15-17

Consider another perpetual project like the crusher described in Section 15– 1. Its initial investment is $ 1,000,000, and the expected cash inflow is $ 95,000 a year in perpetuity. The opportunity cost of capital with all- equity financing is 10%, and the project allows the firm to borrow at 7%. The tax rate is 35%. Use APV to calculate this project’s value.

a. Assume first that the project will be partly financed with $ 400,000 of debt and that the debt amount is to be fixed and perpetual.

b. Then assume that the initial borrowing will be increased or reduced in proportion to changes in the market value of this project.

Explain the difference between your answers to ( a) and ( b).

Pretax cash flow $ 1.731 million

Tax at 35% .606

After- tax cash flow C =$ 1.125 million

Perpetual Crusher (Market Values, $ millions)

Asset value $ 12.5 $ 5.0 Debt

7.5 Equity

$ 12.5 $ 12.5