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The Role of Betas versus Characteristics in Cross-Sectional Asset Pricing

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A fundamental paradigm in finance is that riskier assets should earn higher expected returns. Fama and French (1992) call into question the link between risk and expected returns by showing that the relation between betas and returns is negative, though not reliably different from zero. Moreover, there is considerable evidence of cross-sectional patterns (so-called anomalies) in stock returns that raises doubts about the risk-return paradigm.

Motivated by empirical findings, new factor models have been proposed that essentially proxy for the variation in returns evidenced by anomalies. There remains controversy in the literature, however, as to whether these additional factors are really risk factors – it seems that both betas and characteristics have a role to play in explaining expected returns. However, none of the studies in the vast literature clarify how much of the cross-sectional variation in expected returns is explained by betas and/or characteristics. The main goal of this research agenda is to fill this gap.

We develop a new methodology for cross-sectional asset pricing tests using individual stocks. Our approach tackles the well-known errors-in-variables problem that results from the use of estimates of beta in the second stage regression of returns on betas and characteristics. We will apply our methodology to three different settings. The main research sub-project studies the cross-section of U.S. stocks. We start by analyzing the popular one-, three-, and four-factor models. Our aim is to revisit the debate of characteristics versus betas, especially size and book-to-market, in explaining stock returns. The second sub-project extends the approach to studying liquidity. Mirroring the classical debate about the value premium, variety of liquidity proxies, some as levels and others as risk factors, have been proposed in the literature to explain the cross-section of returns. Our project aims to study these comprehensively. Finally, in the third sub-project, we hope to apply the same methodology to study the cross-section of bond returns.

We plan to offer new results on the “loadings versus characteristics” controversy. The previous literature has tended to focus on whether it is one or the other that ultimately explains differences in expected returns. In contrast, we provide an intuitive and simple way to disentangle the relative importance of betas and firm characteristics in explaining the cross-section of expected returns.

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Fields of Research

Capital Markets