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An empirical examination of investor sentiment and stock market volatility: evidence from India

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Abstract

Understanding the irrational sentiments of the market participants is necessary for making good investment decisions. Despite the recent academic effort to examine the role of investors' sentiments in market dynamics, there is a lack of consensus in delineating the structural aspect of market sentiments. This research is an attempt to address this gap. The study explores the role of irrational investors' sentiments in determining stock market volatility. By employing monthly data on market-related implicit indices, we constructed an irrational sentiment index using principal component analysis. This sentiment index was modelled in the GARCH and Granger causality framework to analyse its contribution to volatility. The results showed that irrational sentiment significantly causes excess market volatility. Moreover, the study indicates that the asymmetrical aspects of an inefficient market contribute to excess volatility and returns. The findings are crucial for retail investors as well as portfolio managers seeking to make an optimum portfolio to maximise profits.

Keywords: Investor sentiment, Stock market volatility, Principal component analysis, GARCH, Granger causality test

Introduction

There has been growing academic attention in the past decade on investors' sentiments and their potential impact on market performance. Investor sentiment is the expectation of market participants about the future cash flows (returns) and investment risk (De Long et al. 1990). Because traditional stock market theories comprehended market dynamics under the theoretical framework of the efficient market hypothesis (EMH) and random walk theory, they did not consider investor sentiment as an important aspect. However, they failed to explain the heterogeneous behaviour of investors in the capital market. Investors' sentiment is a vital aspect of the capital market, as it contributes to frequent fluctuations in the stock price and thus creates uncertainty about future returns on investments. In the past few decades, there have been radical changes in the Indian financial environment, especially in the basic structure—for example, shifting from a savings-oriented economy to an investment-oriented economy. These