1   **Q.   Evidence of Ms. McShane, relative risk adjustments, Pages 56-61: Please indicate**
2   **any theoretical model that uses standard deviations (on their own) as a measure of**
3   **risk to price equity securities.**
4
5   A.   Ms. McShane is not aware of any academic literature in a peer-reviewed journal that
6   supports looking at total risk for a company that is indirectly traded in the capital
7   markets. However, the relative standard deviation model is one of the models described
8   in Ibbotson, *2012 Valuation Yearbook*, for estimating the international cost of capital.
9   Relative standard deviations are also used in the Goldman modified beta approach for the
10   same purpose. The concept of Total Beta is used for valuing private firms where the
11   investor is not diversified. The CAPM beta, which is premised on being compensated
12   only for non-diversifiable risk, is equal to the standard deviation of the returns on a stock
13   or portfolio divided by the standard deviation of the returns on the market portfolio
14   multiplied by the correlation between the stock or portfolio and the market. The Total
15   Beta removes the correlation coefficient, so that the Total Beta is the ratio of the standard
16   deviations. The Total Beta thus measures total (including company-specific) risk.
17
18   Total Beta estimates for various industries are available from NYU Professor Aswath
19   Damodaran through his university website at:
20   http://pages.stern.nyu.edu/~adamodar/New_Home_Page/datafile/totalbeta.html