

result, many analysts assume that the market risk premium is around 7 percent. Others argue that a variety of changes in the U.S. economy make the historical risk premium an invalid basis for forecasting expected risk premium going forward. Evidence from some recent academic research suggests that the expected risk premium in the market to use these lower rates in their valuations.⁵ However, questions have arisen about these approaches. In our calculation of TjX's cost of equity we therefore use the historic market risk premium of 6.7 percent.

Although the CAPM is often used to estimate the cost of equity, evidence indicates that the model is incomplete. Assuming stocks are priced competitively, stock returns should be expected just to compensate investors for the cost of their capital. Thus long-run average returns should be close to the cost of equity and should (according to the CAPM) vary across stocks according to their systematic risk. However, factors beyond just systematic risk seem to play some role in explaining variation in long-run average returns. The most important such factor is labeled the "size effect": smaller firms (as measured by market capitalization) tend to generate higher returns in subsequent periods. Why this is so is unclear. It could mean either that smaller firms are riskier than indicated by the CAPM or that they are underpriced at the point their market capitalization is measured, or some combination of both. Average stock returns for U.S. firms (including NYSE, AMEX, and NASDAQ firms) varied across size deciles from 1926 to 2010, as shown in Table 8-5. The table shows that, historically, investors in firms in the top two deciles of the size distribution have realized returns of 10.9 and 12.9 percent compared to significantly higher returns for firms in the smallest two size deciles, 17.2 to 21.0 percent respectively. Not surprisingly, large stocks have been significantly less risky than smaller stocks. Stocks in the largest decile have a beta of less than one compared to 1.41 for the smallest decile. After controlling for this difference in beta risk, we see that firms in the smallest decile have earned an average of 6.4 percent more than the theoretical CAPM return over time. Finance theorists have not developed a well-accepted explanation for why that should be the case.

TABLE 8-5 Stock Returns, Volatility, and Firm Size

Size Decile	Market value of largest company in decile in 2010 (\$ millions)	Fraction of total market value represented by decile in 2010 (%)	Average annual stock return 1926-2010 (%)	Beta, 1926-2010	Size premium (return in excess of CAPM - %)
1 - smallest	235.6	1.0	21.0	1.41	6.4
2	477.5	1.3	17.2	1.35	2.9
3	771.8	1.7	16.5	1.30	2.7
4	1,212.3	2.2	15.4	1.24	1.9
5	1,776.0	2.6	15.0	1.19	1.8
6	2,509.2	3.5	14.8	1.16	1.8
7	3,711.0	4.3	13.9	1.12	1.2
8	6,793.9	7.4	13.6	1.10	1.0
9	15,079.5	13.6	12.9	1.03	0.8
10 - largest	314,622.6	62.3	10.9	0.91	-0.4

Source: Ibbotson and Associates, *Market Results for Stocks, Bonds, Bills, and Inflation, 1926-2010 (2011)*