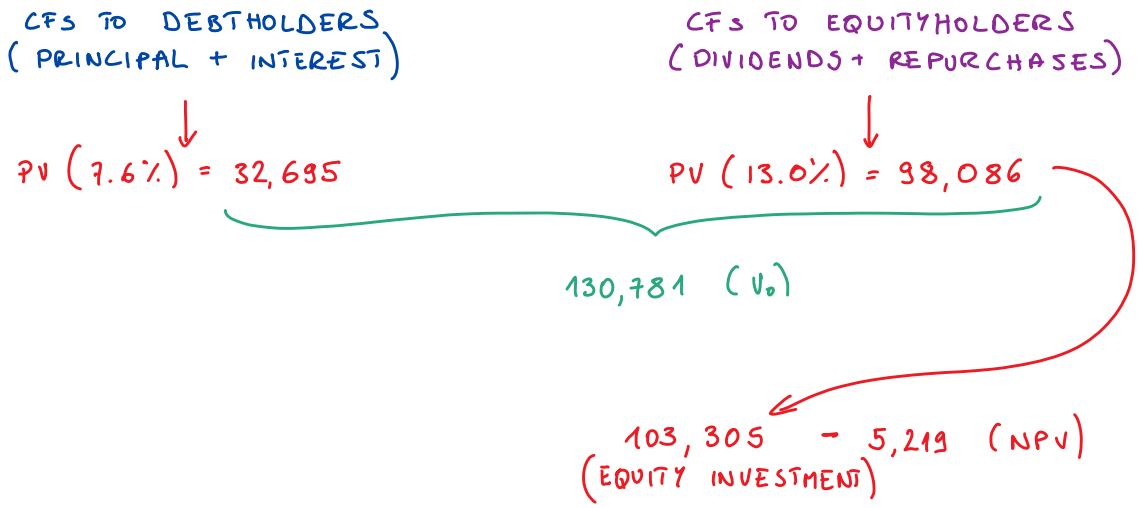
DEBT INV. = 32,695

EQUITY INV: 103,305

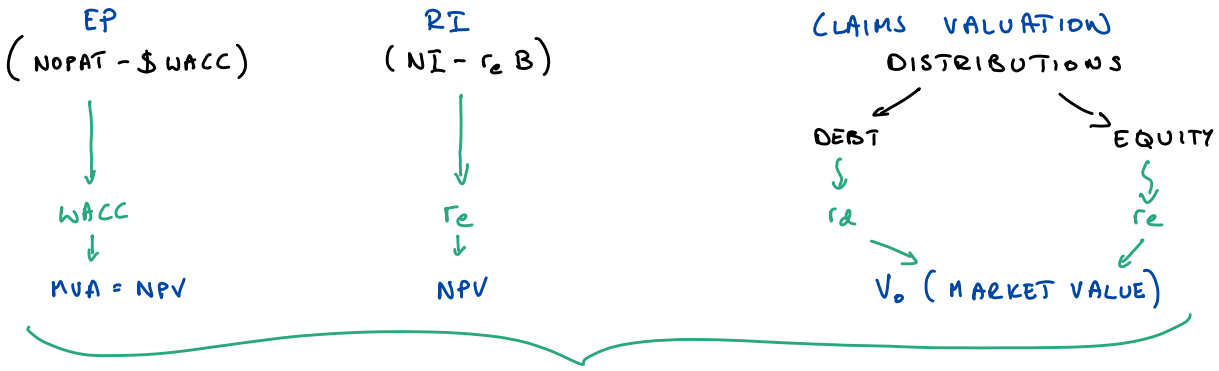
NPV = MVA = PV of RI = -5,219

QUESTION 6 (A)

CLAIMS VALUATION:



DISCOUNT RATES:



MV_0 = DEBT INV + EQUITY INV + NPV