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Slow Diffusion of Information and Price Momentum in Stocks: Evidence from Options Markets

Zhuo Chen* Andrea Lu†

Abstract

This paper investigates the source of price momentum in the stock market using information from options markets. We provide direct evidence of the gradual information diffusion model in Hong and Stein (1999): momentum profits are larger for stocks whose information diffuses slowly into the stock market. We exploit the options markets to identify stocks with slow information diffusion speed. As informed traders trade options to realize the information that has not been fully incorporated in the stock price, we are able to enhance the momentum strategy by selecting winner/loser stocks with high growth/large drop in call option implied volatility. Our empirical strategy generates a risk-adjusted alpha of 1.8% per month over the 1996–2011 period, during which the simple momentum strategy fails to perform. The results are robust to the impact of earnings announcement, transaction costs, industry concentration, and choice of options' moneyness and time-to-maturity. Finally, our finding is not driven by existing stock- or option-related characteristics that are known to improve momentum.

JEL Classification: G10, G11, G12, G13
Keywords: Momentum, Implied Volatility

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