Journal of Comparative Economics 42 (2014) 304–327

Contents lists available at ScienceDirect

Journal of Comparative Economics

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

A spatial–temporal analysis of East Asian equity market linkages

Pui Sun Tam *

University of Macau, Macau

ARTICLE INFO

Article history:
Available online 5 April 2014

JEL Classification:
C23
G01
G15

Keywords:
East Asia
Equity market linkages
Financial crisis
Spatial dependence

ABSTRACT

Tam, Pui Sun—A spatial–temporal analysis of East Asian equity market linkages

This paper examines East Asian equity market linkages in and out of the Asian and global financial crises using a novel econometric approach. The market dependence structure and shock transmission mechanism are explored spatially in the time domain, thus offering new insights into the dynamic regional market linkage patterns. Results show that East Asian equity markets are characterized by linkages through significant spatial effects, crises are conducive to increased cross-border linkages especially in the case of China, and Japan is a dominant driver of market linkages in the region. *Journal of Comparative Economics* **42** (2) (2014) 304–327. University of Macau, Macau.
© 2014 Association for Comparative Economic Studies Published by Elsevier Inc. All rights reserved.

1. Introduction

The high-performing Asian economies recorded remarkably high and sustained economic growth during 1965 and 1990, which was referred to as the East Asian miracle by the World Bank (1993). However, this miraculous nature of these economies was challenged by Krugman (1994), who maintained that the rapid economic growth in East Asia had not been achieved through technical progress and was therefore likely to diminish in the long-run. Krugman's skepticism was seen by many as prescient with the onset of the deep Asian financial crisis in 1997. What started off as a local currency crisis in Thailand escalated into full-blown regional financial turmoil. The East Asian economies, one after the other, experienced stock market implosions and/or sharp currency depreciation. The turbulence even spread beyond the region to Russia and Brazil in 1998. In the aftermath of the crisis, the East Asian economies took initiatives to strengthen their economic and financial fundamentals, and ushered in a series of regional cooperation programs and policies. When the global financial crisis began in 2007, the East Asian economies escaped its worst effects despite the extensive financial and debt problems in the US and Europe. Against this background, this paper studies the dynamic linkages of East Asian equity markets in and out of the Asian and global financial crises, which have significant implications on regional portfolio diversification and policy-making (see, for instance, Berben and Jansen, 2005; Darrat and Zhong, 2005).

In the literature on East Asian equity market linkages, many of the studies focus on selected East Asian economies alongside the developed non-regional markets of the US, UK and Germany (for example, Burdekin and Siklos, 2012; Chelley-Steeley, 2004; Dekker et al., 2001; Ghosh et al., 1999; Huang et al., 2000; Huyghebaert and Wang, 2010; Masih

* Address: Faculty of Business Administration, University of Macau, Av. Padre Tomás Periera, Taipa, Macau. Fax: +853 2883 8320.
E-mail address: pstam@umac.mo

http://dx.doi.org/10.1016/j.jce.2014.03.008
0147-5967/© 2014 Association for Comparative Economic Studies Published by Elsevier Inc. All rights reserved.

and Masih, 2001; Yang et al., 2003). Some other studies deal with specific groupings in East Asia, such as developed markets (Fernández-Serrano and Sosvilla-Rivero, 2001; Leong and Felmingham, 2003), emerging markets (Jayasuriya, 2011) and ASEAN-5 markets (Click and Plummer, 2005; Lim, 2009). There are also studies that consider East Asian markets without China (Awokuse et al., 2009), and East Asian markets with sub-markets for China and Hong Kong (Yu et al., 2010).

This paper differs from the above-described literature as it investigates the core set of ten East Asian equity markets of Japan (JP), China (CN), Hong Kong (HK), South Korea (hereafter Korea, KO), Taiwan (TA), Singapore (SG), Malaysia (MA), Indonesia (IN), Thailand (TH) and the Philippines (PH) on an aggregate basis. Given certain features of the Australian equity market, an extension of the East Asian regional framework to include this market in the analysis is also examined.

Besides comprehensively encompassing major aggregate equity markets in the region, this paper also uses the data covering 1995–2011 to gauge the potential changing equity market linkage patterns during the Asian financial crisis and the recent global financial crisis. While it is well-recognized that the prominent regional episode of the Asian financial crisis has a bearing on the East Asian market interactions, it is perceived that regional market interdependencies are also influenced by the global financial crisis (Burdekin and Siklos, 2012; Yoshida, 2010). Indeed, the global financial crisis has induced a significant disjunction in the inter-governmental relationships among the East Asian economies. At the regional level, cooperation on financial and monetary issues has been initiated in the wake of the Asian financial crisis, but more substantial advancement on these issues, such as the multilateralization of the Chiang Mai Initiative, has been achieved only in the ongoing global financial crisis. At the global level, the Asian economies are taking on new roles by virtue of the enlargement of IMF quotas and by their participation in the G20 (Lai and Ravenhill, 2012). Any understanding of the cross-market linkages in East Asia would therefore be incomplete without discerning the potential differences in the dynamism among the equity markets under different economic and financial environments. In the literature, the time-varying patterns of market linkages are typically gauged by dividing the entire sampling period into subperiods solely on the knowledge of historical events (Burdekin and Siklos, 2012; Huyghebaert and Wang, 2010; Leong and Felmingham, 2003; Lim, 2009; Sander and Kleimeier, 2003; Sheng and Tu, 2000; Yang et al., 2003). In this paper, subperiods are determined by endogenously estimated structural break dates and supported by the chronology of major events much like in Awokuse et al. (2009).

Finally, this paper contributes to the extant literature on the study of equity market linkages by the use of a novel spatial–temporal econometric approach. Many existing works have employed time series vector autoregressive (VAR) and vector error correction (VEC) modeling techniques, including cointegration, Granger causality and impulse responses, to investigate the transmission mechanism driving equity market linkages (Eun and Shim, 1989; Dekker et al., 2001; Masih and Masih, 2001; Yang et al., 2003; Huyghebaert and Wang, 2010). However, they typically do not take into account price shock propagation across equity markets in contemporaneous time, although contemporaneous cross-market dependency has been well-recognized in the literature (Hilliard, 1979; Eun and Shim, 1989; Koch and Koch, 1991; Hasbrouck, 1995). Awokuse et al. (2009) and Bessler and Yang (2003) have used the directed acyclic graph (DAG) technique on the residuals from a VEC model to identify contemporaneous interrelationships among markets and then feed back the DAG results as zero restrictions in a structural VAR model to assess short-run dynamic market linkages. However, their approach falls short of modeling equity market linkages contemporaneously and over time within one single framework. Furthermore, Awokuse et al. (2009) note that their DAG results can be fragile as these have no direct measure of the economic significance or strength of the identified cross-market relationships.

Recently, Holly et al. (2011) proposed a method that enables the investigation of shock transmission and propagation both over time and over space in a dynamic system, with the effects of shocks analyzed using generalized spatial–temporal impulse responses. Spatial econometrics does not have a long history, but has been profitably applied to urban economics and economic geography, and it is gaining in popularity in other areas of economics (Anselin, 2010). It models the interactions among neighboring units and quantifies the spillover effects among them. Spatial interdependence need not be restricted to the pure geographic sense, and it can also be applicable to the economic or social dimension. Notwithstanding the fact that contemporary financial transactions are predominantly electronic and weightless, the literature has provided increasing evidence of the significant effects of spatial factors, such as geographic proximity or economic and financial similarities, on cross-border equity market linkages (Asgharian et al., 2013; Beine and Candelon, 2011; Eckel et al., 2011; Fernández-Avilés et al., 2012; Flavin et al., 2002; Suchecka and Laszkiewicz, 2011; Villar Frexedas and Vayá, 2005; Wälti, 2011). Modeling spatial dependence structures in the field of finance has essentially been overlooked (Fernandez, 2011) and is not yet very frequent in financial applications (Arnold et al., 2011; Asgharian et al., 2013), but it is receiving more attention in the wake of the global financial crisis (French et al., 2009; Asgharian et al., 2013). Some examples of the limited studies in the related literature are in order. Fernández-Avilés et al. (2012) and Villar Frexedas and Vayá (2005) use spatial techniques to identify channels of equity market comovements and linkages. Arnold et al. (2011) and Asgharian et al. (2013) model stock returns using spatial lag models of different orders. While the former forecast risk measures, the latter identify channels of spatial equity market linkages and estimate the effects of shock transmission from one market to the others in the spatial system. Fernandez (2011) formulates a spatial capital asset pricing model to quantify the risk premium on the market portfolio, whereas Zhu and Hui (2008) estimate a spatial error model to assess the impacts of stock returns of China on the returns of other markets. The works of Asgharian et al. (2013) and Zhu and Hui (2008) are most closely connected to the present study. Employing spatial regression models, while the former investigate multilateral equity market relationships, the latter monitor specific bilateral market dependencies. However, neither considers the serial dependence of equity markets in the analytic framework. Although Zhu and Hui (2008) begin with the specification of a general first-order serial and spatial autoregressive distributed lag model, they subsequently reduce it to a parsimonious spatial error model to serve

دریافت فوری ← متن کامل مقاله

ISIArticles
مرجع مقالات تخصصی ایران

- ✓ امکان دانلود نسخه تمام متن مقالات انگلیسی
- ✓ امکان دانلود نسخه ترجمه شده مقالات
- ✓ پذیرش سفارش ترجمه تخصصی
- ✓ امکان جستجو در آرشیو جامعی از صدها موضوع و هزاران مقاله
- ✓ امکان دانلود رایگان ۲ صفحه اول هر مقاله
- ✓ امکان پرداخت اینترنتی با کلیه کارت های عضو شتاب
- ✓ دانلود فوری مقاله پس از پرداخت آنلاین
- ✓ پشتیبانی کامل خرید با بهره مندی از سیستم هوشمند رهگیری سفارشات