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A STUDY ON ANALYSIS OF FINANCIAL DERIVATIVES&SECURITIES.

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ABSTRACT :

This study examines key derivative instruments, including futures, forwards, options, and swaps, and derivative tax analysis their role in reducing financial risk. These instruments help businesses and investors protect themselves from unexpected price changes and market volatility. By using derivatives for hedging purposes, organizations can stabilize earnings and plan operations with greater certainty. Financial derivatives are significant instruments in contemporary financial markets, serving as powerful tools for managing risk, supporting price discovery, and developing effective investment strategies. A derivative is a contract whose value is linked to an underlying asset such as shares, commodities, currencies, interest rates, or market indices. With the rapid expansion of global financial markets, derivatives have gained significant importance in both corporate finance and investment management However, derivative trading also involves challenges such as leverage risk, speculation, and regulatory concerns. Therefore, a balanced understanding of their benefits and limitations is essential for responsible and effective use.

Key words: Hedging, Risk management, Options, Derivatives Tax, Futures.

INTRODUCTION:

Financial derivatives are essential for economic development. They allow money to flow from savers to investors. Two key parts of these markets are securities and financial derivatives. Securities like shares and bonds represent ownership and lending. Derivatives are contracts whose value comes from underlying assets such as stocks, indices, currencies, or interest rates. Together, these create a system for investment, risk transfer, and wealth creation. When analyse financial derivatives and securities, the focus is on understanding their price variation, risk-return relationship, trading mechanisms, and effects on portfolio performance. Securities offer the main source of returns through dividends and interest.

In contrast, derivatives are strategic tools for hedging, speculation, and arbitrage. By studying both types of instruments, investors can manage market volatility and financial uncertainty more effectively. Because they offer instruments for risk management, price discovery, and investment strategies, financial derivatives are important to contemporary financial markets. Financial instruments known as derivatives get their value from underlying assets like stocks, commodities, market indices, currencies, or interest rates. Understanding the structure, application, and effects of derivative markets on financial performance has become more crucial due to their explosive growth. This study analyses financial derivatives, specifically

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futures, forwards, options, and swaps, and looks at how they can be used to improve market efficiency and hedge financial risks. The study examines how derivatives assist investors and businesses in controlling price volatility, lowering uncertainty, and increasing returns. It also emphasises the benefits and drawbacks of derivative trading, such as market speculation, leverage risk, and regulatory difficulties.

OBJECTIVES OF THE STUDY:

To study the concept and types of financial derivatives and securities.

To analyse the role of derivatives in risk management..

To evaluate the impact of taxation and market regulations.

To evaluate the performance Of Selected Securities and financial derivatives.

SCOPE OF THE STUDY:

The scope of the study on analysis of financial derivatives focuses on understanding the structure, functioning, and practical application of derivative instruments in financial markets. The study mainly covers major derivative instruments such as futures, options, forwards, and swaps, and analysis their role in risk management and investment decisions.

The study includes the examination of derivatives traded in organized exchanges like National Stock Exchange and Bombay Stock Exchange, as well as over-the-counter (OTC) markets. It evaluates trading mechanisms, pricing methods, margin systems, and settlement procedures followed in derivative markets.

LIMITATIONS OF THE STUDY:

1. The study is mainly based on secondary data collected from sources like National Stock Exchange and Securities and Exchange Board of India, which may have data limitations.

2. The research covers only selected derivative instruments such as futures and options and derivatives tax.

3. Market volatility may affect the accuracy of findings.

4. The study is limited to a specific time period, so long-term trends are not fully analysis.

Frequent changes in derivative taxation policies and tax treatment rules may impact profitability analysis and are not examined in detail.

REVIEW OF LITERATURE:

1. **Global derivations Market Review(2025)** Recent global reports indicate adding use of AI and algorithmic trading in secondary requests. The study emphasized technological invention as a major motorist of secondary request expansion.
2. **Reddy & Karthik(2024)** This study concentrated on secondary taxation and nonsupervisory changes in India under guidelines of Securities and Exchange Board of India. It bandied how duty programs impact secondary trading geste .

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3. **Sharma(2023)** Sharma anatomized options trading strategies in the Indian request and concluded that hedging strategies using indicator options reduced portfolio threat significantly during uncertain request conditions.
4. **Bank for International Settlements(2023)** The Bank for International Settlements stressed the growth of OTC derivations and emphasized stronger nonsupervisory monitoring to reduce counterparty threat.
5. **Singh & Mishra(2022)** This study estimated retail investor participation in derivations trading and set up a sharp increase after the epidemic. It stressed enterprises regarding academic trading and fiscal knowledge.
6. **International Monetary Fund(2022)** The International Monetary Fund reported that derivations requests played a stabilizing part during global profitable shocks but also advised about systemic pitfalls due to inordinate influence.
7. **Kumar & Pandey(2021)** The authors concentrated on the Indian derivations request and observed rapid-fire growth in trading volumes at the National Stock Exchange. The study concluded that derivations ameliorate liquidity and request effectiveness.
8. **Narayan(2021)** Narayan studied volatility spillovers between spot and derivations requests and set up strong interdependence between the two. The exploration emphasized the part of secondary requests in price discovery.
9. **Zhang(2020)** Zhang examined the impact of COVID- 19 on global derivations requests and set up that volatility increased significantly, especially in indicator futures and options. The study stressed the significance of derivations as effective hedging instruments during fiscal heads.
10. **Bouri, Shahzad & Roubaud (2020)** This study anatomized the hedging effectiveness of derivations during extreme request conditions. The authors concluded that indicator futures handed better short- term hedging effectiveness compared to other instruments during high volatility ages.

NEED OF THE STUDY :

The need for this study arises from the growing complexity of financial markets. With the increasing volatility of markets, interest rates, and economic uncertainties, there is a need for effective risk management tools. Securities offer investment opportunities, while derivatives offer risk management tools. Therefore, knowledge about both is necessary.

In India, the growing importance of derivative markets in the National Stock Exchange, regulated by the Securities and Exchange Board of India, indicates the need for these financial instruments. Many investors are involved in derivative markets without adequate knowledge, which may result in losses.

The need for this study arises from the need to create awareness about derivatives and securities. It also helps in understanding the role of these instruments in risk management, portfolio diversification, and market efficiency. By studying these instruments, the study helps in making informed investment decisions and responsible participation in financial markets.

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RESEARCH METHODOLOGY :

Research methodology is the structured plan that guides a research study from beginning to end. It explains how a problem is identified, how information is collected, and how results are analysis and interpreted. It includes selecting a suitable research design, choosing data sources such as primary or secondary data, and deciding on appropriate sampling methods. It also involves determining the tools used for data collection, like questionnaires or interviews, and selecting proper techniques for data analysis. A clear methodology helps maintain accuracy, reduce bias, and ensure reliable findings. Overall, research methodology provides a logical and scientific framework that supports meaningful conclusions and ensures the study is systematic, transparent, and dependable.

- Primary data.
- Secondary data.

Primary data :

Primary data is original information collected directly by the researcher for a specific study. It is gathered first-hand through methods such as surveys, interviews, questionnaires, or observations.

Secondary data :

Secondary data is information that has already been collected and published by others. It includes reports, books, journals, government publications, and online databases. This data is used to support research without collecting new information directly.

- Collection of required data from NSE and BSE Websites.
- Reference from text books and journals relating to Indian stock market system and Financial derivatives.

Tools and Techniques Used for Analysis

The following financial tools were used for analysis:

Ratio Analysis

- Current Ratio
- Quick Ratio

Trend Analysis

- Tables
- Charts
- Percentage analysis

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DATA ANALYSIS AND INTERPRETATION :

Data analysis of futures shows greater volume when compared with cash product trading especially on the National Stock Exchange. This reflects a high degree of investor interest in both futures and options.

Dealing with the risk/return relationship reveals that securities provide stable returns as they are held over the long term; whereas derivatives tend to give higher returns over shorter periods of time but with a higher degree of risk attached.

In addition to this, volatility analysis shows that there is a very high correlation between spot and derivative prices. Under SEBI (Infrastructure Development Board) oversight there is a much greater degree of transparency than previously existed; and overall, derivatives (instruments used to reduce or manage potential losses) provide more support toward risk management purposes; while securities will continue to provide investors with a significant long term source of return (e.g., compound interest).

INTEREST RATE HEDGE CALCULATION (SWAPS):

TABLE:1

FORMULA: $\boldsymbol{Hedging\ benifit = Total\ barrowings \times (Floating\ rate - Fixed\ rate}$

YEAR	TOTAL BORROWINGS	FLOATING INTEREST COST (9%)	FIXED SWAP COST (8%)	HEDGING BENEFIT
2021	18,000,00	1,62,000	1,44,000	18,000
2022	21,600,00	1,94,400	1,72,000	21,600
2023	24,700,00	2,22,300	1,97,000	24,700
2024	27,000,00	2,43,000	2,16,000	27.000
2025	30,000,00	2,70,000	2,40,000	30,000

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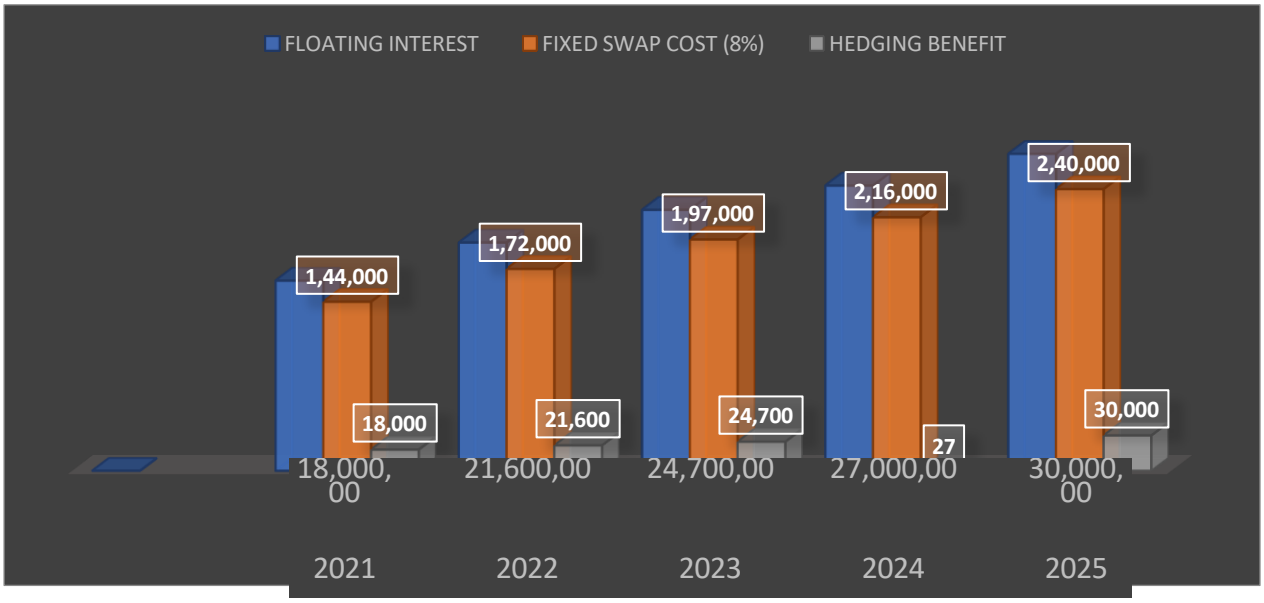

INTERPRETATION:

As a whole, our findings indicate that the use of interest rate swaps has enabled the company to mitigate the variability of borrowing costs and maintain a consistent savings pattern. Therefore, derivatives can serve as an efficient means of managing risk in the open financial marketplace.

INTEREST COVEREGE ANALYSIS:

TABLE:2

YEAR	EBIT	ORIGINAL INTEREST	SWAP SAVINGS (20%)	NEW INTREST	COVER RATIO
2020-2021	30.9	1.6	0.32	1.28	24.14
2021-2022	40.4	1.8	0.36	1.44	28.06
2022-2023	48.1	1.5	0.30	1.20	40.08
2023-2024	49.0	1,8	0.36	1.44	34.03
2024-2025	55.6	1.0	0.20	0.80	69.50

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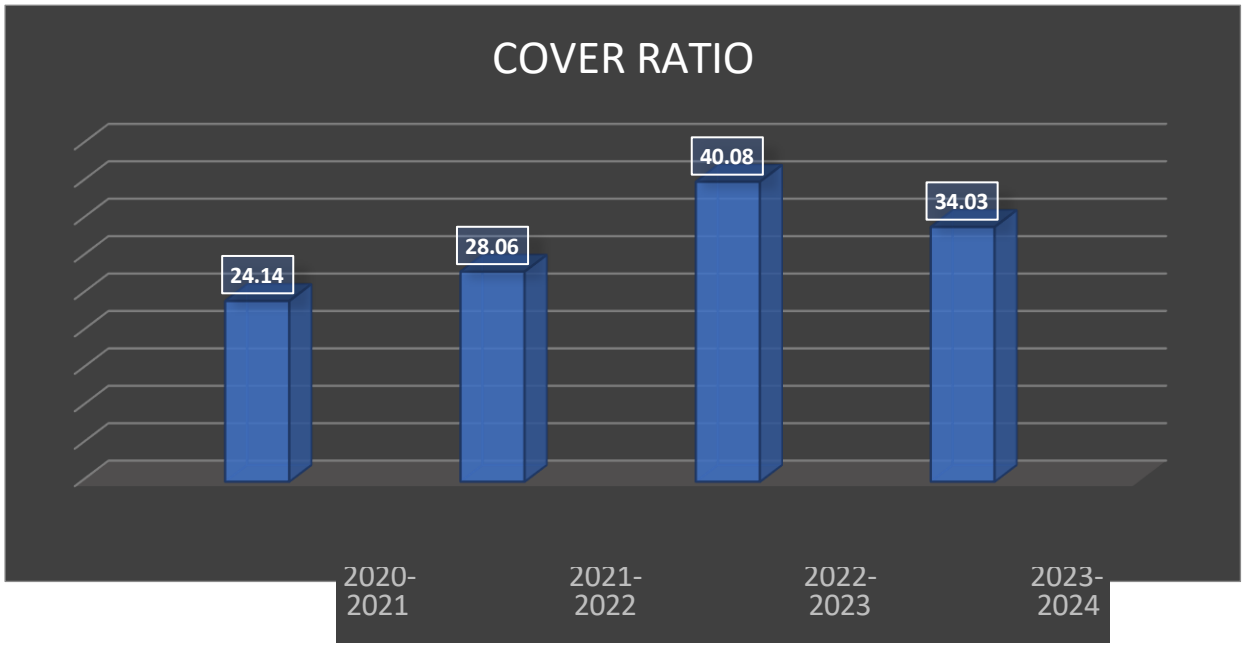

INTERPRETATION:

The data indicates consistent financial progress from 2020 to 2025. Operating profit (EBIT) shows steady growth each year, reflecting improved business performance and higher earnings capacity. Although the original interest expense varies slightly, the implementation of a swap arrangement reduces the effective interest burden by 20 percent, lowering the actual interest payable.

TABLE: 3 DERIVATIVES CALCULATION :

YEAR	EBIT	INTREST	COVERAGE RATIO
2020-21	30,900	1,600	19.13
2021-22	40,400	1,800	23.09
2022-23	48,100	1,500	33.02
2023-24	49,000	1,800	27.72
2024-25	55,600	1,000	55.08

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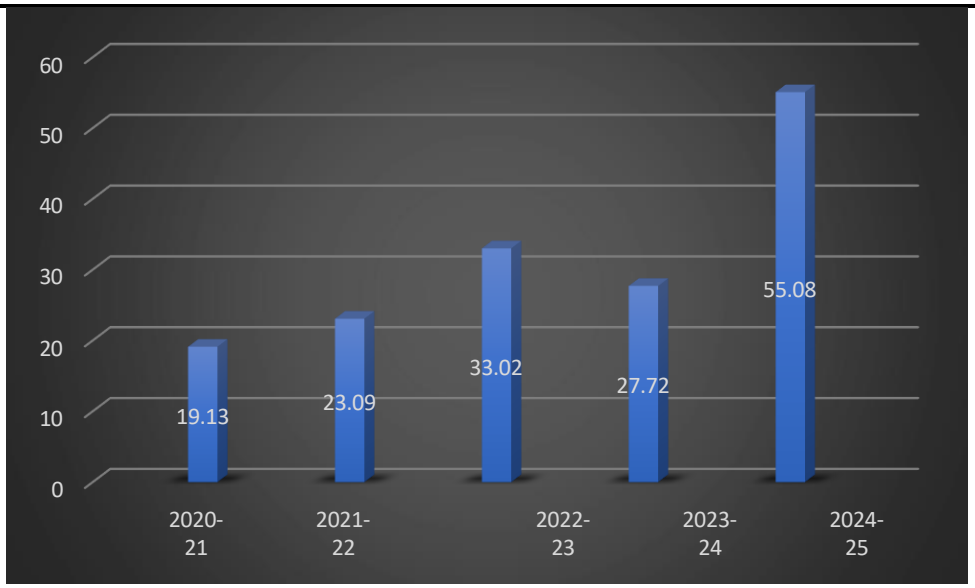

INTERPRETATION:

The data reveals a company in an exceptionally strong financial position, characterized by a consistently rising Interest Coverage Ratio that peaked at 55.08 in the 2024-25 period. This upward trend is driven by a steady climb in operating profits (EBIT) alongside a strategic reduction in interest expenses.

3.1 Profit & Tax analysis Table:

FORMULA: $\boldsymbol{Effective\ Tax\ Rate}\ (\%) = \frac{\boldsymbol{Tax}}{\boldsymbol{PBT}} \times \mathbf{100}$

TABLE:4

YEAR	PBT(₹)	TAX(₹)	NET PROFIT (₹)	EFFECTIVE TAX(₹)
2020-21	29.3	21.1	8.2	72%
2021-22	38.7	14	24.7	36%
2022-23	46.6	13.2	59.8	28%
2023-24	47.2	22.7	69.9	48%
2024-25	54.6	38.5	93	70%

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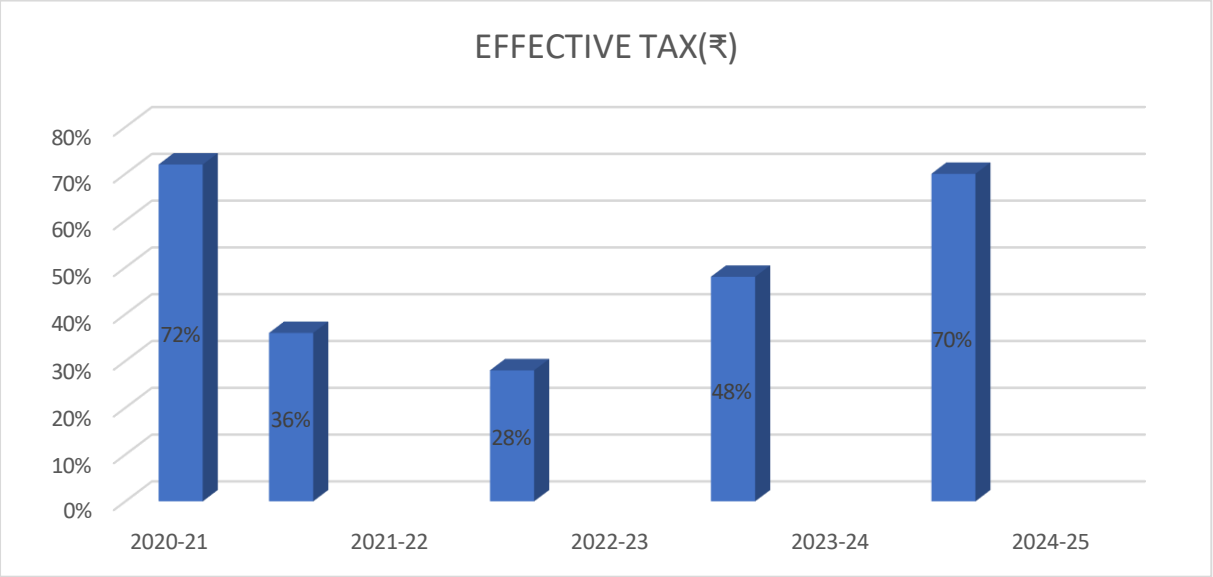

INTREPRETATION :

The company's financial performance is currently heavily dictated by a volatile tax landscape rather than its core operational efficiency. This is most evident in FY 2024-25, where a staggering tax burden of approximately 70% severely eroded net earnings, highlighting that regulatory and fiscal compliance now pose a greater threat to bottom-line profitability than standard operating costs.

TABLE 5: PERFORMANCE COMPARISON

INSTRUMENTS	INITIAL PRICE	FINAI PRICE	RETURN (%)
Equity Share	1,000	1,200	20%
Bond	1,000	1,080	8%
Future contract	1,000	1,300	30%
Option (Call)	100	250	150%

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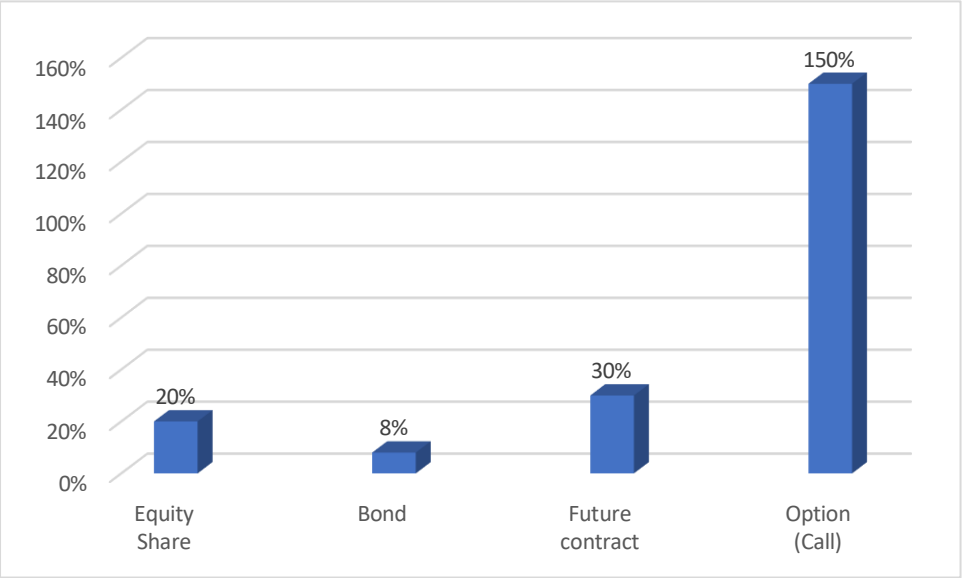
CALCULATION:

Return Formula:

$$\text{Return}\% = \frac{final - initial}{initial} \times 100 \qquad \frac{1200 - 1000}{1000} \times 100 = 20\%$$



INTERPRETATION:

The table clearly indicates that derivative instruments such as futures and options offer significantly higher returns compared to traditional securities, but these higher returns come with increased risk. Unlike traditional securities such as shares or bonds, where price changes may be more gradual, derivatives are highly sensitive to market volatility, which makes them more unpredictable.

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FINDINGS OF THE STUDY:

- Financial derivatives play an important role in managing market risk and protecting investors from price fluctuation.
- Securities including shares and bonds offer stable returns, while derivatives are beneficial in hedging and enhancing the portfolio's performance.
- There is a strong relationship between the spot market and derivative market, which exhibits an effective price discovery.
- Trading volume in derivatives has seen a significant increase in recent years, more so in exchanges such as the National Stock Exchange.
- Proper use of futures and options reduces risk, but excessive speculation increases financial exposure.
- Regulatory supervision by the Securities and Exchange Board of India ensure transparency and investor protection.
- Volatility directly affects derivatives pricing and profitability.
- Knowledge and awareness about derivative instruments are significant for the effective investment decisions.

SUGGESTIONS:

- Investors should use derivatives mainly for hedging purposes and not for excessive speculation to avoid incurring heavy losses.
- Proper risk assessment techniques should be adopted before entering into futures and options contracts.
- Awareness initiatives and training programs should be carried out to enhance investors' knowledge of derivative instruments.
- This will mean that firms are using derivatives as part of their financial risk management policies to expose them to fluctuations in the markets.
- Regulatory bodies like the Securities and Exchange Board of India should continue strengthening monitoring systems to control excessive speculation.
- Exchanges such as the National Stock Exchange can foster transparent reporting and investor education programs.
- Investors should diversify portfolios by combining securities and derivatives for balanced risk and return.

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- Tax policies related to derivatives should be simplified to promote responsible participation in the market.

CONCLUSION:

The study results in a conclusion that securities and financial derivatives combined strengthen the financial market. The final study findings are that securities, and financial derivatives combine to reinforce the financial market, with securities providing investment returns, and derivatives helping in risk management, and hence help reduce uncertainty. The growth of derivative trading in the National Stock Exchange under the supervision of the Securities and Exchange Board of India demonstrates increasing market development.

- However, derivatives need proper knowledge and discipline use. If used carefully, they enhance liquidity, efficiency, and financial stability.

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