A STUDY ON STOCK MARKET VOLATILITY

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Introduction

High indices of stock market in every aspect of measurement implied less variability of volatility. A country's depression or recession turned into severe volatile stock market which cannot be cured in the short run. Political turmoil or instability or chaos made negative impact on stock market which spurs volatility. The stock market volatility has the negative nexus with the growth rate of a nation i.e. high volatility reduces growth rate. There is causality between them. Since stock market volatility brings forth economic crisis which has ultimately spill over on growth inversely to other countries as well. The international trade and stock market volatility is negatively related in the sense that volatility reduces the volume of trade and increases current account and capital account deficits. Behaviour of stock market is uncertain, volatile and probabilistic although it is related with the major macroeconomic indicators of the economy. The stability of the stock market needs the strong capital market with high macro fundamentals. In the globalization era, the international trade plays a key role in changing stock market efficiency in the areas of banking and finance. The extreme volatility in the stock market produces instability in the capital market, destabilize the value of currency, as well as hampers international trade and finance. Even, the growth and the stock market volatility are inversely related where causality was found. A developed stock market should be fundamentally more competitive with any other international stock markets in which floating exchange rate mechanism is determined. The monetary and trade policy of a country crucially help in finding factors of stock market volatility to work properly although the patterns of behavior of investors and savers of the stakeholders are unknown where the political super structure and process of the economy are given. But the political factors may change parametrically.

Moving from first to second moments, Veronesi (1999) presents a theoretical model that formalizes the link between economic uncertainty and stock market volatility. He shows that investors are more sensitive to news during periods of high uncertainty, which in turn increases asset price volatility. Yet establishing the empirical link between the second moments of stock returns and macroeconomic variables has proven to be even more challenging than that between their first moments. Based on US data, Schwert (1989) concludes that there is a volatility puzzle (p. 1146):

"The puzzle highlighted by the results in this paper is that stock volatility is not more closely related to other measures of economic volatility."

Literature Review

Jones, Kaul, Lipson (1994) investigates the effect of the information flow on the behaviour of stock prices and suggests that the public information is the major source of short-term return volatility. The investors react and interpret to the immediate information, adjust the market prices up or down leads to high fluctuations (volatility) in the market. The volatility is also associated with trading volume and trading opportunities and various market and non-market components.

Berry and Howe (1994) found positive, reasonable relationship between public information and trading volume, but an insignificant relationship with price volatility and they also emphasized intraday flows and news releases by Reuter's News Service per unit of time used as a measure of public information arrival. The pattern of volatility persistence is the one most significant characteristics of volatility.

Andersen and Bollerslev (1997) analyzed a one-year time series of five-minute Deuchemark-U.S. Dollar exchange rates and found a degree of volatility persistence for high intra-daily returns and low frequency inter-daily returns.

Foster and Viswanathan (1993) found that the actively traded firms, trading volume, adverse selection costs and return volatility were high during the first half hour of the day by using intraday data of New York Stock Exchange. Since the behaviour of stock returns volatility is influenced by economical and institutional changes, the market liberalization also have an impact on the patterns of volatilities of stock returns.

The stock markets are integrated with each other and thus the information flows are directly associated with the variance of price changes (Ross 1989). With the increase of rate of flow of information across the markets, the market liberalization can increase or decrease the volatility in the market.

Due to the strong financial market linkages, the volatility of one stock market spill-over to another stock market, and the information of market movements are transmitted to all around the world.

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Several empirical studies have proved and suggest that, 'volatility shocks in the developed stock markets have significant impact on the returns and volatility spillover effects on emerging stock markets including India'.

Kumar and Mukhopadyay (2002) found significant relationship in return and volatility spillover from US to India by using Granger causality test and Univariate GARCH models.

Using Sentiment to Predict Stock Returns

The strongest tests of the effects of sentiment involve return predictability. If high sentiment indeed causes overvaluation, we may be able to document low future returns on sentiment-prone stocks as sentiment wanes and fundamentals are revealed. Predictability is *not* a natural implication of the skeptical view that the correlation between returns and sentiment indices arises because the latter are contaminated by fundamentals.

Cross-sectional Predictability

The unconditional average returns are slightly lower for speculative stocks, consistent with behavioral models of disagreement among investors combined with short-sales constraints. The market-adjusted returns are on average positive because of the well-known size effect-in January, small capitalization stocks earn high returns, on average-which increases the average return of our equally-weighted portfolios. Controlling for equal-weighted market returns instead of value-weighted returns shifts the market-adjusted returns down across all ten portfolios.

We show that it is quite possible to measure investor sentiment, and that waves of sentiment have clearly discernible, important, and regular effects on individual firms and on the stock market as a whole. In particular, stocks that are difficult to arbitrage or to value are most affected by sentiment.

Looking forward, the investor sentiment approach faces a number of challenges: characterizing and measuring uninformed demand or investor sentiment; understanding the foundations and variation in investor sentiment over time; and determining which particular stocks attract speculators or have limited arbitrage potential. Much remains to be done in terms of spelling out this framework, but the potential payoffs of an improved understanding of investor sentiment are substantial. For example, the standard methodology for estimating fundamental market betas (an input to long-term capital budgeting and other important financial decisions) does not account for sentiment.

When the stock market goes up one day, and then goes down for the next five, then up again, and then down again, that's what you call stock market volatility.

In layman's terms, volatility is like car insurance premiums that go up along with the likelihood of risky situations, such as if you have a poor driving record or if you keep the car in a high-theft area.

Some cynics say volatility is a polite way of referring to investors' nervousness. Investors may think volatility indicates a problem. But many analysts believe that increased volatility can indicate a rebound.

Volatility is measured by the Chicago Board of Options Exchange (CBOE), primarily through the CBOE Volatility Index (VIX) and, to a lesser extent, the CBOE Nasdaq Volatility Index (VXN) for technology stocks. The VIX tracks the speed of stocks' price movements in the S&P 100; the VXN tracks it in Nasdaq 100 stocks. Both indices take a weighted average of the estimated volatility of eight stocks on a particular index. Both are calculated every 60 seconds over the CBOE's trading day, which means it records a great deal of fluctuation.

Seasoned traders who monitor the markets closely usually buy stocks and index options when the VIX is high. When the VIX is low, it usually indicates that investors believe the market will head higher. This, in turn, can trigger a market selloff, as speculators try to unload their holdings at premium prices.

Historical data has shown that wild market movements precede a change in the market's direction. A high VIX appears just before a market rally, and a low VIX usually augurs a slide.

Bearish types argue, however, that any value to the VIX's past behavior ended on September 11. They say the market is up against too many things, including the economy, wary investors, and ongoing fear of terrorist attacks. Others blame volatility on 24/7 financial news on cable and the Internet, since people can watch the market move in front of their eyes.

So what's an investor to do? For starters, remember that success in the market does not depend on predicting the future-predictions only measure the short term. Volatility is more dependent on mass hysteria-fear and greed-than on underlying economic or financial events. Those are not reliable emotions on which to base long-term investment decisions.

Conclusion

Prediction of volatility of stock market is always a concern for the researchers, academicians and market analysts. The sensitivity of stock market is measured by different indices which check the health of equity market. Volatility has its connection with different variables which are responsible for its existence such as market information, global factors, market returns, investor sentiments etc. As economies develop over time, financial systems become increasingly sophisticated, which calls for greater need of risk management techniques. In the wave of globalization, the external economic factors have an increasing impact on a country's economy and the financial security issues are more prominent as well. Innovation of derivatives in this direction have redefined and revolutionized the landscape of financial system and it has earned a well deserved and extremely significant place among all the financial products available till date.

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