

Risk-Free Rate - Applied

Whilst simple in theory, applying the concept of the Risk-Free Rate (RFR) can be challenging, especially in the context of determining an investment proposition's Cost of Equity (CoE).

RFR is the return achieved for an investment with basically zero risk, or zero volatility. Whereby in any domestic capital market, local sovereign bonds are assumed to constitute the least risky investment alternative. Hence, if one considered buying shares of a company operating in Germany, one may refer to the yields of German domestic government bonds as the regional applicable RFR. However, with numerous domestic government bonds outstanding, especially across a wide maturity spectrum, the question arises which one to choose.

The assumption that bonds with shorter maturities are less risky than longer ones makes sense: Along with time, the likelihood of a default as well as inflation-related risks simply increases. Therefore, in ordinary markets – exceptions occur – longer-maturity bonds carry a higher yield than shorter ones.

Literature and practice suggest using the yield of a 10-year domestic government bond to determine the RFR when calculating the CoE as a benchmark for investing in a stock. – This assumption may be challenged, though: Because a shareholder may keep shares for few months only, or for decades, perhaps. Therefore, the appropriate benchmark would be the RFR of a domestic sovereign bond with a maturity exactly matching the expected period of shares held. Therefore, a pension fund with a relatively long investment horizon may rather use a longer-dated

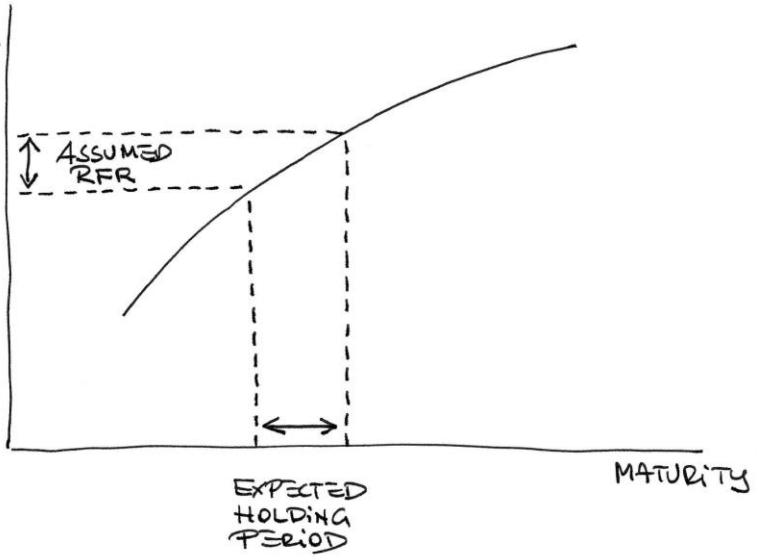
sovereign bond as a benchmark, unlike some hedge fund flipping positions in a matter of days or weeks.

Empirical research indicates, though, that – on average – stockholders hold on to their shares for a period of approximately 10 years: Therefore the frequently quoted reference to apply 10-year government bonds as RFR benchmark. – Consequently, an “average” (typical) investor acquiring shares in an German corporate may use as RFR benchmark German domestic government bonds with a remaining maturity of 10 years.

In principle, this same concept can also be applied in any (considerably more risky) emerging market: Also there, local government bonds are deemed the least risky investment alternative (despite those not being risk-free at all. With a respective credit rating almost certainly worse than that of the United States or Germany, perhaps even below investment grade).

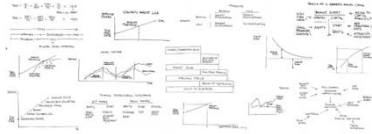
However, identifying appropriate RFRs in lesser developed capital markets can be a challenge: Often, longer-dated government bonds within the maturity spectrum of average holding periods of stocks simply do not exist. In this case, only broad assumptions or approximations may help. – Such may also be the only solution when determining an appropriate RFR benchmark in high-inflationary environments. (Unless one used a stable base currency in assessing an investment proposition). – Finally, an alternative approach may also be required when assessing a firm formally registered in a (challenging) emerging market, whilst running global operations and benefitting from a well-diversified product portfolio. In this case, a blend of RFRs may be considered across those regions where this corporate generates most of its cash flow.

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BONDS



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