

## Algebra: Treasury Analyst

### Boise Cascade Forest Products

**Job Description:** Has direct responsibility for managing corporate short-term borrowings and investments.

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### Problem:

The company has a debt payment due on May 1st in the amount of \$5,000,000. It currently has \$5,000,000 available to meet the obligation; but is not allowed to make the payment until the due date, May 1st. The company would like to purchase an investment, which at maturity would have a value equal to the amount of the debt payment—thus allowing the excess cash to be used elsewhere.

Using the following assumptions, determine the price of the required investment and the amount of excess cash they are holding.

### Assumptions

- Debt payment required: \$5,000,000 (**P**)
- Cash on hand: \$5,000,000
- Interest rate (or discount rate) on investment: 6% (**IR**)
- Days until debt payment date: 63 (**DM**)
- Dollar Price: amount required to invest today to meet debt obligation in 63 days (**DP**)
- A year consist of 360 days for interest accrual formula:  $P \times (1 - (IR \cdot x DM \div 360)) = DP$

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### Solution:

$$P \times (1 - (\text{IR} \div \text{DM}360)) = \text{DP}$$

$$\$5,000,000 \times (1 - (.06 \times 63 \div 360)) = \text{DP}$$

$$\$5,000,000 \times (1 - (.0105)) = \text{DP}$$

$$\$5,000,000 \times (.9895) = \text{DP}$$

$$\$4,947,500 = \text{DP}$$

$$\begin{aligned} \text{Cash available for other purposes} &= \$2,500.00 \\ (\$5,000,000 - \$4,947,500) \end{aligned}$$

Financial instruments such as this one are referred to as "discounted" and include Banker's Acceptances, Commercial Paper, Treasury Bills, and secondary Discount Notes.