Corporate Finance, Module 12: Corporate Financing and Market Efficiency (Chapter 13)

Practice Problems – Abnormal Returns

(The attached PDF file has better formatting.)

Exercise 1.2: Abnormal Returns

An analysis of 72 monthly rates of return on a company's common stock indicates a beta of 1.75 and an alpha of 0.005 per month. One month later, the market is up by 1.0% and the stock is up by 2.0%. What is the abnormal rate of return?

Solution 1.2: The expected return is 0.005 + 1.75 × 1% = 2.25%. Since the stock rose by 2.0%, the abnormal rate of return is 2.0% – 2.25% = –0.25%.

Exercise 1.3: Abnormal Returns

An analysis of the stock of the ABC Company indicates that the stock price, on average, decreases 0.1% per month when the market index is unchanged, and increases 1.5% for each 1% increase in the market index. One month later, the market index is up 7% and ABC's stock is up 9%. What is the abnormal rate of return for the stock of ABC Company?

Solution 1.3: The expected return for ABC stock is –0.1% + (1.5% / 1.0%) × 7% = 10.40%. The actual return is 9.0%, so the abnormal return is 9.0% – 10.4% = –1.4%.

Exercise 1.4: Abnormal Returns

Company X's expected return is equal to 1.25 times the expected market return. Yesterday, the market increased by 1%, but Company X's stock decreased from $100 to $80. What is the abnormal return?

Solution 1.4: The expected return is 1.25 × 1% = 1.25%. The actual return is –($100 – $80) / $100 = –20%. The abnormal return is –20% – 1.25% = –21.25%.

Exercise 1.5: Abnormal Returns

The stock of ABC Company currently trades at $100 per share. The stock price, on average, increases 0.5% per month when the market is unchanged and rises an additional 1.1% for each 1% increase in the market index. In a given month, the market index increased 3.5%, and the stock of ABC Company increased 4%. What was the additional price change of the stock of ABC Company?

Solution 1.5: The expected return is 0.5% + (1.1% / 1.0%) × 3.5% = 4.35%. The actual return is 4.0%. The abnormal return is 4.0% – 4.35% = –0.35%.