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Can media exposure improve stock price efficiency in China and why?

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ABSTRACT

The media in China has undergone extensive commercialization to become more market-driven over the last 35 years. Based on a sample of over two million newspaper articles, this study investigates whether the media in China has an incremental impact on stock price efficiency. We find that: as media coverage of a firm increases, (1) its stock price synchronicity decreases; (2) the probability of informed trading of its stock increases; and (3) the extent to which its stock price deviates from random walk decreases. Our inter-regional analysis over thirty-one provinces/regions within China reveals that the effects of the media on decreasing stock price synchronicity, increasing the probability of informed trading, and reducing stock price deviation from random walk are stronger in regions of weaker institutional development. Our findings suggest that a market-driven media can play the role of compensating for the underdeveloped governance institutions in transitional economies such as China.

1. Introduction

In transitional economies such as China or Russia, agency problems are severe but the standard governance institutions to protect investors and maintain transparency are limited and weak (e.g., Allen et al., 2005). With investor protection weakened and transparency reduced, stock prices are likely to become less informative because they are less able to incorporate firm-specific information (Jin and Myers, 2006). The resulting

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equilibrium is that stock prices are less efficient because they are less able to channel scarce capital into best investments (Tobin, 1982).

In such an institutional environment, can the media play the role of compensating for the weak standard institutions to improve stock price efficiency? Our study investigates this hitherto unexplored question in the context of listed Chinese firms. Our analysis focuses on the impact of firm-level media coverage on three dimensions of stock price efficiency: (1) the ability of stock price to incorporate firm-specific information; (2) the collection of private firm-specific information in stock trading (i.e., the extent of informed trading); and (3) the extent to which stock prices deviate from random walk (i.e., pricing error).[1] In an inter-regional analysis across 31 regional/provincial jurisdictions within China, we also directly test our compensating hypothesis that the effect of media coverage in increasing stock price efficiency is stronger in regions (or countries) with weaker standard governance institutions.

We are motivated to study the effect of firm-level media coverage in China on stock pricing efficiency for at least two reasons. First, La Porta et al. (1998) suggest that in countries where standard institutions are weak, substitutive or compensating mechanisms (such as concentrated ownership) may develop to sustain financial activities.[2] As the largest transitional economy in which standard institutions for investor protection and disclosure transparency are either underdeveloped or still in the developing stage, China provides arguably the best laboratory setting in which to identify compensating mechanisms.[3] Our investigation in effect assesses whether the media can act as a compensating mechanism to increase stock price efficiency.

Second, Morck et al. (2000) find that Chinese stock prices are less able to incorporate firm-specific information than most other stocks in a 40-country sample.[4] Jin and Myers (2006) as well as Hutton et al. (2009) show that the ability of stock prices to incorporate firm-specific information is lower in countries with poor investor protection and low firm-level transparency. In the case of China and other transitional economies, these two related factors stem from the underdevelopment of standard governance institutions. This institutional underdevelopment results in weak legal enforcement, lax financial regulations, poor disclosure quality, insufficient information intermediation, poor external monitoring by financial analysts, independent auditors, institutional investors, or credit rating agencies. Since the development of standard governance institutions is necessarily a gradual process, the potential compensating role of the well-established and increasingly market-driven institution of the Chinese media warrants research attention.[5]

Our empirical strategy involves developing two measures of firm-specific media coverage based on over two millions newspaper articles written about all listed firms in China and published in 14 national financial newspapers and the 10 largest comprehensive newspapers in China in the period of 2000–2009 and identifying three empirical proxies for stock price efficiency, which are the inverse of stock price synchronicity, the probability of informed trading (PIN), and stock pricing error. Our results reveal the following.

First, we find that as the media coverage of a firm increases, the ability of the firm's stock to incorporate firm-specific information improves. Second, we find that as the media coverage of a firm increases, both the probability of informed trading and the probability that a private information event occurs in its stock increase. Third, we find that as the media coverage of a firm increases, the extent to which the firm's stock

[1] To the best of our knowledge, this study is the first to examine the relation between firm-level media coverage (in China or elsewhere) and stock price efficiency. There is, however, a growing literature which looks at the relation between non-media institutions and stock price efficiency (e.g., Kim and Shi, 2012; Haw et al., 2012; Ferreira et al., 2011; Gul et al., 2010; Boehmer and Kelley, 2009; Fernandes and Ferreira, 2009; Ferreira and Laux, 2007; Jin and Myers, 2006; Chan and Hameed, 2006; Morck et al., 2000).

[2] La Porta et al. (1998) use both the words "substitute" (p. 1116) and "compensate" (p. 1140) to describe these mechanisms relative to "complement" mechanisms. We prefer the word "compensate" because these mechanisms cannot *completely* substitute for legal institutions, but they can "compensate, at least in part" (p. 1140).

[3] China ranks poorly in the ranking of countries in terms of rule of law, corruption, and the protection of property rights (La Porta et al., 2004; Pistor and Xu, 2005; Allen et al., 2005; Jiang et al., 2010).

[4] Given that China is the second-largest and fastest-growing economy and that it attracts the largest amount of foreign capital, the *inability* of Chinese stocks to incorporate firm-specific information into their prices is an important concern, particularly from the perspective of foreign equity investors. For example, the fraction of U.S. pension money invested in emerging markets with underdeveloped legal systems such as China is growing rapidly (Dyck et al., 2008, p. 1094).

[5] See next section and Appendix C for detailed arguments.