FIXED INCOME

How Well Does Duration Measure Interest Rate Risk?

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Fixed-income managers use duration to measure the risk of their portfolios. If duration were a perfect measure of interest rate risk, of course, it would explain all the differences in government bond returns. In fact, examination of the quality of this risk measure over time indicates that duration's ability to explain the cross-sectional variation in bond returns has increased dramatically from the 1960s through the 1980s, an important finding for portfolio managers.

Despite the widespread use of duration, academic research yields conflicting evidence on its quality. Early empirical studies found that duration works as well as more sophisticated models. Subsequent studies, however, found that multifactor models outperformed duration and other one-factor models.

Even though the relative performance of alternative risk measures has been thoroughly evaluated, the evidence on their absolute performance is contradictory. Therefore, this study focuses on duration's ability to predict cross-sectional variation in bond returns.

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