

## Relationship between downside beta and CAPM beta: an alternative perspective

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### **Abstract**

This paper derives the relationship between the CAPM beta and downside beta assuming a data generating process in the mean-variance framework and another in the mean-semi-variance framework. A new perspective on the condition under which the CAPM beta may equal the downside beta is discussed. An empirical example (i) illustrates how the derived relationships between the betas may be used to explain differing conclusions in some asset pricing studies and demonstrate (ii) the extent to which the CAPM beta and the downside beta may capture different characteristics of the asset return distribution.