Date	Market Value (€)	External Cash Flow (€)	Market Value Post Cash Flow (€)
12/31/97	200,000		
1/31/98	208,000		
2/16/98	217,000	+40,000	257,000
2/28/98	263,000		
3/22/98	270,000	−30,000	240,000
3/31/98	245,000		

Solution: Dietz

January

$$R_{Jan} = \frac{(208,000 - 200,000)}{200,000} = 4.00\%$$

February

$$R_{Feb} = \frac{(263,000 - 208,000 - 40,000)}{(208,000 + (0.5 \times 40,000))} = 6.58\%$$

March

$$R_{Mar} = \frac{(245,000 - 263,000 - (-30,000))}{(263,000 + (0.5 \times (-30,000)))} = 4.84\%$$

Quarter 1

$$R_{QT1} = ((1 + 0.0400) \times (1 + 0.0658) \times (1 + 0.0484)) - 1 = 16.21\%$$

Solution: Modified Dietz

January

$$R_{Jan} = \frac{(208,000 - 200,000)}{200,000} = 4.00\%$$

February

$$W = \frac{(28 - 16)}{28} = 0.43 \quad R_{Feb} = \frac{(263,000 - 208,000 - 40,000)}{(208,000 + (40,000 \times 0.43))} = 6.66\%$$

March

$$W = \frac{(31-22)}{31} = 0.29 \quad R_{Mar} = \frac{(245{,}000 - 263{,}000 - (-30{,}000))}{(263{,}000 + (-30{,}000 \times 0.29))} = 4.72\%$$

Quarter 1

$$R_{QT1} = \left((1+0.0400) \times (1+0.0666) \times (1+0.0472)\right) - 1 = 16.16\%$$

Solution: Valuation and Calculation at time of large external cash flows:

January

$$R_{Jan} = \frac{(208{,}000 - 200{,}000)}{200{,}000} = 4.00\%$$

February

$$R_{Feb1-15} = \frac{(217{,}000 - 208{,}000)}{(208{,}000)} = 4.33\%$$

$$R_{Feb16-28} = \frac{(263{,}000 - 257{,}000)}{(257{,}000)} = 2.33\%$$

$$RFeb1-28 = \left((1+0.0433) \times (1+0.0233)\right) - 1 = 6.76\%$$

March

$$R_{Mar1-21} = \frac{(270{,}000 - 263{,}000)}{(263{,}000)} = 2.66\%$$

$$R_{Mar22-31} = \frac{(245{,}000 - 240{,}000)}{(240{,}000)} = 2.08\%$$

$$RMar1-31 = \left((1+0.0266) \times (1+0.0208)\right) - 1 = 4.80\%$$

Quarter 1

$$R_{QT1} = \left((1+0.0400) \times (1+0.0676) \times (1+0.0480)\right) - 1 = 16.36\%$$