

Correlations Dynamics between Stock and Bond Returns: Evidence from India

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This study looks at the relationship between stocks and bond market of India from December 2003 to March 2010. It examines whether the correlations between the two classes of assets are time-varying by using multivariate conditional volatility models. We start our investigation by Bollerslev (1990) Constant conditional correlation model to test whether varying correlations are statistically significant. Then we use a DCC-GARCH (1, 1) model proposed by Engle (2002) to analyze the dynamics of conditional correlations between the two assets. Our empirical results do not support the assumption of constant conditional correlation. There is clear evidence of time varying correlations between Indian stocks and bond market.

I Introduction

Stocks and bonds are primary securities traded in stock exchanges and the major component of any optimal portfolio, especially in emerging markets. Since risk-return characteristics of stocks and bonds are different; stock-bond correlation plays an important role in asset allocation, portfolio management and risk management. It is, therefore, natural to ask whether there is a relationship between the returns of stocks and bonds, considering the main object of a portfolio manager, i.e., to construct a portfolio that has the largest expected return with minimum risk. Moreover, the above mentioned contradictory empirics motivate us to explore this issue further, especially in the context of emerging markets.

The present value model is a framework for understanding how the prices of stocks and bonds are determined. Both stocks and bonds are claims of future cash flows. According to the present value model, their current prices should be equal to the present value of future cash flows, subject to the appropriate discount rates, which consist of the real interest rate, inflation expectations and a premium for holding a risky asset. Other things being equal, an increase (decrease) in the expected future discount rates for both stocks and bonds should

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