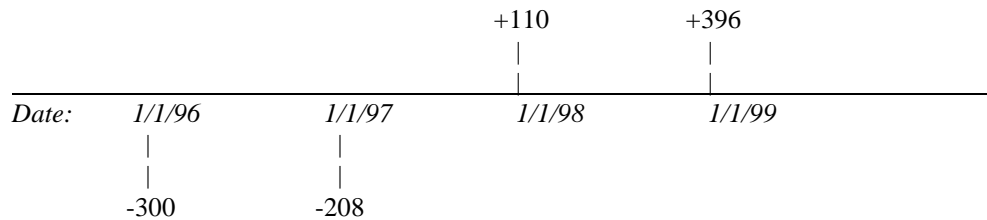


Essentials of Investments (BKM 7th Ed.)
Answers to Selected Problems – Lecture 4

Note: The solution to the concept check is provided in the text.

Chapter 5:

14b. Time	Cash flow	Explanation
0	-300	Purchase of three shares at \$100 each.
1	-208	Purchase of two shares at \$110 less dividend income on three shares held.
2	110	Dividends on five shares plus sale of one share at price of \$90 each.
3	396	Dividends on four shares plus sale of four shares at price of \$95 each.



The Dollar-weighted return can be determined by doing an internal rate of return (IRR) calculation. In other words, set the present value of the outflows equal to the present value of the inflows (or the net present value to zero):

$$300 + \frac{208}{(1 + R)^1} = \frac{110}{(1 + R)^2} + \frac{396}{(1 + R)^3} \Rightarrow R = -0.001661 = -0.1661\%$$

Chapter 18:

- We need to distinguish between timing and selection abilities. The intercept of the scatter diagram is a measure of stock selection ability. If the manager tends to have a positive excess return even when the market's performance is merely 'neutral' (i.e., has zero excess return), then we conclude that the manager has on average made good stock picks – stock selection must be the source of the positive excess returns.

Timing ability is indicated by curvature in the plotted line. Lines that become steeper as you move to the right of the graph show good timing ability. An upward curved relationship indicates that the portfolio was more sensitive to market moves when the market was doing well and less sensitive to market moves when the market was doing poorly -- this indicates good market timing skill. A downward curvature would indicate poor market timing skill.

We can therefore classify performance ability for the four managers as follows:

	<u>Selection Ability</u>	<u>Timing Ability</u>
a.	Bad	Good
b.	Good	Good
c.	Good	Bad
d.	Bad	Bad

9. The manager's alpha is:

$$10 - [6 + 0.5(14-6)] = 0$$

10. a) $\alpha(A) = 24 - [12 + 1.0(21-12)] = 3.0\%$
 $\alpha(B) = 30 - [12 + 1.5(21-12)] = 4.5\%$
 $T(A) = (24 - 12)/1 = 12$
 $T(B) = (30-12)/1.5 = 12$

As an addition to a passive diversified portfolio, both A and B are candidates because they both have positive alphas.

b) (i) The funds may have been trying to time the market. In that case, the SCL of the funds may be non-linear (curved).

(ii) One year's worth of data is too small a sample to make clear conclusions.

(iii) The funds may have significantly different levels of diversification. If both have the same risk-adjusted return, the fund with the less diversified portfolio has a higher exposure to risk because of its higher firm-specific risk. Since the above measure adjusts only for systematic risk, it does not tell the entire story.