1. Investments A and B, suppose that each has a cost of capital of 10%. How long does it take for each investment’s discounted cash flows to pay back its 100,000 TL investment?

|  |  |  |
| --- | --- | --- |
| Year | Investment A | Investment B |
| 2000 | 13.000 | 80.000 |
| 2001 | 20.000 | 13.000 |
| 2002 | 33.000 | 7.000 |
| 2003 | 34.000 | 6.000 |
| 2004 | 66.000 | 6.000 |

1. Use the table for the question below. Consider the following balance sheet:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Luther Corporation**  **Consolidated Balance Sheet**  **December 31, 2009 and 2008 (in $ millions)** | | | | | | | |
| **Assets** | **2009** | **2008** |  | **Liabilities and Stockholders' Equity** | **2009** | **2008** |
| *Current Assets* |  |  |  | *Current Liabilities* |  |  |
| Cash | 63.6 | 58.5 |  | Accounts payable | 87.6 | 73.5 |
| Accounts receivable | 55.5 | 39.6 |  | Notes payable/  short-term debt | 10.5 | 9.6 |
| Inventories | 45.9 | 42.9 |  | Current maturities of long-term debt | 39.9 | 36.9 |
| Other current assets | 6.0 | 3.0 |  | Other current liabilities | 6.0 | 12.0 |
| Total current assets | 171.0 | 144.0 |  | Total current liabilities | 144.0 | 132.0 |
|  |  |  |  |  |  |  |
| *Long-Term Assets* |  |  |  | *Long-Term Liabilities* |  |  |
| Land | 66.6 | 62.1 |  | Long-term debt | 239.7 | 168.9 |
| Buildings | 109.5 | 91.5 |  | Capital lease obligations | --- | --- |
| Equipment | 119.1 | 99.6 |  | Total Debt | 239.7 | 168.9 |
| Less accumulated    depreciation | (56.1) | (52.5) |  | Deferred taxes | 22.8 | 22.2 |
| Net property, plant, and equipment | 239.1 | 200.7 |  | Other long-term liabilities | --- | --- |
| Goodwill | 60.0 | -- |  | Total long-term liabilities | 262.5 | 191.1 |
| Other long-term assets | 63.0 | 42.0 |  | Total liabilities | 406.5 | 323.1 |
| Total long-term assets | 362.1 | 242.7 |  | Stockholders' Equity | 126.6 | 63.6 |
|  |  |  |  |  |  |  |
| **Total Assets** | **533.1** | **386.7** |  | **Total liabilities and Stockholders' Equity** | **533.1** | **386.7** |

|  |  |  |
| --- | --- | --- |
| **Luther Corporation**  **Consolidated Income Statement**  **Year ended December 31 (in $ millions)** | | |
|  | **2009** | **2008** |
| Total sales | 610.1 | 578.3 |
| Cost of sales | (500.2) | (481.9) |
| Gross profit | 109.9 | 96.4 |
| Selling, general, and  administrative expenses | (40.5) | (39.0) |
| Research and development | (24.6) | (22.8) |
| Depreciation and amortization | (3.6) | (3.3) |
| Operating income | 41.2 | 31.3 |
| Other income | --- | --- |
| Earnings before interest and taxes (EBIT) | 41.2 | 31.3 |
| Interest income (expense) | (25.1) | (15.8) |
| Pre-tax income | 16.1 | 15.5 |
| Taxes | (5.5) | (5.3) |
| Net income | 10.6 | 10.2 |
| Dividends Paid | 5.1 | 5.0 |
| Price per Share | $16 | $15 |
| Shares outstanding (millions) | 10.2 | 8.0 |
| Stock options outstanding (millions) | 0.3 | 0.2 |
|  |  |  |
| Stockholders' Equity | 126.6 | 63.6 |
| Total Liabilities and Stockholders' Equity | 533.1 | 386.7 |

1. What is the change in Luther's net working capital?
2. What is Luther's cash flow from operating activities for the year ending December 31, 2009?
3. A firm is 40% financed by debt with a yield-to-maturity of 8.5%. The equity has a beta of 1.3, the market risk premium is 8.4% and the risk-free rate is 3.8%. What is the firm's weighted average cost of capital if the tax rate is 21%?
4. Reliable Electric is a regulated public utility, and it is expected to provide steady dividend growth of 5% per year for the indefinite future. Its last dividend was $5 per share; the stock sold for $60 per share just after the dividend was paid. What is the company’s cost of equity?
5. What proportion of a firm is equity financed if the WACC is 14%, the before-tax cost of debt is 10.77%, the tax rate is 21%, and the required return on equity is 18%?
6. Given the following information, calculate the weighted average cost of capital for ABC Company. Line up the calculations in the order shown in the Table.

**Percent of capital structure:**

Preferred stock 20%

Common equity 40

Debt 40

**Additional information:**

Corporate tax rate 25%

Dividend, preferred $6.50

Last Dividend, expected common $2.00

Price, preferred $110.00

Growth rate 6%

Bond yield 8.5%

Flotation cost, preferred $4.20

Price, common $80.00

1. Vital Slience, Inc. , has a Project with the following cash flows:

|  |  |
| --- | --- |
| Required Return | 9% |
| *Annual cash flows:* |  |
| Year 0 | − $50.000 |
| Year 1 | $ 12.100 |
| Year 2 | $ 10.200 |
| Year 3 | $ 12.000 |
| Year 4 | $ 13.000 |
| Year 5 | $ 15.000 |
| Year 6 | $ 15.500 |
| Year 7 | $ 8.000 |

The company evaluates all projects by applying IRR rule. If the appropriate discount rate is 9 percent, should the company accept the project?

1. Suppose you are offered $10,700 today but must make the following payments:

|  |  |
| --- | --- |
| Year 0 | − $10.700 |
| Year 1 | $4.900 |
| Year 2 | $3.900 |
| Year 3 | $2.300 |
| Year 4 | $2.800 |
| Year 5 | $1.500 |

1. What is the IRR of this offer?
2. What is the NPV of the offer if the appropriate discount rate is 10 percent? 20 percent?
3. A project with an initial cost of $30,200 is expected to provide cash flows of $10,200, $11,300, $14,400, and $8,900 over the next four years, respectively. If the required return is 8.7 percent, what is the project's profitability index?
4. The company shows the following information on its 2019 income statement: sales = $246,000; costs = $135,000; other expenses = $7,100; depreciation expense = $19,100; interest expense = $10,000; taxes = $18,876; dividends = $9,800. In addition, you’re told that the firm issued $7,900 in new equity during 2019 and redeemed $6,800 in outstanding long-term debt.
5. What is the 2019 cash flow to creditors?
6. What is the 2019 cash flow to stockholders?