

ARTICLE



Cross-sectional and time-series momentum returns and market dynamics: evidence from Japan

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ABSTRACT

We test the behavioural theories of overconfidence and underreaction on cross-sectional (CS) and time-series (TS) momentum returns in the Japanese stock markets. Both CS and TS momentum returns are large and significant when the market continues in the same state and turns into losses when the market transitions to another state, consistent with the overconfidence but not the underreaction model. We find that TS conditional momentum returns exceed conditional CS momentum returns because of its active position since TS takes a net long (short) position following UP (DN) markets while CS is a zero-cost strategy irrespective of the market state. Finally, we find no relation between idiosyncratic volatility (IV) and momentum returns which is not supportive of either the overconfidence or underreaction model but implies that IV is not a significant limit to arbitrage in Japan.

KEYWORDS

Momentum returns; time-series; cross-sectional; market states; idiosyncratic volatility

JEL CLASSIFICATION

G12; G11; G14

I. Introduction

The cross-sectional momentum trading strategy (henceforth CS), proposed by Jegadeesh and Titman (1993), consists of buying (selling) the top (bottom) decile of stocks based on the past returns of 3–12 months and holding them over the next 3–12 months. They show that this strategy generates significant momentum returns in the US markets. Subsequently, Moskowitz, Ooi and Pedersen (2012) find larger momentum returns by buying (selling) different asset classes with positive (negative) past excess returns over the risk-free rate compared to the top (bottom) decile over the recent months. The literature refers to this as the time-series momentum strategy (henceforth TS). Numerous studies find momentum returns using both CS and TS strategies in various asset classes including stocks, indices, commodities, futures and currency markets (see e.g. Moskowitz, Ooi and Pedersen 2012; Goyal and Jegadeesh 2015).

Stock selection could cause TS momentum returns to exceed CS. The CS strategy buys (sells) an equal number of stocks based on the average returns over the ranking period while the TS strategy

buys (sells) all stocks with positive (negative) returns over the ranking period. Therefore, the CS strategy has a net position of zero because the long and short positions would consist of an equal number of stocks. For the TS strategy, it is unlikely that the number of stocks in the long position will equal the short position because a bull (bear) market would have a greater number of stocks with positive (negative) returns, resulting in a net long (short) position. In a recent article, Goyal and Jegadeesh (2015) show that the TS strategy outperforms the CS largely because of its net long position. They further argue that markets generally have more UP than DOWN states, which result in a net long position for the TS strategy. A higher number of stocks with positive past excess returns are bought relative to the negative past excess returns, and the net long position earns the corresponding risk premium in the market.

Fama and French (1996) find that risk factors cannot explain momentum returns, so research has shifted to the links between momentum returns and behavioural biases (Asem and Tian 2010; Arena, Haggard, and Yan 2008). There are three main