# Effects of Spot Market Short-Sale Constraints on Index Futures Trading*

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## Abstract

We analyze the effects of spot market short-sale constraints on derivatives trading using a unique Chinese stock market futures trading database. Due to short-sale constraints, investors' pessimistic views on the underlying index can be expressed solely through short futures positions, while investors' optimistic views are dispersed through their spot and futures trading. We hypothesize that trading of pessimistic investors (with net short futures positions) contains more information than that of optimistic investors. We document the negative volatility–volume relation is associated with pessimistic investors' trading, which attenuates with less-restricted spot market short-sale rules. Large pessimistic investors' net demand can predict future returns, but not the case for optimistic investors.

**JEL classification**: G11, G13, C53

## 1. Introduction

Academics, practitioners, and regulators have long debated and studied the effects of short-sale constraints on stock prices as well as the orderly functioning of equity markets. Theoretical work can be traced back to Miller (1977) and Harrison and Kreps (1978) who show that in the presence of short-sale constraints, asset prices tend to reflect the optimistic views of the investors and prices may exceed the fundamental value of those assets. Since then, several studies have highlighted the joint effects of the short-sale constraints and heterogeneous beliefs in driving asset price bubbles and crashes (see, e.g., Hong and Stein, 2003; Scheinkman and Xiong, 2003). On the empirical side, numerous studies found consistent evidence that short-sale constraints cause stock overvaluation, and the overvaluation is more dramatic among stocks that are more difficult to arbitrage (see e.g., Lamont and Thaler, 2003; Chang, Cheng, and Yu, 2007; Xiong and Yu, 2011; Stambaugh, Yu, and Yuan, 2012).