Portfolio 1

Date	Value ($)	External Cash Flow ($)	Value Post External Cash Flow ($)
12/31/99	100,000		
1/10/00	103,000	20,000	123,000
1/22/00	130,000		
1/31/00	133,000		

Monthly Return = 11.37%.

Portfolio 2

Date	Value ($)	External Cash Flow ($)	Value Post External Cash Flow ($)
12/31/99	500,000		
1/10/00	512,000		
1/22/00	530,000	–70,000	460,000
1/31/00	470,000		

Monthly Return = 8.30%.

Composite Return

Beginning Assets Weighting method:

$$R_{BMV} = \frac{(100{,}000 \times 0.1137) + (500{,}000 \times 0.0830)}{(100{,}000 + 500{,}000)} = 8.81\%.$$

Beginning Assets Plus Weighted External Cash Flow method:

$$W_{PORT1} = \frac{(31-10)}{31} = 0.68.$$

$$W_{PORT2} = \frac{(31-22)}{31} = 0.29.$$

$$R_{BMV+CF} = \frac{\{[100{,}000 + (20{,}000 \times 0.68)] \times 0.1137\} + \{[500{,}000 + (-70{,}000 \times .029)] \times 0.0830\}}{\{[100{,}000 + (20{,}000 \times .068)] + [500{,}000 + (-70{,}000 \times .029)]\}} = 8.89\%.$$

Aggregate Return method (using Modified Dietz method):

$$W_{Port1} = \frac{(31-10)}{31} = 0.68.$$

$$W_{Port2} = \frac{(31-22)}{31} = 0.29.$$

$$R_{January} = \frac{[(133{,}000 + 470{,}000) - (100{,}000 + 500{,}000) - (20{,}000 - 70{,}000)]}{[100{,}000 + 500{,}000 + (20{,}000 \times 0.68) + (-70{,}000 \times 0.29)]} = 8.93\%.$$