
The Study of Spillover, Risk, and Leverage Effects: Smart Beta ETF Management Style

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ABSTRACT

This research uses the Generalized Autoregressive Conditional Heteroscedasticity-in-Mean Autoregressive Moving Average (GARCH-M-ARMA) and Exponentially Generalized Autoregressive Conditional Heteroscedasticity-in-Mean Autoregressive Moving Average (EGARCH-M-ARMA) models to measure spillover, risk, and leverage effects of active, passive, and smart beta management Exchange-traded Funds (ETFs). The increase in popularity of ETFs and new categories within them, specifically the growth of smart beta management, means asset managers and investors have new metrics to account for when determining portfolio exposure. The results show significant relationships among all groups regarding spillover. A trend of positive multi-lateral spillover of returns among the three management types is observed with smart beta showing the highest percentage of a bi-lateral positive effect. The strongest spillover of volatility effects is among the actively managed ETFs. The testing of risk results is insignificant, but the leverage effect results are consistent with past studies showing the significant negative bi-lateral effect. These results provide evidence of the essential effects can have strategizing portfolio exposure and can be used by asset managers and investors to fine-tune and better adapt their portfolios.

KEYWORDS Spillover Effect; ETFs; Smart Beta; ETF Management

JEL G11, G15, G32