

# **An Analysis of Potential Trends to Change the Indian Derivatives Market**

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**Abstract:** *The Indian market exhibits a strong reliance on the derivatives market. A financial framework refers to a set of principles that are specifically linked to a certain financial instrument, indicator, or commodity. It allows for autonomous management of targeted risks in the financial markets. The derivative market in India has experienced significant growth and has reached a scale of several trillion dollars, with a continuing trend of rapid expansion. Derivative instruments typically encompass commodities, precious metals, foreign exchange rates, bonds, shares and share warrants, short-term securities, and money market products. The National Stock Exchange (NSE) and Bombay Stock Exchange (BSE), together with other smaller Indian exchanges, are the main trading venues in India for derivatives. Now, let's analyze the performance of derivative products in the Indian market. The author will assess the significance of the derivatives market, examine the obstacles it encounters, and emphasize the importance of its potential in the ongoing investigations.*

**Keywords:** expansion, National Stock Exchange (NSE), Bombay Stock Exchange (BSE), financial products

## **I. INTRODUCTION**

The derivative markets have become a crucial component of the modern financial system in under thirty years since its inception. However, in comparison to the derivatives markets of other nations, the Indian market is still in the process of becoming completely formed. Therefore, it is imperative to comprehend the current state of the financial derivatives markets in India.

A derivative is a financial instrument that obtains its value from the price of an underlying asset or service. It is an agreement between two parties or individuals. Equities, sometimes referred to as underlying assets, encompass a range of financial instruments such as indexes, bonds, currencies, interest rates, exchange rates, commodities, and stocks.

## **II. REVIEW OF LITERATURE**

Chatrath, Ramchander, and Song (2015): The derivatives market has faced criticism for its role as a platform mostly utilized by speculators. The scarcity of financial resources involved in this sector is what renders it highly perilous. Consequently, it is argued that individuals involved in systems that allow high degrees of leverage diminish the quality of information in the market. These uninformed traders have the potential to exacerbate market volatility in the cash sector.

Srivastava, Yadav, and Jain (2018) conducted a study on derivative trading in the Indian stock market. The investigation revealed that investors in the Indian stock market are using derivative instruments for various purposes such as risk management, profit maximization, speculation, and arbitrage. Financial derivatives have significantly transformed the financial industry by introducing novel methods for comprehending, quantifying, and controlling risks. Ayuso and Nuez (2012) suggest that transferring risk to derivative markets might greatly enhance transactions in the spot market. The absence of a risk premium in the spot market eliminates the need to account for price fluctuations.

Hentchell and Smith (20017) examine the potential of derivative products to reduce the necessity for enterprises and banks to maintain unused precautionary reserves in order to cope with unexpected losses. Consequently, the percentage of funds held by these organizations that are not being used reduces.

Sahoo (1997) states that commodity-linked derivatives were the primary type of products in this category for a long time. These derivatives were initially created as a means of hedging against fluctuations in commodity prices. Marlowe (2000) suggests that the development of derivative market products, such as forwards, futures, and options, can be attributed to the need of risk-averse economic actors to protect themselves from uncertainty caused by changes in asset values. It is widely accepted that regulation plays a crucial role in ensuring the smooth and effective functioning of markets. Sahoo (1997) argues that the legal framework for trading in derivatives is a vital component of the overall regulatory framework for derivative markets. Rather than impeding efficiency and competitiveness, regulation is intended to promote them. While there may be similarities in regulatory goals, Hathaway (2020) argues that there is no preferred paradigm for regulating derivative markets.

Avadhani (2016) explains that the history of financial markets has been marked by numerous crises. To mitigate the risks associated with these crises, a derivative, which is an innovative financial instrument, was developed. The financial markets are characterized by a high level of volatility and unpredictability, leading to events such as the breakdown of the fixed exchange rate system in 1971, Black Monday in October 1987, the sharp decline in the Nikkei in 1989, and the US bond fiasco of 1994. As global markets have become more interconnected, these types of catastrophes have become more frequent.

According to Mr. Jitendra Pande's 2021 definition, derivative trading in options mitigates risk by ensuring that investors are aware of the greatest potential loss.

In 2005, Deana Mehta demonstrated that share futures are particularly favoured in India compared to other countries because to their perception as a substitute for badla. The new system must be preferable to the previous one and should not amplify market risk.

Jiménez (2008) provided evidence that bank borrowers are more prone to default when loans are approved during periods of low central bank interest rates. This conclusion was drawn from a substantial dataset obtained from the Spanish credit registry. Furthermore, the study revealed that when short-term interest rates are low for an extended duration, the cost of risk decreases and the economy's loan portfolio tends to expand.

Vashishtha and colleagues (2010) conducted a study on the origins of derivative trading, legal and policy changes, trends and growth, and the challenges faced by the derivative market in India. They also examined the comparison between the Indian derivatives market and the global derivatives markets.

In their paper, Shree Bhagawat and colleagues (2012) aim to define the concept of financial derivatives as the revolutionary development in the field of finance due to its rapid and extensive global expansion.

P. Hemavati (2013) examined the historical development and regulatory framework of derivative trading in the Indian capital market, with the aim of promoting its long-term sustainability.

### **The Indian derivatives market:**

In India, derivative markets have existed in some capacity for a long time. The Bombay Cotton Trade Association began futures trading in the commodities market back in 1875. The initial structured futures market was this one. After that, the futures market was established in 1893 by Bombay Cotton Exchange Ltd., 1900 by Gujarat Vyapari Mandall, and 1919 by Calcutta Hesstan Exchange Ltd. After the nation gained its independence, the derivatives market completed a full circle, going from the outright ban on all derivative trading to their most recent return. After the Indian government outlawed cash settlement and option trading in 1952, the trade of derivatives moved to unofficial forwarding markets. Government policy has changed recently to promote a bigger role for market-based pricing and less dubious derivatives trading. The Securities Laws (Amendment) Ordinance of 1995 was the first step towards the establishment of financial derivatives trading in India. It allowed for withdrawal of securities option contracts upon prohibition. The restriction on trading in numerous commodities' futures was lifted throughout the past ten years, starting in the year 2000.

An essential factor in a nation's economic prosperity is the derivatives market. The financial risk to the business world has grown as a result of changes in interest rates, stock prices, and currency values across different financial markets.

Even the continued existence of the corporate world is in danger due to negative developments in macroeconomic fundamentals. To address such risk, a new set of financial instruments known as derivatives must be developed for the Indian financial markets. These instruments' goals are to give commitments to prices for future dates in order to provide protection against adverse price fluctuations and to lessen the severity of financial risks. This essay chronicles the development and present standing of the Indian derivatives market. The goal of the current study is to examine derivative trading in India. It aims to illustrate the development and growth of NSE's financial derivatives in India from 2010–2011 to 2017–2018. From Rs. 17663664.57 Cr. in 2009–2010 to 1163539816.124 Cr. in 2017–18, the market turnover has increased.

**The Bombay Stock Exchange (BSE):**

The Bombay Stock Exchange (BSE) was established in 1875 and is the oldest stock market in India and Asia. It started trading derivatives on June 9, 2000, initially as a sub-tool of a derivative known as a "futures contract." On June 1, 2001, a new sub-tool called the "index option" was introduced. BSE achieved a significant milestone in the derivatives sector by introducing the innovative "weekly options" product on September 13, 2004. Furthermore, BSE introduced currency futures on October 1, 2008.

**The National Stock Exchange (NSE):**

The National Stock Exchange (NSE), established in 1992, is the world's third-largest stock exchange. It commenced trading in "Index future" as its initial derivative product on June 12, 2000, and introduced "index option" on June 4, 2001. SEBI mandated 233 future contract securities. NSE set a new standard by introducing "Mini Index Future & Options" with a minimum contract size of one lakh. On August 29, 2008, NSE introduced a currency future contract on the US Dollar-Rupee in the Indian derivatives market.

**Issues and difficulties faced in the derivative market:**

Despite recent promise, the derivative market still has unresolved underlying problems. While the number of instruments and volume of transactions in the market continue to increase, the fundamental goal of establishing multiple exchanges has not been achieved. Additionally, the unresolved problems, which are significant obstacles, cast doubt on the future prospects of the derivative markets.

The Forward Contract Act of 1952 restricts the use of cash settlement for commodities derivatives. Instead, physical delivery is required to fulfil outstanding commitments at maturity. This poses a challenge for the derivatives market as individuals often take positions before they are prepared to make physical deliveries. Modifying this Act is necessary to address this issue.

- **Market Stability and Development Concern:** The rapid growth of the counter derivative market has attracted the attention of regulators and supervisory agencies. During times of global crisis, certain OTC (Over the Counter) derivatives are utilized as a means of reducing stress. However, the main challenge lies in dispelling the opponents' belief that this market lacks transparency, has less stringent capital requirements, and is more vulnerable to systemic risk.

- **Warehousing and Standardization:** A robust and effective warehousing infrastructure is essential for the smooth operation of the country's commodity derivative market. The absence of well-standardized laboratories and top-notch testing facilities for the end consumer, who accepts physical delivery, poses a significant obstacle for the derivative market.

- **Limited Economies of Scale:** The derivatives market is not yet operating at an optimal scale. Although there are 80 commodities being traded on various exchanges, only a few of them are actually in high demand. The Indian government plans to merge two marketplaces to enhance coordination among multiple regulatory agencies, such as the Reserve Bank of India, Forward Market Commission, Securities and Exchange Board of India, and the Department of Companies Affairs. This consolidation will reduce the overall effort required and promote a competitive environment.

- **A regulatory framework,** like the one used by the Security Exchange Board of India, is needed to oversee the derivatives market. Currently, the Forward Market Commission regulates derivatives and is funded by the Department of Consumer Affairs. However, in order for the market to thrive, it requires a dedicated agency. Additionally, effective collaboration between SEBI and FMC, the regulatory bodies, is essential for better results.

- **Competition between OTC derivatives and Exchange traded derivatives:** It is recommended to convert OTC derivatives into Exchange traded derivatives following a financial crisis. Advisors suggest that this will enhance the

clearing and settlement process, as well as improve transparency and liquidity. These recommendations are based on the assumption that there is currently no established clearing mechanism and that OTC items are only traded via telephone.

• **Enhancing the Centralized Clearing Parties:** In India, the only centralized clearing party that provides exceptional processing and settlement services is CCIL, which commenced operations in 2002. CCIL currently offers a secure settlement facility for trading in government securities, clearing CBLOs (cleared collateralized borrowing and lending obligations), trading in foreign currencies, and settling all IRS transactions. The opinion of the Certified Financial Services Auditor (CFSA) report highlights that having such a wide range of activities concentrated in one entity leads to a concentration of risk. However, the concentration of business related to money, securities, and the forex market with CCIL aids in pooling risk and reducing overall transaction costs for the system. Consequently, it is imperative to strengthen additional clearing parties.

#### **Financial derivatives:**

An instrument is classified as a derivative when its value is derived from another security or economic variable. Derivatives are effective tools for transferring and managing risk, as its value is contingent upon other costs or factors. John C. Hull defines a derivative as a financial instrument that derives its value from other underlying factors.

Robert L. McDonald expanded the definition of a derivative as a financial instrument, specifically a contract between two parties, whose value is determined by the price of another commodity or service. A derivative is classified as such if its value is derived from another security or economic variable. Derivatives are effective tools for transferring and managing risk due to their dependence on external costs or factors.

#### **Factors influencing the growth of derivatives:**

Derivative growth is impacted by several factors. The key elements that have a significant influence are as follows:

1. An increase in the volatility of asset prices in the financial markets.
2. A greater integration of domestic financial markets with global ones.
3. Remarkable advancements in communication capabilities and a substantial decrease in their cost.

The underlying asset refers to the financial instrument on which a derivatives contract is based.

The valuation of a derivative instrument is determined by the underlying asset that has been previously specified. The underlying asset can take on different forms:

Foreign exchange rates denote the specific values at which various currencies can be interchanged. Bonds, in contrast, are diverse forms of transferable financial instruments issued by governments, companies, and other entities, usually with maturities ranging from medium to long term.

Diverse forms of bonds, encompassing negotiable debt instruments of medium to long-term maturity, issued by governments, companies, and other entities. Commodities, such as grains, coffee beans, and orange juice. Valuable metals, such as gold and silver. Foreign exchange rates refer to the values at which one currency can be exchanged for another currency.

The stock index is a numerical representation of the worth of shares and share warrants of corporations that are traded publicly. Treasury bills, often known as T-bills, and Over-the-Counter (OTC) money market products, such as loans or deposits, are examples of short-term securities.

These are financial products that get their value from the underlying assets in the stock market.

In 1850, a group of four Gujarati and one Parsi stockbrokers convened beneath a banyan tree situated in front of the Bombay Town Hall with the purpose of establishing India's inaugural stock market. With the increase in the number of members, the facility was relocated to Dalal Street in 1874. The following year, the club was officially founded as "The Native Share & Stock Brokers Association." The Indian government initially enacted the Securities Contract Regulation Act in 1956, with the Bombay Stock Exchange (BSE) being the first stock exchange to be granted this acknowledgment. However, the concept of the derivative market was not introduced until the year 2000. This instrument has a substantial influence on the Indian market. Derivative products have established a notable position in the trading industry within around a decade. The most notable attribute of this product is its risk-averse nature, which assists investors in mitigating losses and strategizing for future obstacles. The derivative market has gained a strong reputation, recognition, and trust from investors and other financial institutions, both primary and secondary, in a

relatively short period of time compared to other instruments in the stock market. It assisted hedgers in balancing the worth of their asset (a commodity) in the futures market compared to the cash market. India has had a futures market for trading shares on the spot market with settlements occurring on a weekly or fortnightly basis for a considerable period of time. Without the advantages of price discovery and hedging services that result from the separation of the spot market and the futures market, these marketplaces possess all the risks and difficulties associated with the futures market. In India, the primary market is acquainted with two distinct categories of derivatives.

- Bonds that can be converted into a specified number of shares of stock at the bondholder's discretion.

It might be argued that our market currently has a small-scale options market because of the inclusion and trading of these warrants. Moreover, there exist additional alluring derivative markets inside the informal sector. These unregulated markets function separately from India's traditional financial institutions and have relatively low levels of involvement.

The Securities Laws (Amendment) Ordinance of 1995 was a significant step towards the establishment of derivatives trading in India as it removed the restriction on options in securities. Nevertheless, it was the SEBI that played a crucial role in driving the growth of the Indian derivatives business. In November 1996, the securities market regulator established a group, headed by Dr. L. C. Gupta, with the aim of creating a complete regulatory framework for derivatives trading in India.

In the year 2000, SEBI authorized NSE and BSE to initiate the trading of index futures contracts based on the S&P CNX Nifty and BSE 30 (Sensex) index. Later on, the trading of options linked to these indices, as well as options on individual stocks, was authorized. Specific equities futures contracts were established on November 9, 2001. The trading and settlement processes strictly comply with the legislation specific to each exchange. Nevertheless, the initial levels of trade were quite modest.

This could be attributed to the initial restriction imposed by SEBI, where only a select few members were authorized to participate in derivative trading.

Foreign institutional investors (FIIs) and mutual funds (MFs) have been granted restricted participation rights. Brokerage firms are required to hire brokers who have successfully completed the "SEBI approved certification test" in order to participate in derivatives trading. The tax and accounting elements of derivatives trading are poorly understood. Based on the existing trading trends in the derivatives market, single stock futures still make up a significant portion of the market. Recent press reports indicate that volumes for futures on Indian exchanges have exceeded global levels. Futures closely resemble the previous Badla system, which could be a contributing factor to the traders' biased behavior. However, the market does not show any interest in such distortions. While not all of the shares listed are eligible, SEBI has granted permission for trading options and futures on some stocks. Option trading is not allowed for stocks with a highly volatile market capitalization. A subset of the market exhibits significant animosity over SEBI's move. They argue that investors who want to protect their investments against fluctuations should not need stock options. The level of importance in providing choices for a stock is directly proportional to the level of instability or unpredictability of the stock. Rather than outright banning options trading on low market capitalization stocks, they strongly advocate for SEBI to develop a robust monitoring, surveillance, and risk management system at the exchange and clearing house levels. This system would help prevent and handle default risks that may arise due to the high volatility of these stocks. The claims need to be investigated by SEBI. In order to prevent manipulations, it may be necessary to adopt a firm position and impose severe punishments on individuals who participate in such activities.

Mutual funds now have the ability to participate in "hedging and portfolio rebalancing" through the use of equity derivative instruments. Nevertheless, fund managers are reluctant to engage in this technique because to their perception that the distinction between hedging and speculating is unclear, which could expose them to regulatory scrutiny.

#### **Unresolved Issues and Future Prospects of the Derivatives Market:**

Although the derivatives market has made significant progress in recent years, it has not yet fully addressed the fundamental challenges it will encounter in the future. While the number of derivative trading products and the volume and value of business have increased, urgent issues remain unresolved. If these pressing problems are not promptly resolved, it is likely that the objectives of establishing various derivative exchanges will not be achieved, and the observed growth rates will not be sustainable. The following are some of the key outstanding problems.

1) Market Stability and Development Concerns: Regulators and supervisory authorities have shown interest in the Over the Counter (OTC) derivatives market because of its significant size and rapid growth. Some OTC derivatives have been seen as factors contributing to the ongoing global financial crisis. The main objections often revolve around the lack of transparency in OTC markets, excessive use of borrowed funds, relaxed capital requirements, and the existence of hidden systemic risk.

2) The establishment of a smart, cost-efficient, reliable, and user-friendly warehousing infrastructure is crucial for the proper functioning of the commodities derivatives market in the country. The committee formed by Habibullah (2003) recognized the absence of a sophisticated warehousing business. Furthermore, it is necessary to set up independent laboratories or quality testing facilities in each region to certify the quality, grade, and quantity of commodities. This will ensure that the commodities are appropriately standardized and that the final buyer, who receives the physical delivery, will not encounter any unexpected issues.

3) Cash vs. Physical Settlement: Only a small percentage, ranging from 1% to 5%, of commodities derivatives transactions in the country are resolved through physical delivery. This low figure can be attributed to the inefficiencies of the current storage system. Since a reliable delivery system is crucial for every commodity exchange, addressing the storage issue must be done aggressively. However, there is a significant obstacle to cash settlement of commodities derivative contracts: the Forward Contracts (Regulation) Act of 1952 currently prohibits cash settlement of outstanding contracts at maturity. This means that physical delivery must be used to fulfill any outstanding commitments when contracts mature. To avoid this, participants choose positions before they fully develop, resulting in the majority of contracts being settled in cash before maturity. To align with common practice and prevent unnecessary complications for participants, the legislation needs to be revised.

4) Increased Off-Balance Sheet Exposure of Indian Banks: The Reserve Bank of India (RBI) has expressed concern about the expansion of derivatives as off-balance sheet (OBS) assets for Indian banks. OBS exposure and risk have significantly increased in recent years. As of March 2002, the notional principal amount of OBS exposure was Rs. 8,42,000 crore (approximately \$181 billion at the exchange rate of Rs. 46.6 to a US \$), while by the end of March 2008, it had risen to Rs. 149,69,000 crore (around \$321 billion).

5) A strong and independent regulator, similar to the Securities and Exchange Board of India (SEBI), is essential as market activity and volume grow. Unlike SEBI, the Forwards Markets Commission (FMC) is not an autonomous organization but rather a department of the Ministry of Consumer Affairs, Food, and Public Distribution, and relies on it for financial support. In order for the commodities markets to thrive under proper control, the government should grant the FMC more authority. Given the interdependence of the two markets, close collaboration between SEBI and FMC is necessary.

6) The lack of economies of scale is a problem caused by the presence of too many commodities exchanges, with 3 national and 21 regional exchanges. Although trading in derivatives is allowed for over 80 commodities, only a small number of these commodities are widely used. Consequently, a small number of exchanges handle the majority of transactions, while others become unprofitable due to the division of volumes. One possible solution to this issue is to consolidate some exchanges. Furthermore, there has been considerable discussion about the potential convergence of the derivatives markets for commodities and stocks. The Indian government has expressed its desire to merge these two markets. It is expected that the convergence of various derivative markets would lead to economies of size and scope, eliminating the need for duplication of effort and supporting the growth of the commodity derivatives market.

7) Tax and Legal impediments: Currently, there are restrictions on transporting certain things across states in India, which require the payment of taxes. In order to establish a fully integrated national market for commodities and derivatives, these restrictions must be lifted.

8) New Derivatives Products for Credit Risk Transfer (CRT): Credit risk transfer (CRT) encompasses various methods such as loan syndication, guarantees, and securitization. However, the use of innovative CRT forms in conjunction with credit derivatives has been rapidly increasing. Credit derivatives allow banks and other financial institutions to protect themselves from global credit default risk. Previously, credit derivatives were not allowed in India. In the second quarter of the 2009-10 monetary policy, the RBI stated the need for caution in this matter. The RBI has now introduced regulations for a basic, over-the-counter, single name CDS for corporate bonds for resident firms, with certain safeguards, starting from December 2011.

### **III. CONCLUSION**

An increasing number of individuals believe that the financial derivatives market plays a crucial role in managing risk and promoting economic growth. Financial derivatives have become an integral part of all financial instruments due to innovation and changes in the industry. The Indian derivative market has a long history of trading various derivative products, which has led to significant growth over time. The derivatives market has experienced both positive and negative trends. To cater to the diverse needs of investors, new and innovative derivative products have been developed. Financial derivatives have gained a prominent position among all financial instruments due to innovation and industry transformation. The recent growth of derivatives has surpassed that of other markets worldwide. In conclusion, derivatives have a substantial impact on the Indian market and are vital for its future prospects.

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