

## **Example F.2**

An asset is priced at time 0 at \$115. The discrete risk free rate is 4%. The expiration for the forward contract is in three years. The asset pays dividends of \$2.50 at times 1, 2 and 3. What is the fair forward price at time 0?

### Solution

First we must find the present value of the dividend payments at time 0.

$$\sum_{i=1}^3 d_i (1+r)^{-i} = \frac{\$2.50}{1.04} + \frac{\$2.50}{1.04^2} + \frac{\$2.50}{1.04^3} = \$6.94$$

Now we can calculate:

$$F(0,3) = \left( S_0 - \sum_{i=1}^3 d_i (1+r)^{-i} \right) (1+r)^3 = (\$115 - \$6.94) * 1.04^3 = \$121.55$$