Question 5 (35 Points)

Cookie Win Manufacturing has the following capital structure, which it considers to be optimal:

- ***Debt:*** 5,000 7 percent coupon bonds outstanding, $1,000 par value, 20 years to maturity, selling for 92 percent of par; the bonds make semiannual payments.
- ***Common stock:*** 100,000 shares outstanding, selling for $57 per share; the beta is 1.15.
- ***Preferred stock:*** 13,000 shares of 7 percent return preferred stock outstanding, currently paying dividend for $8 per share.

Assume the company's tax rate is 35 percent. From current market condition, it is found that market return is at 14 percent, and the 6-month T-bills and the 6-year government bonds are at 4 percent and 6 percent, respectively.

5.1 What are Cookie Win Manufacturing's capital structure weights on a market value basis? **(10 points)**

Answer:

	#share	Price	Cost	MV	Wi
Debt	5,000	920	7.80%	4,600,000.00	39.03%
CS	100,000	57	15.20%	5,700,000.00	48.36%
PS	13,000	114.29	7.00%	1,485,714.29	12.61%
			Total	11,785,714.29	100.00%

5.2 Find the component after-tax costs of debt, cost of common stock, and cost of preferred stock. Then, calculate weighted average cost of capital (WACC) under the current market capital structure. **(10 points)**

Answer:

	#share	Price	Cost	MV	Wi
Debt *(AF)*	5,000	920	5.07%	4,600,000.00	39.03%
CS	100,000	57	15.20%	5,700,000.00	48.36%
PS	13,000	114.29	7.00%	1,485,714.29	12.61%
			Total	11,785,714.29	100.00%

beta	1.15
Rf	6%
Rm	14%

WACC 10.2125%

5.3 If Cookie Win Manufacturing plans to raise $15 million capital for new projects, in order to maintain the present market capital structure, how much of the new investment must be financed by equity? Furthermore, if this new project has higher risk level than company's other projects, what will be an appropriate *discount rate* for project compared with WACC obtained from **(5.2)**? **(10 points)**

Answer:

Total capital	15
New Equity	7.2545

The appropriate discount rate should be HIGHER than **10.2125%**

5.4 *Qualitatively speaking*, if Cookie Win Manufacturing issues new shares of common stock with flotation cost, do you think CAPM is still an appropriate tool to estimate cost of equity? If not, what should be an alternative approach? **(5 points)**

Answer:

CAPM is normally more superior than dividend discounted model. However, to this case, it cannot capture the flotation cost. Dividend discounted model seems more appropriate.