

# [Investment and equity cost](https://assignbuster.com/investment-and-equity-cost/)

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2. Suppose the market portfolio has an expected return of 10% and a volatility of 20%, while Microsoft’s stock has a volatility of 30%.

* A. Given its higher volatility, should we expect Microsoft to have an equity cost of capital that is higher than 10%?

No, Microsoft is diversifiable and it will not be affected by the changes in the market. We do not expect Microsoft’s equity cost of capital to be higher than 10%. Each stock carries its own weight.

* B. What would have to be true for Microsoft’s equity cost of capital to be equal to 10%?

In order for Microsoft’s equity cost of capital to be 10% its beta will have to be 1. 4. Suppose all possible investment opportunities in the world are limited to the five stocks listed in the table below.

* What does the market portfolio consist of (what are the portfolio weights)?

Stock Price/Share ($) Number of Shares Outstanding (millions) A 10 10 B 20 12 C 8 3 D 50 1 E 45 20

* Total value of the market = 10x10+20x12+8x3+50x1+45x20= $1. 314 billion
* Stock Portfolio Weight A 10x10= 100 100/1314 = 0. 0761 x 100 = 7. 61%
* B 20x12= 240 240/1314 = 0. 1826 x 100= 18. 6%
* C 8x3= 24 24/1314= 0. 0183 x 100 = 1. 83%
* D 50x 1 = 50 50/1314= 0. 03381 x 100 = 3. 81%
* E 45x20 = 900 900/1314= 0. 6859 x 100 = 68. 49%
* Total = 100% 5.

Using the data in Problem 4, suppose you are holding a market portfolio, and have invested $12, 000 in Stock C.

A. How much have you invested in Stock A? 12, 000x(10x10)/(8x3)=$50, 000