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International financial integration in Asian bond markets

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ABSTRACT

With the development of international financial market, the degree of international financial integration increased significantly during the late 1980s and 1990s. A key factor underlying this process was the increased globalization of investments seeking a higher rate of return and the opportunity to diversify risk internationally. In this paper, we investigate the degree of international financial integration in Asia by examining the relationships amongst Asian bond markets by employing the advanced econometric technique of cointegration of error correction vectors. In other words, we propose the answers to the following questions. Firstly, what is the degree of international financial integration in Asian bond markets? Secondly, does this degree of integration significantly change after the 1997 Asian financial crisis?

This study has a strong implication for investors, in particular, from the perspective of Australian or US investors, whether they do benefit from investing in Asian bond markets. In addition, understanding the extent of financial integration and monitoring its progress in the region is important for Asian central banks. In addition, increased international financial integration promotes financial development and hence enhances economic performance in the region.

1. Introduction

The degree of integration of financial markets around the world has increased significantly since the late 1980s. A key factor underlying this process has been the increased international financial

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integration and globalization of investments where investors seek higher returns and the opportunity to diversify risk internationally. At the same time, in the process of policies towards opening markets, many countries, especially developing countries, encourage capital openness by dismantling restrictions and controls on capital inflows and outflows, deregulating domestic financial markets, liberalizing restrictions on foreign direct investment and improving their economic environments and prospects through the introduction of market-oriented reforms. This helps to promote international financial integration (Agenor, 2003). Along with this process, a great number of studies have focused on the issues of international financial integration and investment diversification (Panton et al., 1976; Taylor and Tonks, 1989; Von Furstenberg and Jeon, 1989; French and Poterba, 1991; Tesar and Werner, 1992; Kearney and Lucey, 2004; Tahai et al., 2004; Voronkova, 2004; Vo and Daly, 2005b, 2005a).

This paper investigates international financial integration in bond markets from the perspective of measuring correlations and cointegrations amongst bond yields over time. The basic assumption is that higher correlations indicate a greater degree of international financial integration (Kearney and Lucey, 2004). Parallel to the correlations, the estimation of cointegrations is also employed to assess the degree of international financial integration in bond markets. The assumption of perfect international financial integration is that there will be $n-1$ cointegrating vectors in a system of n indices (Bernard, 1991; Kearney, 1998).

The issue of international financial integration also has strong implications for international diversification. It is argued that increased international financial integration facilitates greater capital mobility and investors would invest capital in countries which offer the highest returns. The lifting of policy on cross-border capital controls and capital restrictions makes international diversification easier and accessible. Hence, in the world of perfect capital mobility, investors will have significant opportunities to diversify their portfolio to eliminate country-specific risks and achieve higher returns.

On the other hand, increased international financial integration would cause markets to move together (increased correlation and cointegration) and hence the diversification benefit obtained by investors will be diminished. In addition, the issue of home country bias is another obstruction to international diversification. Often, investors will hold equities and/or bonds from more than one national market in the expectation of achieving a reduction of risks via the resulting diversification as it is widely known that risks are normally country-specific. If international markets are strongly integrated, diversification will be less effective than if bond markets operated independently of one another. An important indication of the degree to which long-run diversification is available to international bond market investors is given by determining whether the markets are cointegrated.

Many empirical studies have been devoted to the examination of international integration in equity markets. However, the literature investigating relationships and integration in bond markets is very thin. Hence, this work will contribute to the literature on international financial integration by providing an empirical analysis of bond markets.

This paper employs the data of daily closing observations on the long-term government bond yields (5 year + to maturity) over the 15-year period from 03/02/1990 to 03/02/2005. The Asian countries in the dataset include Thailand, Hong Kong, Japan, Malaysia, Korea, Singapore and Philippines while the advanced developed markets include the US and Australia.

The research examines the financial integration of Asian bond markets by employing a number of econometric and financial modelling techniques. The aim of the paper empirically is to propose answers to the following critical questions. Firstly, what is the degree of international financial integration in Asian Bond Markets? Secondly, does this degree of integration change significantly after the 1997 Asian financial crisis?

This study has a strong implication for international investors, in particular, from the perspectives of Australian or US investors, whether there are considerable international diversification benefits from investing in Asian bond markets. In addition, understanding the extent of financial integration and monitoring its progress in the region is important for Asian central banks. In addition, increased international financial integration promotes financial development and hence enhances economic performance in the region. On the other hand, a highly integrated financial market may facilitate the transmission of the impacts of monetary policies from one economy to the others. At times of financial crisis, this contagion may have important consequence on the financial stability. Therefore, the paper