

1 **Q. Reference: Page 8, Line 178**

2
3 **“However, in practice, beta has many documented drawbacks.”**

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5 **Please provide a list of the documented drawbacks.**

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7 A. In his testimony, Mr. Cicchetti was referring to the substantial amount of academic
8 literature that criticizes the efficacy of beta in practice. Documented drawbacks of
9 beta include:

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11 1.) Beta is estimated using historical information but it is the future beta
12 coefficient that is needed for estimating the required rate of return.
13 2.) True beta cannot be observed.
14 3.) An increase in systematic risk can lower the calculated beta which is
15 opposite of rational expectations.
16 4.) Betas regress toward unity.
17 5.) Betas are unstable.
18 6.) Unadjusted betas are poor predictors.
19 7.) Different computational methods produce different betas.
20 8.) Individual company betas are measured with error.
21 9.) Historically, there are instances where betas did not indicate that firms
22 were about to go bankrupt.
23 10.) Beta as the only measure of relevant risk is controversial.

24
25 A comprehensive list of all the academic literature criticizing beta would be
26 voluminous. A small listing includes:

27
28 Fama, Eugene and Kenneth French, 2004, “The Capital Asset Pricing
29 Model: Theory and Evidence.” *Journal of Economic Perspective*, 18, pp.
30 25-46.

31
32 Levy, R.A., 1971, “On the Short-Term Stationarity of Beta Coefficients.”
33 *Financial Analysts’ Journal*, pp. 55-62.

34
35 Blume, M.E., 1975, “Betas and Their Regression Tendencies.” *Journal of*
36 *Finance*, pp. 785-796.

37
38 Kryzanowski, L and A. Jalilvand, 1983, “Statistical Tests of the Accuracy
39 of Alternative Forecasts: Some Results for U.S. Utility Betas.” *The*
40 *Financial Review*, pp. 319-335.

41
42 Brigham, Eugene and Roy Crum, 1977, “On the Use of the CAPM in
43 Public Utility Rate Cases.” *Financial Management*, pp. 7-15.

- 1 Carleton, Willard, 1978, "A Highly Personal Comment on the Use of the
2 CAPM in Public Utility Rate Cases." *Financial Management*, pp. 57-59.
3
4 Fama, Eugene and Kenneth French, 1992, "The Cross-Section of Expected
5 Stock Returns." *Journal of Finance*, pp.427-465.
6
7 Fama, Eugene and Kenneth French, 1993, "Common risk Factors in the
8 Returns on Stocks and Bonds." *Journal of Financial Economics*, 39: pp. 3-
9 56.
10
11 Fama, Eugene and Kenneth French, 1997, "Industry Costs of Equity."
12 *Journal of Financial Economics*, 43: pp.153-193.