

FOMC Announcements and Risk Neutral Densities

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Abstract

How do expectations of stock market participants change through FOMC announcements? This question has been at the core of many previous studies. Many of which analysed the impact of FOMC announcements on a daily or weekly basis for a rather small number of announcements and often focusing on the second moment of the implied risk neutral density or the stock returns. We try to answer this question by using an intraday data set containing all option trades of different indices over the last 17 years in order to shed light on the intraday dynamics of stock market (tail risk) expectations by estimating risk neutral densities on an intraday periodicity following the estimation approaches by Shimko (1993), Figlewski (2009), Malz (2014) and Hayashi (2020). We apply our methodology to index options on the S&P 500, Nasdaq as well as Russel 2000 in order to test whether our findings are different for growth- and small stocks compared to more frequently used S&P 500 index options.

Keywords: Risk neutral densities, FOMC announcements, tail risk

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