Sharpe Ratio

The Sharpe Ratio is a performance benchmark for the assumed risk when making an investment. It measures the yield earned in excess of the risk-free rate which is then divided by the standard deviation of the investment, representing its risk. – Hence: The greater the value of the Sharpe Ratio, the more attractive the risk-adjusted return of the investment.

That assuming a higher risk also deserves a higher expected return seems evident. Whereby, in assessing a specific investment opportunity, market portfolios provide relevant benchmarks in regards to both, risk and return.

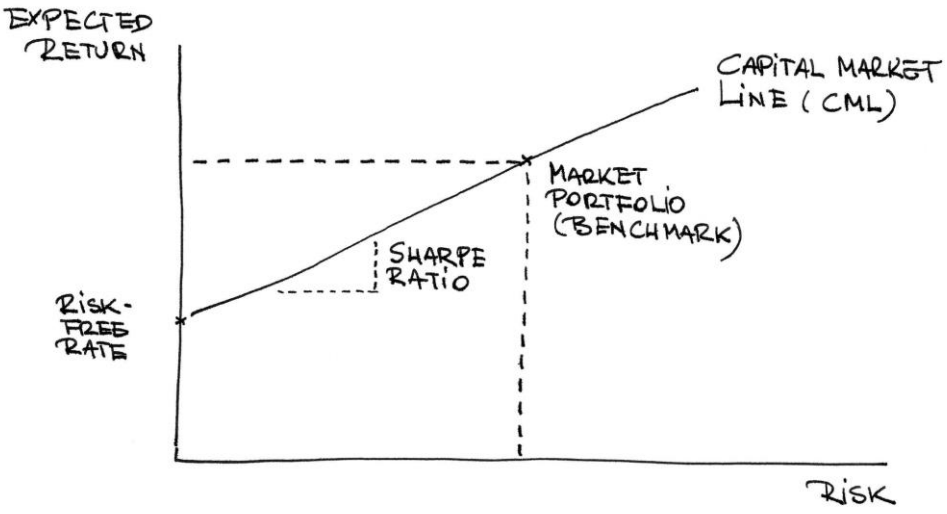
William Sharpe, a Nobel Prize laureate, refined this concept further: He argues that any return has to be adjusted for its unique, specific risk. Therefore, returns have to be risk-adjusted. - Sharpe is even more precise, though: He actually focuses on the excess return of an investment opportunity based on the risk assumed. Therefore, the risk-free rate is subtracted from the yield generated by an investment, as – hic! – only the actual risk assumed on top of the risk-free rate is assessed. – Alternatively, the excess return of an investment can also be defined as the difference between the total return of an investment less the return of a chosen benchmark. Usually, however, this chosen benchmark is the risk-free rate, the return achievable for investing in a risk-free asset.

This excess return is then put in relation to the risk assumed, with the risk expressed by the standard deviation of the asset´s return. – And, in dividing the excess return of an investment opportunity by its standard deviation, one ends up with a risk-return benchmark: the Sharpe Ratio.

Hence, the Sharpe Ratio helps to mathematically substantiate whether a certain investment is preferable vis-a-via another one, entirely based on its unique risk-return profile.

For example: If one had a choice between two investments with the same risk profile (i.e. same standard deviation), naturally the one with the higher excess return (i.e. the higher Sharpe Ratio) would be chosen. In other words: Out of two investment propositions with the same excess return one would prefer the proposition with the lower risk profile (standard deviation): Again, the one with the higher Sharpe Ratio.

The concept of the Capital Market Line (CML) represents all investment opportunities which have the same Sharpe Ratio as the - fully diversified - market portfolio: Therefore, if a specific investment opportunity has an expected yield with a risk-return profile above the CML, then this opportunity appears attractive. In technical terms, it seems to be undervalued (as a higher valuation would reduce its expected yield). Or, in other terms: Investment opportunities with a higher Sharpe Ratio than that of the market portfolio should signal „buy“-opportunities.



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