Betting on Intraday Beta

T.G. Andersen, M. Thyrgaard, and V. Todorov

Abstract

We document a systematic shift in the intraday cross-sectional dispersion of the market beta for the individual stocks in the S&P 500 market index. The dispersion is high at the open and drops almost monotonically until the market close. We find that this cross-sectional beta dispersion i) increases with the intensity of firm-specific news arrivals; ii) decreases with positive innovations to the pricing of aggregate tail risk; iii) decreases with positive innovations to measures of global uncertainty; iv) increases in periods with a high intensity of earnings announcements; v) drops sharply just around the release of FOMC announcements. We argue that these patterns are consistent with the market beta being a weighted average of two different betas, reflecting an exposure of the individual stock returns to cash flow and discount rate shocks embedded in the market index. The evidence suggests that cash flow betas are substantially more cross-sectionally dispersed than discount rate betas. In addition, the volatility of cash flow shocks changes systematically during the day and around periods of (clustered) earning announcements. These two facts combined can rationalize our evidence for the intraday pattern in the cross-sectional dispersion of market betas. A number of robustness checks corroborate our interpretation.