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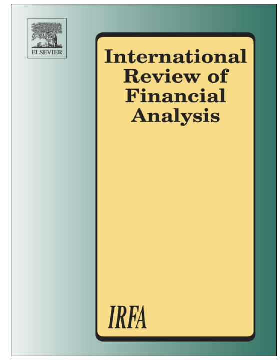

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Abstract. This paper investigates the causal relationship between changes in the 10-year Treasury bond yield and the S&P 500 stock return in the United Sates with emphasis on time variation, stress factors and smooth regime transition. First, the time-varying Granger causality test proposed by Lu *et al.* (2014) is applied. Then a two-regime multifactor smooth transition regression model with a single transition variable representing a wide range of macroeconomic and financial variables is estimated in order to identify the key explanatory factors governing the causal relationship. The results show a significant bidirectional causal relationship over most of the study period, mainly due to the strong simultaneous interactions between the bond interest rate and the stock returns, and the causal link has strengthened since the beginning of the U.S. sub-prime crisis in the summer of 2007. Moreover, the U.S. financial stress indices seem to play a key role in explaining the dynamics of the causal relationship between the long-term interest rates and the stock returns, especially during the recent global financial crisis.

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