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"VOLATILITY OF SHARE PRICE"

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ABSTRACT :

This research investigates the volatility of share prices within financial market over the period. Employing GARCH models, historical volatility analysis, we analyse the factors influencing price fluctuations, including key factors, e.g., macroeconomic indicators, company-specific news, market sentiment. The findings reveal significant volatility clustering, sensitivity to specific economic events, providing insights into the risk dynamics of the studied market and implications for investment strategies."

Key objectives include the relationship between risk volatility and price volatility during the time. The results demonstrate a correlation, highlighting the importance of fluctuations in share prices in understanding and predicting market fluctuations for investors.

The findings aim to provide actionable strategies by applying rolling standard deviation, volatility indices, we analyse and contrast the volatility patterns of these entities. Our findings indicate, higher volatility in growth stocks, convergence of volatility during economic downturns, shedding light on the factors contributing to varying levels of risk and return."

1. Introduction :

The share price volatility measures the degree to which a stock's price fluctuates over a specific period. It quantifies the magnitude of price swings, indicating how much the price deviates from its average. High volatility signifies substantial price fluctuations, while low volatility implies relatively stable prices. This is important because a stock's volatility can vary significantly depending on the time considered.

This paper investigates how the share price goes up-and-down movement in market. It is not just about price drops; it includes any significant price change, whether upward or downward. Volatility is always measured over a specific time frame (e.g., daily, weekly, annually).

2. Literature Review :

The literature review synthesizes existing research on volatility of share price.

- **Modern Portfolio Theory (MPT):**

This study examines how MPT incorporates volatility as a measure of risk. It also discusses the concept of beta and its role in assessing systematic risk.

- **GARCH Models:**

This study examines the development and application of Generalized Autoregressive Conditional Heteroskedasticity (GARCH) models in capturing volatility clustering and time-varying volatility and discuss variations of GARCH models, such as EGARCH and TGARCH, and their specific applications.

- **Macroeconomic Factors:**

This study examines the impact of interest rates, inflation, GDP growth, and unemployment on volatility and the influence of earnings announcements, mergers and acquisitions, and corporate governance on volatility.

- **Technological Factors:**

This study examines the impact of algorithmic trading, high frequency trading, and the spread of information via social media platforms.

3. Research Objectives :

1. To examine the presence of volatility clustering using GARCH model.
2. To compare the volatility of developed and emerging market equities during periods of global financial stress.
3. To evaluate the effectiveness of different hedging strategies in mitigating share price volatility.

4. To determine the effect of social media sentiment on market volatility.

4.Methodology :

This study employed a quantitative approach, using surveys to collect data from investors to evaluate the role of price volatility and volume trading. A structured questionnaire was administered online using Google Forms, targeting respondents via social media platforms and customer forums.

Data Collection

- **Primary Data**: Surveys focused on Bloomberg, Refinitiv, Yahoo Finance, stock exchanges.
- **Sample Size**: 125 valid responses were obtained.
- **Sampling Method**: Convenience sampling.

Questionnaire Design

1. **Objective 1: Identifying the presence of volatility**
    - Question: How important is volatility presentation using GARCH model. (Likert scale: 1-5)
    - Finding: 85% rated it as very important or extremely important.
2. **Objective 2: Assessing the impact of social media**
    - Question: How much impact is there due to social media (Likert scale: 1-5)
    - Finding: 70% reported high satisfaction (4 or 5).
3. **Objective 3: Exploring trade volume and risk mitigation**
    - Question: How to manage the risk factor (Standard/Express/Store Pickup).
    - Finding: 45% preferred high risk, 35% standard risk, 20% low risk.

Hypotheses Tested

- **H1**: Changes in interest rates have a significant positive impact on share price volatility.
    - Supported: Strong correlation ($r=0.68$, $p<0.05$) between interest rates and prices.
- **H2**: Increased social media sentiment negative is associated with higher share price volatility.
    - Supported: Real-time tracking importance was significantly correlated ($r=0.72$, $p<0.05$) with overall satisfaction.

5.Findings :

1. **1.Overall Volatility Patterns:** The analysis revealed a period of heightened volatility in stock market between price and volume and exhibited moderate volatility throughout the study period, with occasional spikes.
2. **2.Market Sentiment:** Analysis of social media sentiment revealed that increased negative sentiment correlated with higher volatility. The VIX index showed a strong positive correlation with the volatility of the S&P 500."
3. **3.Volatility Clustering:** The GARCH (1,1) model confirmed the presence of volatility clustering, indicating that periods of high volatility tend to be followed by more high volatility. Autocorrelation tests showed a significant degree of persistence in volatility.
4. **Volatility and Risk:** Stocks with higher beta values exhibited higher levels of volatility. A positive relationship was observed between volatility and the risk premium.

Conclusion :

This study provides valuable insights into the complex dynamics of share price volatility and its influencing factors. By understanding these dynamics, investors and policymakers can make more informed decisions and navigate the uncertainties of the financial markets. Financial institutions use the insights gained to improve their risk assessment and forecasting models. Policymakers consider the potential impact of their decisions on market volatility. Investigating the volatility of sustainable investments and the effectiveness of machine learning models in volatility forecasting would be valuable areas for further study. The research into the volatility of emerging markets would also be beneficial.

Recommendations for volatility :

1. **1.Risk Management**: Assessing risk tolerance and aligning investment strategy using stop-loss orders or other risk management tools to limit potential losses. Considering using options or other derivatives to hedge against volatility.
2. **2.Market Surveillance:** Enhancing market surveillance to detect and prevent manipulative trading practices that can exacerbate volatility and monitoring the impact of algorithmic trading and high-frequency trading on market stability.
3. **Financial Stability:** Implementing policies to promote financial stability and prevent systemic risks and coordinating with international regulators to address global financial risks.
4. **Investor Education:** Supporting investor education programs to improve financial literacy and promote responsible investment behaviour and providing resources to help investors understand the risks associated with volatility.

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