

A LOOK AT BETA, SIZE AND BOOK-TO-MARKET IN THE CROSS-SECTION OF RETURNS: THE DEVELOPMENT AND APPLICATION OF THE MULTIFACTOR SWITCHED MODEL

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The pricing of financial assets lies at the heart of modern financial theory. Pricing functions value assets by the cash flow they produce and the risk associated with this cash flow. The pioneering work of Sharpe, Linter and Black (SLB) developed an asset pricing function that prices assets with the knowledge of only 1 type of risk-market risk.

By summing the n-dimensional concept of risk into a single metric (beta), the SLB model has tremendous appeal. However, the SLB model has been hit with numerous challenges during empirical analysis, thereby questioning its validity. These challenges, or anomalies, include size- and book-to-market-effects, plus the evidence of a January seasonal in the cross-section of asset returns.

It is difficult to apply ex post tests to a model that is based on ex ante expectations, such as the SLB model. This dissertation analyzes the power of the SLB model in an empirical model that recognizes its expectational nature. These tests show that the SLB model has explanatory power in the cross-section of returns, as the beta-effect is of equal magnitude and is symmetric across markets that are characterized with positive and negative risk-adjusted returns. This dissertation also shows that the size-effect is not symmetric across up- and down-markets, thereby questioning its role as a proxy for risk. Finally, this dissertation finds that the book-to-market effect does not show intertemporal consistency.

