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Journal of Financial Economics 80 (2006) 627–656
JOURNAL OF Financial ECONOMICS
www.elsevier.com/locate/jfec

Earnings and price momentum ☆

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Received 24 November 2004; received in revised form 31 March 2005; accepted 23 May 2005
Available online 6 January 2006

Abstract

This paper examines whether earnings momentum and price momentum are related. Both in time-series as well as in cross-sectional asset pricing tests, we find that price momentum is captured by the systematic component of earnings momentum. The predictive power of past returns is subsumed by a zero-investment portfolio that is long on stocks with high earnings surprises and short on stocks with low earnings surprises. Further, returns to the earnings-based zero-investment portfolio are significantly related to future macroeconomic activities, including growth in GDP, industrial production, consumption, labor income, inflation, and T-bill returns.

JEL classification: G11; G12; G14; M40

Keywords: Post-earnings announcement drift; Price momentum; Earnings momentum; Market efficiency; Macroeconomy

1. Introduction

In a seminal paper, Fama (1998) once again makes the case for the efficient markets hypothesis. Notwithstanding the recent interest in behavioral finance—an interest that is

☆We thank an anonymous referee, Ray Ball, Michael Brennan, Greg Clinch, Francisco Gomes, Paul Irvine, Narasimhan Jegadeesh, Josef Lakonishok, Maureen McNichols, Stefan Nagel, Bhaskaran Swaminathan, Jacob Thomas, and seminar participants at Case Western University, London Business School, University of Chicago, University of Rochester, and the LBS accounting symposium for helpful comments. The second author was supported by the Dean's Fund for Research at the London Business School. All errors are our own.
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doi:10.1016/j.jfineco.2005.05.005

driven by data that are inconsistent with the standard frictionless asset pricing models—Fama argues that the null should still be one of market efficiency. However, Fama concedes that two robust and persistent anomalies pose challenges to the efficient markets paradigm. These two anomalies are (i) the post-earnings announcement drift, or earnings momentum, first documented by Ball and Brown (1968) and (ii) the short-run return continuation, or price momentum, documented by Jegadeesh and Titman (1993). Earnings momentum refers to the fact that firms reporting unexpectedly high earnings subsequently outperform firms reporting unexpectedly low earnings. The superior performance lasts for about nine months after the earnings announcement. Price momentum refers to the strategy that buys past winners and sells past losers, which earns abnormal returns for a period of up to one year after the execution of the strategy.

In this paper, we study whether earnings momentum and price momentum are related. Our analysis extends Chan et al. (1996), who also investigate whether the predictability of future returns based on past returns is subsumed by individual stock earnings surprises in cross-sectional tests. If price momentum is related to macroeconomic variables, as shown by Chordia and Shivakumar (2002), Ahn et al. (2003) and Avramov and Chordia (2005), then firm-specific characteristics, such as earnings surprises, will be insufficient to capture price momentum. We seek a relation between price momentum and the systematic component of earnings momentum.

Based on the most recent earnings surprise, measured as standardized unexpected earnings (*SUE*) following standard practice in post-earnings announcement drift literature, we sort firms into decile portfolios and then examine whether a zero-investment portfolio that is long the highest earnings surprise portfolio and short the lowest earnings surprise portfolio captures the price momentum phenomenon. Both in time-series and cross-sectional asset pricing tests, we find that the earnings-based zero-investment portfolio (denoted *PMN* for positive minus negative) captures the payoffs to price momentum strategies. For instance, the price momentum effect (as measured by the portfolio *WML*, which is long past winners and short past losers), at about 76 basis points per month, is reduced to essentially zero in time-series tests after controlling for the exposure of firms to *PMN*. Since *PMN* is a diversified portfolio, it is unlikely to reflect any firm-specific information. Thus, the above results are consistent with price momentum being primarily related to the systematic component of earnings momentum.

To better understand the ability of *PMN* to explain price momentum, we analyze the properties of *PMN*. During our sample period from January 1972 through December 1999, the payoffs to the *PMN* portfolio average a significant 90 basis points per month. These payoffs are not subsumed by the Fama and French (1993) factors or the momentum factor of Carhart (1997). Thus, while the earnings momentum anomaly subsumes the price momentum anomaly, it is not itself subsumed by the price momentum anomaly. The correlation between *PMN* and the price momentum based portfolio, *WML*, is 0.66. Also, *WML* is more volatile than *PMN*. These results suggest that price momentum is a noisy proxy for earnings momentum. This is consistent with the results in Hong et al. (2003) who examine earnings and price momentum in 11 international equity markets and find that price momentum exists only in those countries in which earnings momentum is profitable.

Using a variety of measures to capture future macroeconomic conditions, we show that the return on *PMN* forecasts future business conditions. In particular, we find that the return on *PMN* is correlated with future GDP growth, industrial production growth, consumption growth, labor income growth, inflation, and T-bill returns. These