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J. of Multi. Fin. Manag. 18 (2008) 131–144

Journal of MULTINATIONAL FINANCIAL MANAGEMENT

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Momentum profits in alternative stock market structures

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Received 9 November 2006; accepted 24 May 2007
Available online 6 June 2007

Abstract

The aim of this study is to examine the relationship between momentum profitability and the stock market trading mechanism and is motivated by recent changes to the trading systems that have taken place on the London Stock Exchange. Since 1975 the London stock market has employed three different trading systems: a floor based system, a computerized dealer system called SEAQ and the automated auction system SETS. Since each new trading system has reduced the level of execution costs, one might expect, a priori, the magnitude of momentum profits to decline with each amendment to the trading system. However, the opposite empirical result is found showing that shares trading on the automated system generate higher momentum profits than those trading on the floor system and companies trading on the SETS system display greater momentum profitability than those trading on SEAQ. Our empirical results concur with the theoretical findings of the trader's hesitation model of Du [Du, J., 2002. Heterogeneity in investor confidence and asset market under- and overreaction. Working paper] and the empirical findings of Arena et al. [Arena, M., Haggard, S., Yan, X., Price momentum and idiosyncratic volatility. Financial Review, in press].

JEL classification: G14; G15

Keywords: Momentum; SETS; SEAQ

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1042-444X/$ – see front matter
doi:10.1016/j.mulfin.2007.05.002

1. Introduction

The momentum strategy describes the tendency for return performance to persist in the medium term. The pioneering work of Jegadeesh and Titman (1993) on the US market showed that by buying winners and selling short losers an abnormal monthly return of approximately 1% could be achieved. Extent evidence now exists in support of the momentum strategy for the US (e.g., Jegadeesh and Titman, 2001), the UK (e.g., Hon and Tonks, 2003), and a global range of stock markets (e.g., Griffin et al., 2003).

A number of studies have examined whether the momentum strategy enjoys significant profitability after transaction costs. Lesmond et al. (2004) report that the momentum returns found by Jegadeesh and Titman (1993, 2001) and Hong et al. (2000) disappear after adjusting for transaction costs, since both winner and loser portfolios tend to include high transaction cost shares, such as small capitalisation and illiquid shares. Chen et al. (2002) and Korajczyk and Sadka (2004) examine the price impact cost of following the momentum strategy. Chen et al. (2002), for instance, report that the maximal fund size possible to exploit the momentum strategy is US$ 44.2 million when value-weighted portfolios are formed.

A significant number of studies have also considered the potential reasons for momentum, but no clear consensus has emerged. Ang et al. (2006) argue that the contents of the winner portfolio are characterized by more downside risk. The higher returns displayed by winners is compensation for this additional amount of risk investors would be exposed to when falling market arise. The importance of risk as a potential explanation for momentum contrasts with the findings of Fama and French (1996) and Liu et al. (1999). After controlling for the risk inherent in the three-factor model of Fama and French (1993), both papers show that momentum profitability does not diminish.

Behavioral models have suggested that momentum is caused by the underreaction of stock prices to new information. Du (2002) argues that investors can be characterized by high or low levels of confidence. Underreaction arises when investors with low confidence are slow to make decisions. Delays in acting upon information cause the effects of new information to persist inducing a continuation pattern in returns.

Momentum profits have also been found to be influenced by firm level characteristics. Lee and Swaminathan (2000) show that firms with high trading volume have higher momentum than firms with low trading volume. Moskowitz and Grinblatt (1999) find that momentum is related to a firm's industry. Momentum also appears to be related to firm size (Hong et al., 2000) and to glamour features (Gregory et al., 2001).

In this paper, we suggest that the size of UK momentum profits can be influenced by the stock market trading system. The London Stock Exchange (LSE) has employed three trading systems since 1975. Until the reforms of Big Bang in 1986 the LSE employed a single capacity floor based trading system. From 1986 onwards the London exchange adopted a computerized dealing system called SEAQ. Since 1997 equities with the highest turnover on the LSE have been able to trade on an automated trading system that has been operating in parallel to SEAQ.

One may expect, a priori, that the level of momentum profits declines with each amendment to the trading system. With the introduction of each new system, a reduction of the transaction costs was occurred (e.g., Naik and Yadav, 1999; Tonks and Webb, 1991). A move to the computerized system SEAQ and then to SETS would have therefore made momentum trading progressively more attractive after the microstructure changes made by the LSE. Furthermore, the increased transparency and ease of trading associated with the new systems would have made momentum trading more attractive to non-institutional traders.