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Islamic and conventional equity index co-movement and volatility transmission: Evidence from Pakistan

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Abstract

This study investigates the Islamic and conventional Index integration over the period 3rd September, 2008 to 30th September, 2015. This study uses Johansen and Juselius cointegration method for exploring the long run association. The short run association is explored using VECM model. The volatility spillover dynamics is examined using the GARCH and EGARCH models. The robustness of the results is analyzed by using Granger causality method, Variance Decomposition method, and Impulse Response Function. The estimation results show significant long run and short run association between Islamic and Conventional index. Furthermore, this study finds asymmetric bidirectional volatility spillovers between Islamic and conventional index. The findings suggest that domestic investors have low diversification opportunities by adding both Islamic and conventional index in their portfolios. However, international investors can add one of the indices in their portfolios, in order to benefit from portfolio diversification.

Keywords: Islamic index; Conventional index; EGARCH; GARCH; Pakistan

1. Introduction

One of the most extensively studied areas in finance literature is stock market integrations. Cheng (2000) define stock market integration as "the situation where markets moves together and have stable long run relationship". There will be no potential diversification opportunities for investors, if the stock markets are integrated (Jebran, 2014). Similarly, investors cannot obtain benefits from arbitrage opportunities in case of perfect financial integration (Abbes & Trichilli, 2015). Therefore understanding the integration of stock markets is important for investors for decision making in international portfolios.

The importance of exploring integrations of financial markets led many researchers to search for potential diversification opportunities across markets. Most of the studies are interested in exploring integrations of developed

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equity markets (Baele, 2002; Diebold & Yilmaz, 2009; Harris & Pisedtasalasai, 2006; Ng, 2000; Wagner & Szimayer, 2004; Xiao & Dhesi; 2010). There are also studies which investigate the integrations of emerging and developed equity markets (Beirne et al., 2009; Li and Majerowska 2008; Jebran 2014; Jebran & Iqbal, 2016). Few of the studies are contributed in investigating the integrations of Islamic equity markets with other markets (Arshad and Rizvi 2013; Nazlioglu, Hammoudeh, & Gupta 2015; Miniaoui et al. 2015; Majdoub and Mansour 2014; Saadaoui and Boujelbene 2015). Most of the studies are carried out after the US subprime financial crises, because the empirical evidences shows that Islamic stock indices perform better, and also provide potential diversification benefits in tranquil and turmoil period (Abbes & Trichilli, 2015). Saiti, Bacha, & Masih (2014) argue that Islamic stock indices performs better due to many specific features that includes exclusion of financial sectors, ethical and ration screenings, the limits of interest-based leveraged, and exclusion of conventional financial assets like derivatives etc. The aforementioned specific features may make an Islamic product less risky. It is generally argued that the features of Islamic stocks are different from conventional stocks because the former is based on Islamic Shariah criteria. Therefore the risk-return tradeoff will be also different and it is important to explore the potential diversification opportunities across Islamic and conventional indices.

This study is a pioneering attempt to investigate the dynamics of integrations between the Islamic and conventional index of Pakistan. More specifically, this study will explore the co-movement and volatility spillovers between the two indices. This study contributes to the existing literature in numerous ways. First, to the best of our knowledge, this is the first study to explore the dynamic integration of Islamic index and its conventional counterpart in reference to Pakistan. Second, this study use data since the formation of Islamic index in Pakistan, so it will provide valuable insights. Third, the results of the study will provide valuable information to domestic and international investors, who are interested in portfolio diversification. Fourth, this study will add valuable knowledge to the existing literature in terms of an emerging economy. Finally, this study applied several econometric techniques to explore the interdependence of the indices to get more robust results.

The rest of the study is organized as follows. The second section presents the Islamic investment criteria in Pakistan. The third section presents the results. The last section concludes.

2. Islamic investment criteria

The Islamic index (known as Karachi Meezan Index) in Pakistan is based on Shariah Compliant Criteria. The Islamic index includes 30 companies, which are selected on the basis of Shariah Compliant Criteria. The board members of Al Meezan Investment Management Limited provide the Shariah screening services. The Islamic Shariah Criteria in Pakistan is based on six screening criteria's. The first screening criterion is based on the fact that the core business of the company should not violate any principle of Shariah. Therefore the companies providing financial services on interest like insurance companies, leasing companies, conventional banks etc are not included in the Shariah. In addition, the companies selling or making products from pork, haram meat, and involved in gambling are also excluded from Shariah criteria. The second criterion is based on the idea that the interest bearing debt to assets ratio of the company should be less than 37%. The third screening criterion is that the non compliant investment to total assets ratio of the company should be less than 33%. The non Shariah compliant investment includes investment in commercial paper, bonds, interest bearing bank deposits, derivatives, and any other commercial interest bearing investments. The fourth criterion is that the non compliant income to total revenue of the company should be less than 5%. The non compliant income includes income from interest based transactions, income from derivatives, insurance companies or any other income from impermissible activities declared by Shariah. The fifth criterion is that the ratio of non-current assets to total assets should be less than 25%. The last criterion includes that the market price per share of the company should be equal to or greater than the net liquid asset per share. The net liquid asset per share is calculated by subtracting non-current assets and total liabilities from total assets and dividing by number of outstanding shares. These screening criteria are strictly followed for inclusion of a company in the Islamic index.[1]

[1]For more discussions, see Majdoub and Mansour (2014); Jebran and Chen (2017).