

Chapter 4
Mutual Funds and Other Investment Companies

2. The offering price includes a 6% front-end load, or sales commission, meaning that every dollar paid results in only \$0.94 going toward purchase of shares. Therefore:

$$\text{Offering price} = \$11.38$$

3. $\text{NAV} = \text{offering price} \times (1 - \text{load}) = \11.69

4.

Stock	Value held by fund
A	\$ 7,000,000
B	12,000,000
C	8,000,000
D	<u>15,000,000</u>
Total	\$42,000,000

$$\text{Net asset value} = \$10.49$$

5. Value of stocks sold and replaced = \$15,000,000

$$\text{Turnover rate} = 0.357 = 35.7\%$$

6.

a. $\text{NAV} = \$39.40$

b. $\text{Premium (or discount)} = \frac{\text{Price} - \text{NAV}}{\text{NAV}} = -0.086 = -8.6\%$

The fund sells at an 8.6% discount from NAV

7. $\text{Rate of return} = \frac{\Delta(\text{NAV}) + \text{Distributions}}{\text{Start of year NAV}} = 0.0880 = 8.80\%$

8.

a. Start of year price = \$12.24

End of year price = \$11.25

Although NAV increased, the price of the fund fell by \$0.99.

$$\text{Rate of return} = \frac{\Delta(\text{Price}) + \text{Distributions}}{\text{Start of year price}} = 0.0417 = 4.17\%$$

b. An investor holding the same portfolio as the fund manager would have earned a rate of return based on the increase in the NAV of the portfolio:

$$\text{Rate of return} = \frac{\Delta(\text{NAV}) + \text{Distributions}}{\text{Start of year NAV}} = 0.1333 = 13.33\%$$

12.

a. Empirical research indicates that past performance of mutual funds is not highly predictive of future performance, especially for better-performing funds. While there *may* be some tendency for the fund to be an above average performer next year, it is unlikely to once again be a top 10% performer.

b. On the other hand, the evidence is more suggestive of a tendency for poor performance to persist. This tendency is probably related to fund costs and turnover rates. Thus if the fund is among the poorest performers, investors would be concerned that the poor performance will persist.

13. Start of year NAV = \$20

Dividends per share = \$0.20

End of year NAV is based on the 8% price gain, less the 1% 12b-1 fee:

End of year NAV = \$21.384

Rate of return = 0.0792 = 7.92%

14. The excess of purchases over sales must be due to new inflows into the fund.

Therefore, \$400 million of stock previously held by the fund was replaced by new holdings. So turnover is: 0.182 = 18.2%

15. Fees paid to investment managers were: \$15.4 million

Since the total expense ratio was 1.1% and the management fee was 0.7%, we conclude that 0.4% must be for other expenses. Therefore, other administrative expenses were: \$8.8 million