Chapter Ten Exercises

1. A firm is considering spending $1 million on a machine that will last 20 years and produce $100,000 in revenue (net of wages, materials, and other expenses) at the end of each year for 20 years. Ignoring taxes, determine whether or not this machine is financially attractive according to each of the following criteria:

    a. Dollars in, dollars out. Compare the total amount spent on the machine with the total revenue over the machine's life.
    b. Accounting profits. Calculate total profits (revenue minus depreciation) over the machine's life, using straight-line depreciation over 20 years.
    c. Net present value. The present value of the machine's cash flow is calculated using a 15 percent required return.

2. For tax purposes, the company in Exercise 1 can either depreciate the machine straight line over 20 years or over 10 years. How much difference does this make to the net present value if the firm's tax rate is 34 percent and its after-tax required rate of return is 6 percent?

3. In 1970 Chrysler's profits were increased by $40 million by a switch from LIFO to FIFO accounting. How can this accounting change increase a firm's profits?

4. The federal government's budget is calculated on a cash flow basis. In 1987, several private borrowers from the federal Export-Import Bank prepaid their loans, reducing the Bank's deficit for that year by $1.5 billion. Why do you think these borrowers voluntarily repaid their loans early? Explain how a loan prepayment reduces the bank's deficit. Do you think that these loan prepayments strengthened or weakened the financial condition of the Export-Import Bank?

5. Explain the following news story:

    > They've got to be kidding. Wall Street's brain trust, the loud-tie-and-suspenders crowd paid extraordinary sums to make sense out of the economy, got some of the best news in years Friday: the nation created a whopping 705,000 jobs last month. Pop the champagne? Run out and buy that new Mercedes? No way.
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    > Traders instead exhibited the topsy-turvey logic that has come to symbolize Wall Street . . . [S]tock traders somehow decided the companies doing all the hiring actually were worth less than a day earlier. They sold, driving the Dow Jones industrial average, the stock market's most widely watched index, down 171.24, to 5,470.45, for its third-worst point decline ever. Traders also dumped Treasury notes, figuring an improving economy makes investments in Uncle Sam less attractive.