TESTING FOR LINEAR AND NONLINEAR RELATIONSHIP IN THE STOCK-BOND RELATION:

MALAYSIA EVIDENCE

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Abstract

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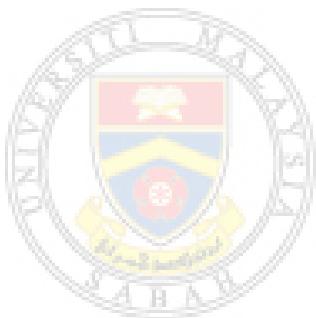
Stocks and bonds have been historically chosen as the main asset for investment. Most of the investors believe that bonds are a direct substitution for stocks, especially government bonds. Early studies extensively studied the correlation between stocks and bonds, in order to make a prediction about stocks based on bonds. However, the directions of correlation between these two markets are not always entire clear. In recent studies, linear cointegration and Granger causality test have been applied to investigate the long run and short run relationship between stocks and bonds. However, if the true relationship is nonlinear, the inferences from linear model may be misleading. Moreover, prior empirical studies had found the nonlinearities in stocks prices. Hence, in this study, the standard linear and nonlinear cointegration and causality tests are employed to investigate the linear and nonlinear relationship between stocks and bonds market indices in Malaysia case from January 1994 till December 2010. The cointegration tests show that no cointegration between stocks and bonds indicates that bond market is not a close substitution to stock market in Malaysia. All the three maturity periods of bonds are found to linear and nonlinear Granger cause stocks. These results may due to the policies of Malaysian government in enhancing the strong development of the bond markets. From the results, it is suggested that researchers should consider nonlinear mechanisms when evaluating the relation of stocks and bonds.

Abstrak

Stok dan bon telah dipilih sebagai asset utama untuk pelaburan sejak dulu. Kebanyakan pelabur percaya bahawa bon merupakan penggantian langsung kepada stok, terutamanya bon kerajaan. Kajian awal mengkaji korelasi antara stok dan bon dengan berleluasan. Namun, keseluruhannya, arahan korelasi antara kedua-dua pasaran ini adalah tidak jelas. Dalam kajian baru-baru ini, ujian kointegrasi linear dan ujian penyebab linear telah digunakan untuk menyiasat hubungan jangka panjang dan jangka pendek antara stok dan bon. Tetapi, jika hubungan sebenar adalah tidak linear, maka, kesimpulan daripada model linear boleh mengelirukan. Tambahan pula, kajian empirik telah mengesahkan ketaklinearan dalam harga saham. Oleh itu, ujian kointegrasi dan ujian penyebab dalam linear dan ketaklinearan telah digunakan untuk mengkaji hubungan linear dan ketaklinearan antara stok dan bon di Malaysia sejak Januari 1994 sehingga Disember 2010. Ujian kointegrasi menunjukkan bahawa tiada hubungan kointegrasi antara stok dan bon, menunjukkan tiada penggantian berhampiran antara stok dan bon di Malaysia. Ketiga-tigaan tempoh matang bon didapati linear dan ketaklinearan Granger menyebabkan stok. Keputusan ini mungkin disebabkan dasar-dasar kerajaan Malaysia dalam meningkatkan pembangunan kukuh pasaran bon. Melalui keputusan, dicadangkan bahawa penyelidik patut mengambil kira mekanisme ketaklinearan semasa penilaian hubungan stok dan bon.