Global Finance Journal 22 (2011) 1–18

Contents lists available at ScienceDirect

Global Finance Journal

journal homepage: www.elsevier.com/locate/gfj

Investors' reactions to sharp price changes: Evidence from equity markets of the People's Republic of China ☆

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ARTICLE INFO

Article history:
Received 6 August 2009
Accepted 12 February 2010
Available online 18 May 2011

JEL classification:
G14
G15

Keywords:
Chinese equity markets
Over and under reaction
Market efficiency

ABSTRACT

We examine investors' reactions to extreme price changes in Chinese equity markets to uncover patterns of price formation. We compare the price behavior and volatility of “A” and “B” shares in both the Shanghai and Shenzhen markets within a 30-day window following the arrival of new information to the market. We find that the arrival of unexpected news resulting in sharp price changes significantly increases market volatility in China and that the subsequent price adjustments exhibit upward corrective patterns. Contrary to findings for other markets, these results are consistent with the prediction of the Uncertain Information Hypothesis. In reaction to both favorable and unfavorable information, investors in Chinese equity markets initially set equity prices below their fundamental values and subsequent price trends register an upward adjustment. These findings suggest that investors in Chinese stock markets react rationally to the arrival of unexpected information and that no contrarian strategy can be utilized to generate abnormal return.

1. Introduction

Financial liberalization and the integration of emerging markets with more developed financial markets in the past two decades have created new investment opportunities for foreign investors in search for efficient international diversification to enhance return and minimize risk. Goetzmann, Li, and Rouwenhorst (2005) find evidence that emerging markets generally offer superior diversification opportunities compared to developed markets. Among such emerging economies attracting foreign investors' attention

☆ We would like to thank Xiaoxi Miao, MSA student for her excellent research assistance.
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doi:10.1016/j.gfj.2011.05.001

is the People's Republic of China (hereinafter referred to as "China"). During the last several years and especially following its admission to the World Trade Organization (WTO) in 2001, China has committed to financial liberalization and deregulation, and to the implementation of market-oriented reforms, all despite the fact that the State yet retains domination of the Chinese economy. The transition of the country to market economy was further facilitated by the crucial role that the Chinese stock market played in the reform of government-owned corporations.

Indeed, the Chinese equity market has become the fastest-growing stock market in the world, notwithstanding concerns about information transparency and corporate governance of Chinese companies. In January 2007, China was ranked as the third-biggest stock market in Asia by market value after Japan and Hong Kong, when the value of shares listed on Shanghai and Shenzhen stock exchanges exceeded $1 trillion (International Herald Tribune, 01/12/07). Chinese equity markets have also become among the most active markets in terms of number of listed companies, volume of transaction, market capitalization, and participation of foreign investors. Their expansion generally took place after the government sold shares worth more than $200 billion to private investors. It also reflects unprecedented rates of economic growth that made China the world's fourth largest economy, overtaking Britain and France, and just behind the economies of the USA, Japan, and Germany.

In parallel with the recent remarkable economic growth and excessive government intervention, price volatility has become a common characteristic of Chinese equity markets. To illustrate, when the Shanghai stock market opened in 1991, a Chinese investor had to wait for days to be able to buy shares. One year later, the Shanghai index soared over 450% but afterward plunged 72%, including a one-day drop of 13% that sent many investors into a panic (Thomas, 2001). In addition to being extremely volatile, Chinese equity markets also have distinctive structures that differentiate them from other conventional emerging markets. Dual classes of stocks are traded in each of the two national exchanges, Shanghai Stock Exchange and Shenzhen Stock Exchange. A-share stocks are traded by domestic residents, and B-share stocks are traded primarily by foreign investors, effectively creating four separate financial markets. Further, Chinese stock markets possess unique market rules in terms of stock ownership, tradability, and segregation of shares and of investors.[1]

High price volatility in a unique market setup provides us with an opportunity to examine the reaction of investors following unexpected price changes. Specifically, we investigate the reaction of Chinese equity prices subsequent to the arrival of unexpected information and sharp stock price changes. Behavioral finance theory provides two possible explanations for the behavior of equity markets after a sharp price change, the Overreaction Hypothesis (OH; DeBondt & Thaler, 1985) and the Uncertain Information Hypothesis (UIH; Brown, Harlow, & Tinic, 1988, 1993). The OH predicts that investors initially overact following the arrival of unexpected information, leading to a price reversal or excessive optimism in the case of good news and excessive pessimism in the case of bad news. Alternatively, the UIH assumes that rational investors initially set equity prices lower than their fundamental values in reaction to both favorable and unfavorable information, so that the subsequent price adjustment has an upward trend whether the unexpected information is good or bad news. The OH and UIH have similar implications for investor reaction to unfavorable price movements, but they differ in their prediction of the response to unexpected favorable information. After the arrival of positive news, the OH predicts a declining price trend, while a rising price adjustment is expected under the UIH.

Studies for developed and emerging markets generally provide evidence for investors' overreaction and report significant price reversals in equity prices following the arrival of unexpected positive news, suggesting that a contrarian investment strategy (buying losing stocks and selling winners) is likely to yield abnormal return. To our knowledge, only one published paper addresses the issue of investors' reactions to extreme price movements in Chinese equity markets, and it also finds evidence in support of OH. Wang, Burton, and Power (2004) employ a number of A and B shares across the two main Chinese equity markets over a six-year period between 1994 and 2000, and they report that investors' overreaction seems to be more pronounced in A shares compared to B shares.

In this paper, we distinguish ourselves from Wang et al. (2004) by widening our sample coverage to include the four well-cited Chinese market indices, while going back to the inception of each index and up

[1] The unique characteristics of Chinese equity markets are discussed in detail in Section 3.