

## Beta Factor

**The beta factor measures a security's volatility of returns relative to the market. Therefore, it indicates whether an investment's return is more or less risky than that of the market. – Whilst there are betas for any financial instrument, also such as bonds, in most cases the concept refers to investments in the equity capital markets.**

The components driving the beta of a stock are the returns of the stock itself and those of the overall market. - The return of a stock is determined by the increase or decrease in the share price as well as dividends paid. – In order to determine the return of the market, one has to first define what “the market” actually is.

Commonly, indices are used to describe the shape and performance of the (equity capital) market. Several providers, such as Standard & Poor's, the Financial Times or Morgan Stanley's MSCI, have meanwhile specialized in composing – among others - stock indices. Some of those indices reflect the combined performance of the overall global markets. Others have a regional focus, specialize only on certain industry sectors or, for instance, follow specific investment themes. One of the oldest, most prominent, still widely used, but apparently worst composed, as most restricted and limited index is the Dow Jones Industrial Index. It only includes some 30 larger firms listed on the US stock market.

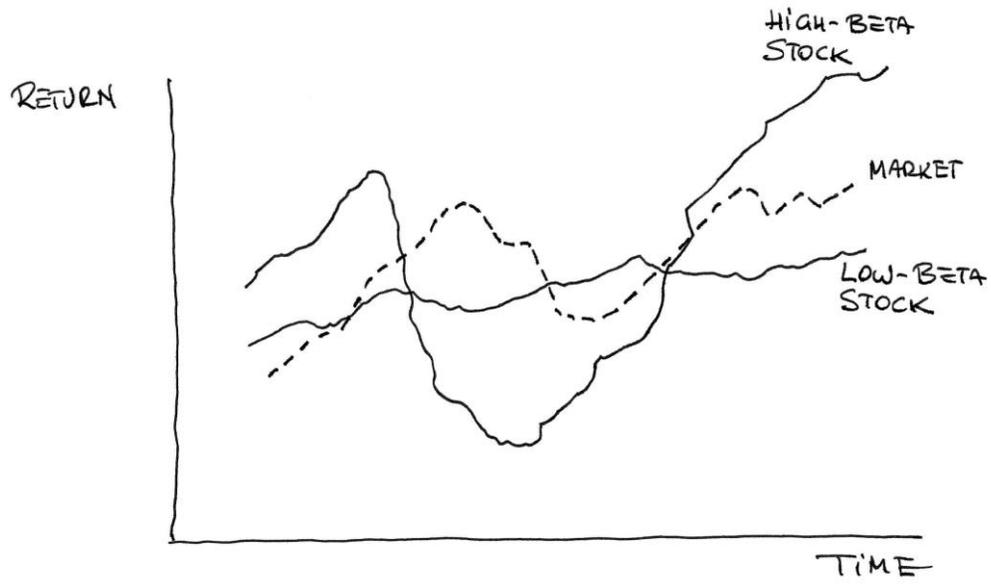
Selection criteria for admission to an index vary widely, whereby parameters could be, among others: A firm's stock capitalization, liquidity of its shares, its

uniqueness or characteristics and importance for a certain industry, geographic region, or else. – Therefore, each index provides a unique view of the return of the (overall) market: Consequently, so do the betas calculated on the basis of each of them.

A security's beta of 1 indicates a volatility exactly matching that of the market, less (more) than 1 less (more) than the market. A negative beta would indicate a negative correlation: Then, a specific security rises (declines) with the market declining (rising). – Relatively higher betas are associated with relatively more risky companies or industry sectors (e.g. tech, luxury goods), whilst low betas with mature, stable sectors, such as utilities or food. Negative betas could possibly be found in sectors such as gold.

Also, the time horizon over which betas are calculated may differ: The Financial Times, for example, publishes betas which are based on calculating the slope of the 60-month regression line of the percentage price change of the stock relative to the percentage price change of the S&P 500. Latter, a major global stock index, is used by numerous investment and pension funds as a benchmark for their respective investment policy.

Beta is essential within the Corporate Finance framework, especially in determining the Cost of Equity (CoE): There, the beta is applied as a multiplier to the market risk premium to account for the relative risk profile of an individual stock. Consequently, the CoE benchmark for a highly volatile stock will be substantially higher than that of – for instance - a mature, stable utility or a well-diversified food manufacturer.



$$COE = RFR + \beta \times MRP$$

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