

1 (1)

	Market price	Cash flow in one year	
Security	Today	Weak Economy	Strong Economy
Security A+ SecurityB	350+450=800	840	840

$$r_f = [(840-800)/2 + (840-800)/2] / 800 = 5\%$$

(2)

$$r_E = [(0-350)/2 + (840-350)/2] / 350 = 20\%$$

$$\text{Risk premium} = 20\% - 5\% = 15\%$$

(3)

$$r_E = [840-450]/2 + (0-450)/2 / 450 = -6.67\%$$

$$\text{Risk premium} = -6.67\% - 5\% = 11.67\%$$

(4)

- 因為經濟學假設人為**風險趨避者**，因此在相同風險下會選擇報酬高的，報酬相同的情況下會選擇風險較小的。

$$\text{Risk Premium} = \text{Expected return} - \text{Risk-free return}$$

(5)

$$\text{No-arbitrage price of security C} = 5A + 1B = 1,750 + 450 = 2,200$$

$$r_e = 30\% + 5\% = 35\%, \text{ if market price} = X$$

$$[(4200-X)/2 + (840-X)/2] / X = 35\% \quad , \quad \text{Market price} = \$1,866.67$$

$$2,200 - 1,866.67 = 333.33$$

套利機會存在，可以藉由買進 1C，賣出 5A 與 1B，現賺 333.33 元

4. (1)公司融資來源依賴負債的程度。

(2)①應付帳款是公司營運就會產生的負債，屬於自發性負債，不須付利息，故不包含於負債權益比率的分子。

②要納入負債權益比率計算。

③銀行借款屬於金融負債，需付利息，故納入。

5. a. **Firm A:** Market debt-equity ratio =  $495.8/401.1 = 1.24$

$$\text{Firm B: Market debt-equity ratio} = 83.8/35.9 = 2.33$$

b. **Firm A:** Book debt-equity ratio =  $495.8/297.9 = 1.66$

$$\text{Firm B: Book debt-equity ratio} = 83.8/38.3 = 2.19$$

c. **Firm A:** Interest coverage ratio =  $106.8/45.2 = 2.36$

$$\text{Firm B: Interest coverage ratio} = 8.4/7.5 = 1.12$$

d. Firm B has a lower coverage ratio and will have more difficulty meeting its debt obligations than Firm A.

9. PV

A 100000

B  $180000 \times \text{PVIF}_{6,12\%}$

C  $12400/0.12$

D  $20000 \times \text{PVIFA}_{8,12\%}$

E  $6500/12\% - 5\%$