**Case Study 2: Making Ace Product`s Financing/ Investment Decision**

Ace Products Company is a growing manufacturer of automobile accessories whose stock is actively traded on the over-the-counter (OTC) market. During 2009, the Dallas-based company experienced sharp increases in both sales and earnings. Because of this recent growth, Kaka, the company`s treasurer, wants to make sure that available funds are being used to their fullest. Management policy is to maintain the current capital structure proportions of 30% long-term debt, 10% preferred stock, and 60% common stock equity for at least the next 3 years. The firm is in the 40% tax bracket.

Ace`s division and product managers have presented several competing investment opportunities to Jen. However, because funds are limited, choices of which projects to accept must be made. The investment opportunities schedule (IOS) is shown below.

|  |
| --- |
| Investment Opportunities Schedule (IOS) for Star Products Company |
| Investment Opportunity | Internal rate of return (IRR) | Initial investment |
| A |  15% |  $400,000 |
| B | 22 | 200,000 |
| C | 25 | 700,000 |
| D | 23 | 400,000 |
| E | 17 | 500,000 |
| F | 19 | 600,000 |
| G | 14 | 500,000 |

To estimate the firm`s weighted average cost of capital (WACC), Kaka contacted a leading investment banking firm, which provided the financing cost data shown in the following table.

|  |
| --- |
| Financing Cost Data Ace Products Company |
| Long-term debt: The firm can raise $450,000 of additional debt by selling 15-year, $1,000-par-value, 9% coupon interest rate bonds that pay annual interest. It expects to net $960 per bond after flotation costs. Any debt in excess of $450,000 will have a before-tax cost, rd, of 13%.Preferred stock: Preferred stock, regardless of the amount sold, can be issued with a $70 par value and a 14% annual dividend rate and will net $65 per share after flotation costs.Common stock equity: The firm expects dividends and earnings per share to be $0.96 and $3.20, respectively, in 2010 and to continue to grow at a constant rate of 11% per year. The firm`s stock currently sells for $12 per share. Expects to have $1,500,000 of retained earnings available in the coming year. Once the retained earnings have been exhausted, the firm can raise additional funds by selling new common stock, netting $9 per share after underpricing and floatation costs. |

**Question**

1. Calculate the cost of each source of financing, as specified:
2. Long-term debt, first $450,000.
3. Long-term debt, greater than $450,000.
4. Preferred stock, all amounts.
5. Common stock equity, first $1,500,000.
6. Common stock equity, greater than $1,500,000.
7. Find the break points associated with each source of capital, and use them to specify each of the ranges of total new financing over which the firm`s weighted average cost of capital (WACC) remains constant.
8. Calculate the weighted average cost of capital (WACC) over each of the ranges of total new financing specified in part b.
9. Using your findings in part c along with the investment opportunities schedule (IOS), draw the firm`s weighted marginal cost of capital (WMCC) and IOS on the same of axes (total new financing or investment on the x axis and weighted average cost of capital and IRR on the y axis).
10. Which, if any, of the available investments would you recommend that the firm accept? Explain your answer.