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Baltic stock markets and the financial crisis of 2008–2009

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ABSTRACT

This study presents new evidence on stock market integration by investigating the linkages between developed European stock markets and emerging stock markets. We focus on three countries in the Baltic region, namely Estonia, Latvia and Lithuania with particular attention to the recent financial crisis of 2008–2009. The study is motivated by traditional stock market studies of integration, which show that developed stock markets are highly integrated, while emerging markets may be segmented. How integrated these emerging stock markets are in a crisis period with respect to the EUROSTOXX50 stock index is an empirical question investigated in this study. While the results of this study demonstrate that the Baltic stock markets were apparently segmented before the crisis, they were highly integrated during the crisis. The results of the variance decomposition analysis show that a large proportion of the forecast variance of the Baltic stock markets can be explained by the EUROSTOXX50 during the crisis. The results from the quantile regressions demonstrate that during the crisis the returns of the lowest quantile were most sensitive to the EUROSTOXX50 stock index. All these results imply less diversification benefits during crises when investors would need them the most.

1. Introduction

An observation according to which the stock markets behaved very similarly across different continents and countries during the global financial crisis of 2008–2009 casts serious doubts on the

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usefulness of the traditional portfolio theory during crisis periods.[3] This is the case in particular if the less integrated frontier emerging markets become fully integrated during global crises. From the perspective of portfolio theory, a relevant question is therefore whether there are still some markets that are less integrated and as such could provide better diversification benefits, also during global crises.

In this study, we examine the integration of a subset of European emerging markets, namely the Baltic stock markets (of Estonia, Latvia and Lithuania), with the developed European stock markets, paying particular attention to the financial crisis period. Our study is motivated by the traditional stock market studies of integration (e.g., Bekaert and Harvey, 1995; Bessler and Yang, 2003; Kim et al., 2005; Carrieri et al., 2007), which generally show that while developed stock markets are highly integrated, emerging markets may still be segmented (e.g., Mateus, 2004; Chambet and Gibson, 2008; Yu and Hassan, 2008; Cheng et al., 2010; Claus and Lucey, 2012). The specific goal of our study is to examine how integrated the emerging Baltic stock markets were during the 2008–2009 crisis with respect to the European stock markets.

Our research problem is timely and relevant as indicated by the large number of related studies on financial crises on various other markets. These include, for example, foreign exchange markets (see e.g., Baba and Packer, 2009; Fratzscher, 2009; Melvin and Taylor, 2009), fixed income markets (see e.g., Acharya et al., 2009; Dwyer and Tkac, 2009; Hartmann, 2010) and stock markets (see e.g., Bartman and Bodnar, 2009; Dooley and Hutchison, 2009; Billio and Caporin, 2010; Chudik and Fratzscher, 2011; Schwert, 2011; Syllignakis and Kouretas, 2011). The studies show that several asset classes and markets were significantly affected by the financial crisis of 2008–2009.

Our study contributes to both the financial crisis literature and studies on the Baltic markets by examining the effects of the financial crisis, specifically on the integration of the Baltic countries during the recent global crisis. The work most closely related to ours is that by Syllignakis and Kouretas (2011), who examine the correlation dynamics for seven Eastern European countries during the financial crisis, whereas studies focusing on the Baltic stock markets are scarce.[4] Of the few existing studies focusing on the integration of the Baltic equity markets, Maneschiöld (2006) examines long-run and short-run integration of the Baltic stock markets with several international markets (US, Japan, Germany, UK, and France) during the period 1996–2005, while Mateus (2004) investigates the Baltic markets within the sample of the 13 EU accession countries during the period 1997–2002. Maneschiöld (2006) shows that the Baltic markets exhibit a low degree of integration with developed international markets and therefore can provide diversification benefits for international investors, especially on a long-term investment horizon. Furthermore, Mateus (2004) presents evidence about the partial integration of the Baltic stock markets with respect to the world market. In sum, the literature on the integration of the Baltic stock markets suggests that these emerging markets are indeed segmented. In this study, we contribute to the existing literature by examining the cross-dependence of the Baltic countries with particular attention to the financial crisis, which has not been previously investigated.

Several studies have documented that the degree of integration among stock markets tends to change over time, particularly in time of crisis. For instance, Yang et al. (2003) find that ten Asian emerging stock markets have generally been more integrated during and after the 1997–1998 Asian financial crisis than before the crisis. Similarly, Yang et al. (2006) present evidence of the significant impact of the 1998 Russian financial crisis on the integration of four major Eastern European emerging stock markets (Czech Republic, Hungary, Poland, and Russia). Given that the literature has documented that the Baltic stock markets are segmented (Mateus, 2004; Maneschiöld, 2006), it is particularly interesting to investigate how these markets behave during a financial crisis.

[3] This is not surprising given the evidence of globally integrated stock markets (see e.g. Lin et al., 1994; Longin and Solnik, 2001).

[4] Generally, the stock markets in the Baltic region provide an interesting environment for further research given their fast economic growth in the years prior to the global financial crisis of 2008–2009, as well as the status of regulated markets associated with the benefits of EU membership. Earlier studies on the stock market integration of the European emerging markets have focused on larger markets in Central and Eastern Europe such as those of Poland, Hungary and the Czech Republic (Gilmore and McManus, 2002; Voronkova, 2004; Chelley-Steeley, 2005; Gilmore et al., 2008; Li and Majerowska, 2008; Middleton et al., 2008), and more recently on the Balkan markets (Samitas et al., 2006; Kenourgios and Samitas, 2011; Syriopoulos, 2011), while the evidence from the Baltic region is limited.