

# Capm exercise

Finance



CAPM Exercise Capital Asset Pricing Model is used by the investors to calculate the required rate of return for a stock and that is given as  $K_i = R_F + \beta_i (K_M - R_F)$ , where

$K_i$  is required rate of return,  $R_F$  is the risk-free return,  $\beta_i$  (beta) is the systematic risk of a stock.  $(K_M - R_F)$ , is the equity risk premium that market would like to earn over risk-free return in the long run.

Given that

$$R_F = 4.6\%$$

$$(K_M - R_F) = 6.4\%$$

Estimating beta of Oracle (ORCL), using yahoo.com site, it has been found

$$\beta_i = 1.42$$

Now applying the values in the equation to calculate  $K_i$

$$K_i = 4.6\% + 1.42 (6.4) = 13.68\%$$

That means Oracle needs to have a rate of return equivalent to 13.68%.

Calculating for McDonald's (MCD)

$$\beta_i = 0.31$$

Applying the values in the equation to calculate  $K_i$

$$K_i = 4.6\% + 0.31 (6.4) = 6.58\%$$

That means McDonald's needs to have a rate of return equivalent to 6.58%

Estimating for Bank of America (BAC)

$$\beta_i = 1.86$$

Applying the values in the equation to calculate  $K_i$

$$K_i = 4.6\% + 1.86 (6.4) = 16.50\%$$

That means Bank of America needs to have a rate of return equivalent to 16.50%

Estimating for Coca-Cola (KO)

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$$b_i = 0.44$$

Applying the values in the equation to calculate  $K_i$

$$K_i = 4.6\% + 0.44(6.4) = 7.41\%$$

That means Coca-Cola needs to have a rate of return equivalent to 7.41%

Summarizing, we have following figures of rate of returns required for the given stocks.

$$\text{Oracle} = 13.68\%$$

$$\text{McDonald's} = 6.58\%$$

$$\text{Bank of America} = 16.5\%$$

$$\text{Coca-Cola} = 7.41\%$$

#### Conclusion

Above estimates provide important information to us that higher the risk associated with the company, higher is the expectation of return by the investor. In this context, Bank of America is the riskiest company to invest. That is also demonstrated by its high beta value of 1.86. Beta value of 1.86 essentially indicates that stock is likely to move up or down with respect to the chosen index, in this case S&P, to the tune of 186%. That means if S&P moves down by 10 percent, BAC will move in the same direction by 18.6%. Reverse is also true when S&P moves up by 10 percent, BAC would also move up by 18.6%.

Opposite is the case with McDonald's, which is a least risky stock. That can be seen from its low beta value equivalent to 0.31. Those who want safe and secured returns will eventually go for investing in McDonald's. It will have least volatility among all four stocks with respect to the chosen index of S&P. Thus, it can be concluded that it is important for the investors to know beta of the stock so that one can make investment as per their risk profile and <https://assignbuster.com/capm-exercise/>

temperament. Thus, Capital Asset Pricing Model is a good way of judging the share from view point of the risk involved.

#### References

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