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Is market integration associated with informational efficiency of stock markets?

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Abstract

This study addresses the question of whether a more integrated stock market is associated with a higher degree of informational efficiency. We employ the adjusted pricing error from an equilibrium international asset pricing model as a proxy for market integration. The aggregate country-level price delay serves as an inverse measure of informational efficiency, as it captures the relative speed with which each aggregate stock market reacts to global common information. Using data from 49 countries, we find robust evidence supporting the hypothesis that markets more integrated with the world are also more efficient, and this positive association is only significant in the sub-sample of emerging stock markets. The results provide additional insight on the factors facilitating the transmission of global information and yield important policy implications.

JEL classification: F36; G14; G15

Keywords: Informational efficiency; Market integration; Financial liberalization; Price delay; Pricing error

1. Introduction

Since the late 1980s, many developing countries have actively pursued financial liberalization policies, with the anticipation that the opening of capital account will deliver higher rates

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of economic growth. Their broad liberalization packages also include the removal of statutory restrictions on foreign ownership of domestic equity securities (for stock market openings, see Bekaert & Harvey, 2000; Henry, 2000). As a result, most emerging market economies experienced surges in the volume of international capital flows over the next two decades. However, a series of financial crises in the 1990s and the recent global financial turmoil have triggered intense debate in both the academic and policy circles on the desirability of full liberalization of capital flows. Providing further ammunition to their critics is the lack of conclusive evidence on the positive growth effect of financial openness, as highlighted by several survey papers (see Edison, Klein, Ricci, & SlØk, 2004; Henry, 2007; Kose, Prasad, Rogoff, & Wei, 2009). Despite the controversy on its growth-enhancing benefit, a consensus emerges that these liberalization policies have further integrated stock markets with the world, though the process is still far from the aspired level of perfect integration (see Carrieri, Errunza, & Hogan, 2007; Carrieri, Chaieb, & Errunza, 2011; Bekaert, Harvey, Lundblad, & Siegel, 2011).

The objective of this paper is to further determine whether the increased integration with world capital markets goes hand in hand with a higher degree of informational efficiency. The efficiency effect deserves greater attention in policymaking than it presently receives for at least two reasons. First, promoting informational efficiency, in which the dissemination of relevant information is timely reflected in the price formation process, is one of the key objectives for securities market regulators.[1] In fact, efficient price discovery is one main function of stock market. Unfortunately, after thousands of published articles spanning over several decades, little is known about how, when and why the stock price becomes efficient. Only in recent years that the academic literature pays relatively more attention to the efficiency effect of various market reforms undertaken worldwide, such as securities laws (Daouk, Lee, & Ng, 2006), insider trading laws (Fernandes & Ferreira, 2009), short-selling regulations (Bris, Goetzmann, & Zhu, 2007; Saffi & Sigurdsson, 2011), private property rights protection (Morck, Yeung, & Yu, 2000), corporate transparency (Jin & Myers, 2006), trade opening (Lim & Kim, 2011) and financial liberalization (Bae, Ozoguz, Tan, & Wirjanto, 2012; Li, Morck, Yang, & Yeung, 2004). An understanding of the key drivers behind informational efficiency is likely to provide useful input to policymakers and stock exchange regulators.

Second, the informational efficiency of a stock market warrants the attention of policymakers to avoid substantial misallocation of resources that has a negative impact on long-term economic growth. Morck, Shleifer, and Vishny (1990) point out that market efficiency would not be important if the stock market does not affect economy activity. According to Majumder (2012), wrong investment strategies may disrupt the optimal allocation of resources. To establish the link between an efficient stock price and efficient allocation of investment resources, Dow and Gorton (1997) develop a theoretical model which shows that the stock market indirectly guides managers' investment decisions by transferring information about investment opportunities and information about managers' past investment decisions. Following their work, the feedback effect from stock prices to real investment decisions has attracted a sizeable theoretical literature (for recent studies, see Dow, Goldstein, & Guembel, 2011; Goldstein & Guembel, 2008). Empirically, several studies find that the stock market is not an economic sideshow, but instead, efficient stock prices enhance the efficiency of capital allocation (Wurgler, 2000), induce higher productivity and faster economic growth (Durnev, Li, Morck, & Yeung, 2004), facilitate more efficient corporate capital

[1] The objectives and principles of securities regulations can be downloaded from the website of International Organization of Securities Commissions (IOSCO), the leading international grouping of securities market regulators, at http://www.iosco.org/library/pubdocs/pdf/IOSCOPD154.pdf (retrieved on 02.05.12).