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New evidence on determinants of price momentum in the Japanese stock market

Tamara Teplova [1], Evgeniya Mikova *

National Research University – Higher School of Economics (NRU HSE), Department of Finance, Faculty of Economic Sciences, Russia

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ABSTRACT

We investigate the cross section momentum effect in the Japanese stock market over the period January 1997 to December 2013, sub-periods before August 2008 and during the crisis September 2008–2009. From previous studies, it follows that the Japanese market is the exception to the findings on developed capital markets (momentum effect does not occur or is weak). Our study highlights the limitation of standard notions; we document the conditional nature of momentum and identify the characteristics of companies and their stocks and market states, allowing investors to earn positive momentum profit in the Japanese market (the statistically significant positive monthly return of zero cost portfolios is not less than 1%). It is shown that investors should take into account the seasonal pattern (for the Japanese stocks this revealed two months when we do not recommend taking investment activity) to increase portfolio profits. We explain the results from the specifics of the Japanese financial and governance systems, the ownership structure of listed Japanese firms and socio-cultural factors.

* Corresponding author at: Research & Training Laboratory of Financial Markets Analysis, Faculty of Economic Sciences, National Research University – Higher School of Economics (HSE), Shabolovskay, 26, 4320 Moscow, Russia. Tel.: +7 495 7729590.
E-mail addresses: tteplova@hse.ru, evgeniya.shutova@gmail.com (E. Mikova).
URL: http://fmlab.hse.ru/en/ (E. Mikova).
[1] Department of Finance, Faculty of Economic Sciences, NRU HSE, Moscow, Russia.

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1. Introduction

Momentum has a multifaceted nature. Traditionally, momentum is associated with physical terms. Conservation of momentum can be deduced from Newton's laws but actually René Descartes before Newton introduced momentum as the "amount" of motion. Since 1980 economists have extrapolated the concept of momentum to financial markets. Technical analysts consider momentum oscillators to help identify trend lines and obtain the signal for overbought and oversold conditions in a security.

Another large group of investigations into momentum concerns different investment strategies based on the momentum effect (trend-follow effects on single asset and cross section momentum for portfolios). Grinblatt et al. (1995) find that about 77% of mutual funds in their sample use momentum strategies in their investment portfolios.

Stock price momentum strategy can be implemented on single asset (trend-following strategy) or on a cross section of the same class of assets by creating only long, only short or simultaneously long-short momentum portfolios based on relative past stocks' performance. The trend-following style uses different indicators (past average returns, moving average, ratios) to obtain signals to buy or sell the security by comparing with the current performance. The cross section momentum effect is observed among portfolios of the same class of assets (bonds and stocks) and based on their past relative performance (e.g. prior returns or measures of risk and return).

Trading strategies based on past returns have become one of the traditional measures of stock market efficiency (with autocorrelation tests and incomplete incorporation of earnings and another news into stock prices). Interest in the analysis of price momentum, as an anomaly in the capital asset pricing (in explaining the variation in stocks return) and efficient market hypotheses (EMH), originated in the late 1980s/early 1990s. The first papers were written by De Bondt and Thaler (1985, 1987) and Jegadeesh and Titman (1993). In general strategies that include buying winning stocks (stocks with high returns over the previous three months to 1 year) and selling losing stocks (stocks with low returns over the same period, the so-called formation period), earn profits of about 1% per month for the following months within the year. Accumulated evidence shows that momentum strategies make profits in most developed stock markets. It is clear that there is a need for additional research to understand the role of momentum strategies in markets with specific macroconditions and relatively closed stock markets, as well as the role of the momentum effect during financial crisis periods. The objective of our research is to improve our understanding of momentum effect as one of the most provocative anomalies of EMH.

Our interest is in the Japanese stock market, the world's second largest. Many researchers have checked stock markets of different regions over different time periods using various methods of portfolio formation, and have consistently reported positive returns by implementing medium-term momentum strategies (3–12 months) and long-term (3–5 years) reversal strategies when investors buy losing stocks and sell winning stocks (stocks with relatively high returns). The existence of a momentum effect is confirmed in many markets, but the Japanese market is an exception (Rouwenhorst, 1998; Liu and Lee, 2001; Fama and French, 2012; Asness et al., 2013).

We examine the previously obtained conclusion that there is no momentum effect in the Japanese stock market (in the rare investigations of Fama and French, 2012; Asness et al., 2013).[2] It is important to shed more light on the nature of this phenomenon. In our study we focus solely on the profitability and nature of the cross section medium momentum effect. The particular interest in studying the Japanese market is driven by its specific financial and governance systems (relationship-based) and that there are only a few empirical studies of the Japanese stock market. The contribution of our paper is to add to the existing literature based essentially on US stock market empirical and theoretical results on less studied countries, in particularly, the Japanese market.

The purposes of our paper are fivefold. Firstly, we test the profitability of momentum strategies in the Japanese stock market on a total sample of 1125 traded stocks, for which market capitalization exceeds $300 million, with different designs of portfolios (different formation (ranking) and holding (investment) periods), and full or partial rebalancing (overlapping holding periods). Secondly, we

[2] It has been concluded that momentum profits are less statistically significant in the Japanese market.