

RISK AND RETURN

Sharpe Ratio

The Sharpe Ratio is a performance benchmark for assuming risk in making an investment. It measures the yield earned in excess of the risk-free rate which is 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 higher risk also justifies a higher expected return makes perfect sense. And, in assessing an individual investment opportunity, market portfolios provide the relevant benchmarks in regards to both, risk and return.

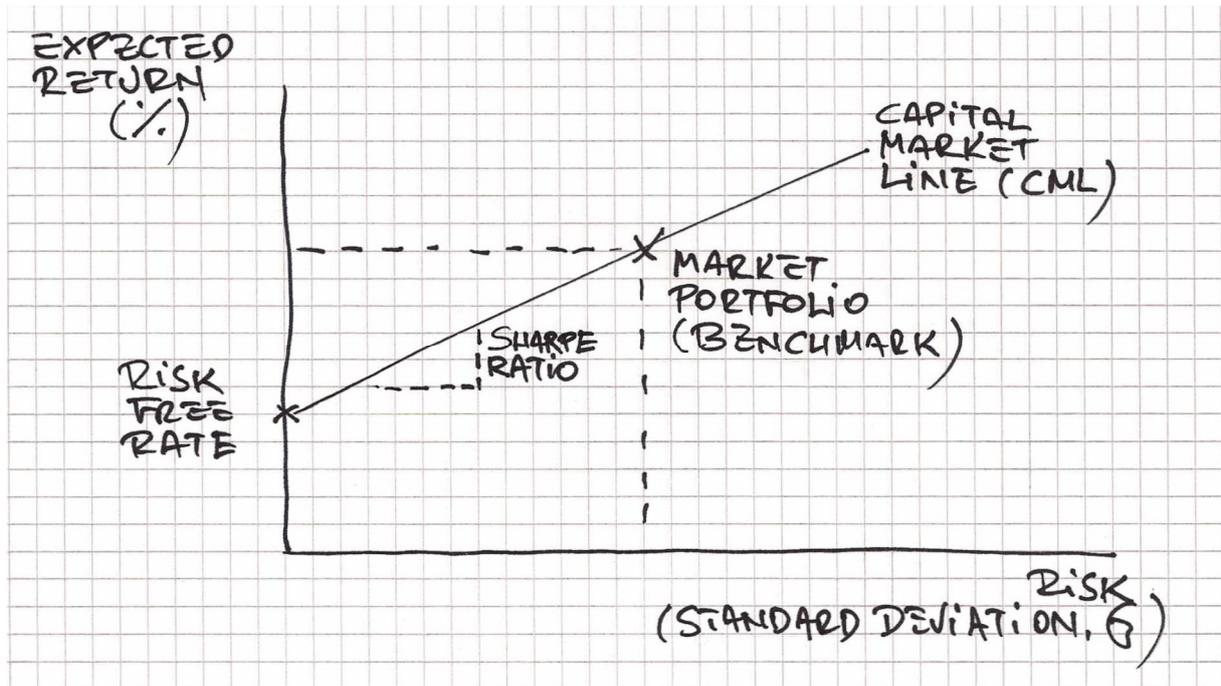
William Sharpe, Nobel Prize laureate, refined this concept further: He basically argues that any return has to be adjusted for its specific risk. Therefore, returns have to be risk-adjusted. Sharpe is more precise, though: He actually focuses on the excess return of an investment opportunity based on the risk assumed. The risk-free rate is subtracted from the yield generated by an investment, as – hic! – only the actual risk assumed 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. But usually, this chosen benchmark is actually the risk-free rate, the return achievable for investing in a risk-free asset.

The excess return is then put in relation to the risk assumed, with the risk expressed by the standard deviation of the asset's return. – Now, in dividing the excess return of an investment opportunity by its standard deviation we end 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-vis another one, purely based on its risk-return profile.

For example: If you had a choice of two investments with the same risk – alas: standard deviation -, then you would naturally prefer the one with the higher excess return – or: the higher Sharpe Ratio. Or, you would also prefer out of two investment propositions with the same excess return the one with the lower risk profile or standard deviation – again: the one with the higher Sharpe Ratio.

The concept of the Capital Market Line (CML) graphically 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.



COPYRIGHT PROTECTED - www.christian.schopper.com