



Role of Financial Derivatives Market in India- an Empirical study

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Abstract

The derivatives market is a financial market where financial instruments known as derivatives are traded. Derivatives are financial contracts whose value is derived from the performance of an underlying asset, index, rate, or event. These contracts allow investors to speculate on the price movements of the underlying assets without owning the assets themselves. The most common types of derivatives include futures contracts, options, swaps, and forwards.. This has led to rapid and unpredictable variations in financial assets prices, interest rates and exchange rates, and subsequently, to exposing the corporate world to an unwieldy financial risk. In the present highly uncertain business scenario, the importance of risk management is much greater than ever before. The emergence of derivatives market is an ingenious feat of financial engineering that provides an effective and less costly solution to the problem of risk that is embedded in the price unpredictability of the underlying asset. In India, the emergence and growth of derivatives market is relatively a recent phenomenon. Since its inception in June 2000, derivatives market has exhibited exponential growth both in terms of volume and number of traded contracts. The market turn-over has grown from Rs.2365 crore in 2000-2001 to Rs. 77010482.20 crore in 2022-2023. Within a short span of eight years, derivatives trading in India has surpassed cash segment in terms of turnover and number of traded contracts. The present study encompasses in its scope an analysis of financial derivatives play a crucial role in risk management, allowing businesses and investors to hedge against market uncertainties. They also provide opportunities for speculation, enabling traders to profit from anticipated market movements. However, the use of derivatives involves a degree of complexity and risk, and market participants need to carefully manage these instruments to avoid potential financial losses.

Keywords: Forward, Futures, Options, Financial Derivatives, Risk Management,
Exchange rates

Introduction

Derivatives are financial instruments whose value is derived from the performance of an underlying asset, index, rate, or event. They serve as tools for managing risk, speculating on price movements, and enhancing liquidity in financial markets. The derivatives market has grown significantly over the years, becoming a crucial component of the global financial system. The derivatives market has become an integral part of modern finance, providing tools that enable participants to manage and transfer risk efficiently. While derivatives contribute to market efficiency and liquidity, it's essential for market participants to understand the complexities involved and use these instruments prudently to avoid unintended consequences.

The derivatives market operates on a global scale, with organized exchanges and over-the-counter (OTC) markets facilitating the trading of derivatives. Major financial centers, such as Chicago, London, and Hong Kong, host significant derivatives exchanges.. Derivatives derive their value from an underlying asset, which can be anything from commodities, currencies, interest rates, stocks, bonds, or market indices. The performance of the derivative is linked to changes in the value of the underlying asset.

The present study attempts to discuss the genesis of derivatives trading by tracing its historical development, types of traded derivatives products, regulation and policy developments, trend and growth, future prospects and challenges of derivative market in India. The study is organised into four sections. Section I deals with the concept, definition, features and types of financial derivatives. Section II has been devoted to a discussion of the growth of derivatives market, and regulation and policy development. Section III discusses status of global derivatives market vis-a-vis Indian derivatives market. The last section specifies summary and concluding remarks.

Section I

1. Concept of Derivatives

The term 'derivatives, refers to a broad class of financial instruments which mainly Common types of derivatives include futures contracts, options, swaps, and forwards. Each type serves different purposes, such as providing a standardized way to buy or sell assets in the future (futures), giving the right to buy or sell at a predetermined price (options), or facilitating the exchange of cash flows (swaps). *The general definition of derivatives means to derive something from something else.* Some other meanings of word derivatives are:

- a derived function: the result of mathematical differentiation; the instantaneous change of one quantity relative to another; $df(x)/dx$,
- b derivative instrument: a financial instrument whose value is based on another security, (linguistics) a word that is derived from another word; "'electricity' is a derivative of 'electric'.

Traders and investors use derivatives for speculative purposes, aiming to profit from anticipated price movements in the underlying assets. Speculation involves taking on risk with the expectation of achieving higher returns

1.1. Definition of Financial Derivatives

Financial derivatives are financial instruments whose value is derived from the performance of an underlying asset, index, rate, or event. These instruments allow investors to speculate on or hedge against price movements in the underlying assets without directly owning those assets. The value of a financial derivative is linked to the changes in the value of the underlying asset.

Section 2(ac) of Securities Contract Regulation Act (SCRA) 1956 defines Derivative as:

- a) "a security derived from a debt instrument, share, loan whether secured or unsecured, risk instrument or contract for differences or any other form of security;
- b) "a contract which derives its value from the prices, or index of prices, of underlying securities".

1.2. Underlying Asset in a Derivatives Contract

As defined above, the value of a derivative instrument depends upon the underlying asset. The underlying asset may assume many forms:

- i. Commodities including grain, coffee beans, orange juice;
- ii. Precious metals like gold and silver;
- iii. Foreign exchange rates or currencies;
- iv. Bonds of different types, including medium to long term negotiable debt securities issued by governments, companies, etc.
- v. Shares and share warrants of companies traded on recognized stock exchanges and Stock Index
- vi. Short term securities such as T-bills; and
- vii. Over-the Counter (OTC)² money market products such as loans or deposits.

1.3 Participants in Derivatives Market

Participants in the derivatives market include a diverse range of entities, each with distinct roles, motivations, and strategies. Here are some key participants in the derivatives market:

Hedgers: Hedgers use derivatives to manage or offset the risks associated with price fluctuations in the underlying assets. For example, a company might use futures contracts to hedge against the risk of adverse price movements in commodities or currencies.

Speculators: Speculators aim to profit from anticipated price movements in the underlying assets. Unlike hedgers, speculators are not seeking to mitigate existing risks but rather to take advantage of market opportunities. They assume risk in the hope of making profits.

Arbitrageurs: Arbitrageurs seek to exploit price differentials between related assets or markets. They engage in simultaneous buying and selling of assets or derivatives to capture risk-free profits resulting from market inefficiencies.

Market Makers: Market makers are typically institutional entities or individuals who facilitate trading by providing liquidity to the market. They do so by quoting bid and ask prices for derivatives, narrowing the bid-ask spread, and ensuring smooth market functioning.

Institutional Investors: Institutional investors, such as mutual funds, pension funds, and insurance companies, participate in the derivatives market for various reasons. They may use derivatives to manage portfolio risk, enhance returns, or gain exposure to specific asset classes.

Retail Traders: Individual investors or retail traders participate in the derivatives market, often through online trading platforms. They may engage in speculative trading, hoping to profit from price movements, or use derivatives as part of their investment or trading strategies.

Banks and Financial Institutions: Banks and financial institutions are major participants in derivatives markets. They use derivatives for a variety of purposes, including risk management, hedging, and trading. Investment banks, in particular, often play a key role in facilitating derivative transactions.

Corporate Entities: Non-financial corporations use derivatives to manage risks associated with their core business activities. This includes hedging against fluctuations in commodity prices, interest rates, and currency exchange rates.

Regulators: Regulatory bodies oversee derivatives markets to ensure fair practices, transparency, and the stability of financial systems. They establish rules and regulations governing the trading and clearing of derivatives to protect market integrity and investor interests.

Clearinghouses: Clearinghouses act as intermediaries between buyers and sellers in the derivatives market. They play a crucial role in risk management by guaranteeing the performance of trades, ensuring that contracts are honored, and mitigating counterparty risk.

Understanding the diverse participation of these entities is essential for comprehending the dynamics, liquidity, and risk management aspects of the derivatives market. It's worth noting that the derivatives market involves a complex interplay among these participants, contributing to the overall functioning of financial markets.

1.4. Function of Financial Derivatives Derivative trading plays a significant role in India's financial markets. It provides investors with opportunities to hedge risks, speculate on price movements and enhance portfolio returns, some key points about derivative trading in India:

Regulation: Derivative trading in India is regulated by the Securities and Exchange Board of India (SEBI), which oversees exchanges like the National Stock Exchange (NSE) and the Bombay Stock Exchange (BSE) where derivative contracts are traded.

Products: The main derivative products traded in India include futures and options contracts on indices

like the Nifty 50 and individual stocks.

Hedging : One of the primary functions of derivative trading is hedging against price fluctuations. Businesses and investors use derivatives to manage risks associated with fluctuations in interest rates, currencies, and commodity prices.

Speculation: Traders also engage in derivative markets for speculative purposes, aiming to profit from price movements without owning the underlying asset.

Arbitrage: Derivative trading facilitates arbitrage opportunities, where traders exploit price differences between the cash and derivative markets to make risk-free profits.

Liquidity: The derivative market in India has grown significantly over the years, attracting both domestic and international participants. Higher liquidity in derivative contracts enhances market efficiency and price discovery.

Risk management: Derivatives allow market participants to manage various types of risks, including market risk, credit risk, and operational risk.

Margin Trading: Derivative trading involves margin requirements, where traders are required to deposit a certain percentage of the contract value as collateral. This enables traders to take leveraged positions in the market.

Volatility: India's derivative markets often experience high levels of volatility, driven by factors such as economic indicators, corporate earnings, and global market trends

Overall, derivative trading plays a crucial role in India's financial ecosystem, offering investors diverse opportunities for risk management and profit generation. However, it's important for traders to understand the complexities of derivatives and the associated risks before participating in these markets.

1.5. Classification of Derivatives

Derivatives can be classified into various categories based on their characteristics, underlying assets, and contractual features. Here are some common classifications of derivatives:

1. Based on Underlying Assets:

Commodity Derivatives: Derivatives whose value is derived from the price movements of commodities like gold, oil, agricultural products, etc.

Currency Derivatives: Derivatives linked to changes in currency exchange rates, such as futures and options on foreign currencies.

Interest Rate Derivatives: Derivatives tied to changes in interest rates, including interest rate swaps, futures contracts, and options on interest rates.

Equity Derivatives: Derivatives linked to the performance of individual stocks or stock indices. Examples include stock options and equity futures.

2. Based on Contract Structure:

Forwards: Customized contracts between two parties to buy or sell an asset at a future date for a price agreed upon today. Usually traded over-the-counter (OTC).

Futures: Standardized contracts traded on organized exchanges that obligate the buyer to purchase or the seller to sell an asset at a predetermined future date and price.

Options: Contracts that give the holder the right (but not the obligation) to buy (call option) or sell (put option) an asset at a predetermined price within a specified time frame.

Swaps: Agreements between two parties to exchange cash flows or other financial instruments. Common types include interest rate swaps and currency swaps.

3. Based on Complexity:

Simple Derivatives: Derivatives with straightforward structures and payoffs, such as plain vanilla options or futures contracts.

Complex Derivatives: Structured or exotic derivatives with more intricate features, often customized to meet specific risk management needs. Examples include barrier options and rainbow options.

4. Based on Exchange vs. Over-the-Counter (OTC):

Exchange-Traded Derivatives (ETD): Derivatives traded on organized exchanges, such as futures and options contracts listed on commodities or securities exchanges.

Over-the-Counter (OTC) Derivatives: Customized derivatives traded directly between two parties outside of an exchange. OTC derivatives include many swaps and some exotic options.

5. Based on Use:

Hedging Derivatives: Used by businesses and investors to manage or hedge risk associated with price fluctuations in the underlying assets.

Speculative Derivatives: Used by traders and investors to speculate on price movements and generate profits.

Arbitrage Derivatives: Used by arbitrageurs to exploit price differentials between related assets or markets.

Understanding these classifications helps investors and market participants navigate the complex landscape of derivatives, enabling them to choose instruments that align with their risk tolerance, investment objectives, and hedging needs.

1.5.1. Forward Contract

A forward contract is an agreement between two parties to buy or sell an asset at a specified point of time in the future. In case of a forward contract the price which is paid/ received by the parties is decided at the time of entering into contract. It is the simplest form of derivative contract mostly entered by individuals in day to day's life.

Section II

2. History of Derivatives Markets in India

The history of derivatives markets in India dates back to the early 19th century when cotton futures were traded in Bombay (now Mumbai). However, organized derivatives trading in India began in the early 2000s with the establishment of the National Stock Exchange of India (NSE) and the Bombay Stock Exchange (BSE) as key players in this space.

Here is a brief timeline of the development of derivatives markets in India:

1. Introduction of Derivatives (Early 19th Century): - The concept of derivatives trading in India can be traced back to the 19th century when cotton futures were traded in Bombay (now Mumbai) to manage price risks in the cotton industry.
2. Formation of Forward Markets Commission (FMC) (1953):- The Forward Contracts (Regulation) Act was enacted in 1952, leading to the establishment of the Forward Markets Commission (FMC) in 1953. FMC was responsible for regulating and promoting the commodity futures markets in India.
3. Banning of Forward Contracts (1960):- In 1960, the government banned most forward contracts, leading to a decline in organized futures trading.
4. Reintroduction of Derivatives (2000): - In 2000, the Indian government reintroduced derivatives trading with the establishment of the NSE and BSE as the main exchanges for equity derivatives. The market initially began with index futures and stock futures.
5. Introduction of Index Options (2001):- NSE introduced index options trading in 2001, allowing investors to hedge and speculate on the movements of Nifty, the benchmark index.
6. Introduction of Stock Options (2002):- Stock options were introduced in 2002, providing investors with additional instruments for risk management and speculation.
7. Development of Interest Rate Derivatives (2003):- The Reserve Bank of India (RBI) introduced interest rate futures (IRF) in 2003 to help manage interest rate risks.
8. Growth and Diversification (2000s and 2010s): Over the years, the derivatives market in India has witnessed significant growth and diversification. New products, such as currency futures and options, were introduced, expanding the scope of derivatives trading.
9. Regulatory Changes and Reforms:- The regulatory framework for derivatives trading underwent several changes to enhance transparency, risk management, and investor protection. The Securities and Exchange Board of India (SEBI) played a crucial role in regulating and overseeing the derivatives markets.
10. Introduction of Commodity Derivatives (2003 Onwards):- In the 2000s, commodity derivatives markets were reintroduced in India. The Forward Markets Commission (FMC) regulated commodity derivatives until 2015 when FMC was merged with SEBI.
11. Merger of FMC with SEBI (2015):- In 2015, the government merged the Forward Markets Commission (FMC) with the Securities and Exchange Board of India (SEBI), bringing all securities and commodity derivatives under a unified regulatory framework.
12. Further Innovations and Challenges:- The derivatives market in India continues to evolve with innovations such as weekly options, commodity options, and more. However, challenges such as market

manipulation, liquidity concerns, and risk management issues remain areas of focus for regulators.

Today, the derivatives market in India plays a vital role in risk management and price discovery for various financial instruments, including equities, commodities, and currencies. SEBI continues to monitor and regulate the derivatives markets to ensure their integrity and stability.

Table 1: Derivatives in India: A Chronology

Date	Progress
14 December 1995	NSE asked SEBI for permission to trade index futures.
18 November 1996	SEBI setup L. C. Gupta Committee to draft a policy framework for index futures.
11 May 1998	L. C. Gupta Committee submitted report.
7 July 1999	RBI gave permission for OTC forward rate agreements (FRAs) and interest rate swaps
24 May 2000	SIMEX chose Nifty for trading futures and options on an Indian index.
25 May 2000	SEBI gave permission to NSE and BSE to do index futures trading.
9 June 2000	Trading of BSE Sensex futures commenced at BSE.
12 June 2000	Trading of Nifty futures commenced at NSE.
31 August 2000	Trading of futures and options on Nifty to commence at SIMEX.
June 2001	Trading of Equity Index Options at NSE
July 2001	Trading of Stock Options at NSE
November 9, 2002	Trading of Single Stock futures at BSE
June 2003	Trading of Interest Rate Futures at NSE
September 13, 2004	Weekly Options at BSE
January 1, 2008	Trading of Chhota(Mini) Sensex at BSE
January 1, 2008	Trading of Mini Index Futures & Options at NSE
August 29,2008	Trading of Currency Futures at NSE
October 2,2008	Trading of Currency Futures at BSE

Source: Compiled from BSE and NSE

2.1. Regulation of Derivatives Trading in India

The regulatory framework in India is based on the L.C. Gupta Committee Report, and the J.R. Varma Committee Report. It is mostly consistent with the IOSCO⁵ principles and addresses the common concerns of investor protection, market efficiency and integrity and financial integrity. The L.C. Gupta Committee Report provides a perspective on division of regulatory responsibility between the exchange and the SEBI. It recommends that SEBI's role should be restricted to approving rules, bye laws and regulations of a derivatives exchange as also to approving the proposed derivatives contracts before commencement of their trading.

2.2.1. Derivatives Products Traded in Derivatives Segment of BSE

The BSE created history on June 9, 2000 when it launched trading in Sensex based futures contract for the first time. It was followed by trading in index options on June 1, 2001; in stock options and single stock futures (31 stocks) on July 9, 2001 and November 9, 2002, respectively. Currently, the number of stocks under single futures and options is 109⁶. BSE achieved another milestone on September 13, 2004 when it launched Weekly Options, a unique product unparalleled worldwide in the derivatives markets. It permitted trading in the stocks of four leading companies namely; Satyam, State Bank of India, Reliance Industries and TISCO (renamed now Tata Steel). *Chhota* (mini) SENSEX⁷ was launched on January 1, 2008. With a small or 'mini' market lot of 5, it allows for comparatively lower capital outlay, lower trading costs, more precise hedging and flexible trading. Currency futures were introduced on October 1, 2008 to enable participants to hedge their currency risks through trading in the U.S. dollar-rupee future platforms. Table 2 summarily specifies the derivative products and their date of introduction on the BSE

Table 2: Products Traded in Derivatives Segment of the BSE

S.no	Product Traded with underlying asset	Introduction Date
1	Index Futures- Sensex	June 9,2000
2	Index Options- Sensex	June 1,2001
3	Stock Option on 109 Stocks	July 9, 2001
4	Stock futures on 109 Stocks	November 9,2002
5	Weekly Option on 4 Stocks	September 13,2004
6	Chhota (mini) SENSEX	January 1, 2008
7	Futures & Options on Sectoral indices namely BSE TECK, BSE FMCG, BSE Metal, BSE	N.A.

8	Bankex and BSE Oil & Gas. Currency Futures on US Dollar Rupee	October 1,2008
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Source: Compiled from BSE website

2.2.2. Derivatives Products Traded in Derivatives Segment of NSE

NSE started trading in index futures, based on popular S&P CNX Index, on June 12, 2000 as its first derivatives product. Trading on index options was introduced on June 4, 2001. Futures on individual securities started on November 9, 2001. The futures contracts are available on 233⁸ securities stipulated by the Securities & Exchange Board of India (SEBI) . Trading in options on individual securities commenced from July 2, 2001. The options contracts are American style and cash settled and are available on 233 securities. Trading in interest rate futures was introduced on 24 June 2003 but it was closed subsequently due to pricing problem. The NSE achieved another landmark in product introduction by launching Mini Index Futures & Options with a minimum contract size of Rs 1 lac. NSE crated history by launching currency futures contract on US Dollar-Rupee on August 29, 2008 in Indian Derivatives market. Table 3 presents a description of the types of products traded at F& O segment of NSE.



Table 3: Products Traded in F&O Segment of NSE

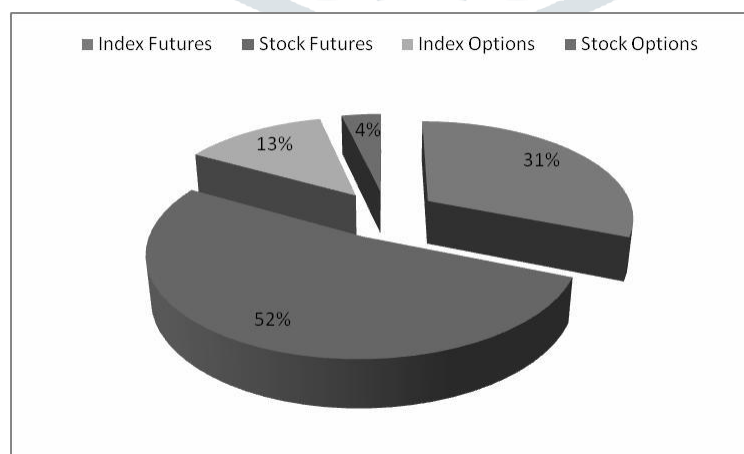
S.no	Product Traded with underlying asset	Introduction Date
1	Index Futures- S&P CNX Nifty	June 12,2000
2	Index Options- S&P CNX Nifty	June 4,2001
3	Stock Option on 233 Stocks	July 2, 2001
4	Stock futures on 233 Stocks	November 9,2001
5	Interest Rate Futures- T – Bills and 10 Years Bond	June 23,2003
6	CNX IT Futures & Options	August 29,2003
7	Bank Nifty Futures & Options	June 13,2005
8	CNX Nifty Junior Futures & Options	June 1,2007
9	CNX 100 Futures & Options	June 1,2007
10	Nifty Midcap 50 Futures & Options	October 5,2007
11	Mini index Futures & Options - S&P CNX Nifty index	January 1, 2008
12	long Term Option contracts on S&P CNX Nifty Index	March 3,2008
13	Currency Futures on US Dollar Rupee	August 29,2008
14	S&P CNX Defty Futures & Options	December 10, 2008

Source: Compiled from NSE website

2.3. Growth of Derivatives Market in India

Equity derivatives market in India has registered an "explosive growth" (see Fig. 2) and is expected to continue the same in the years to come. Introduced in 2000, financial derivatives market in India has shown a remarkable growth both in terms of volumes and numbers of traded contracts. NSE alone accounts for 99 percent of the derivatives trading in Indian markets. The introduction of derivatives has been well received by stock market players. Trading in derivatives gained popularity soon after its introduction. In due course, the turnover of the NSE derivatives market exceeded the turnover of the NSE cash market. For example, in 2008, the value of the NSE derivatives markets was Rs. 130,90,477.75 Cr. whereas the value of the NSE cash markets was only Rs. 3,551,038 Cr. (see Table 4 through Table 7). If we compare the trading figures of NSE and BSE, performance of BSE is not encouraging both in terms of volumes and numbers of contracts traded in all product categories (see Table 8 through Table 10).

Figure 2: Product wise Turnover of F&O at NSE from 2022-2023



Source: Author's calculation based on data compiled from NSE

Table 4: NSE Derivatives Segment Turnover

(Rs. Cr.)

Year	Index Futures	Stock Futures	Index Options	Stock Options	Interest Rate Futures	Total	Average Daily Turnover
2022-23	2583617.92	2558863.55	2358916.90	149498.40	0.00	7650896.80	46938.02
2021-22	3820667.27	7548563.23	1362110.88	359136.55	0.00	13090477.75	52153.30
2020-21	2539574	3830967	791906	193795	0	7356242	29543
2019-20	1513755	2791697	338469	180253	0	4824174	19220
2018-19	772147	1484056	121943	168836	0	2546982	10107
2017-18	554446	1305939	52816	217207	202	2130610	8388
2016-17	43952	286533	9246	100131	-	439862	1752
2015-16	21483	51515	3765	25163	-	101926	410
2014-15	2365	-	-	-	-	2365	11

Source: Compiled from NSE website**Table 5:** NSE Cash & Derivatives Segment Turnover

(Rs. in Cr.)

Year	Cash Segment	Derivatives Segment
2022-23	3,551,038	13090477.75
2021-22	1,945,285	7356242
2020-21	1,569,556	4824174
2019-20	1,140,071	2546982
2018-19	1,099,535	2130610
2017-18	617,989	439862
2016-17	513,167	101926
2015-16	1,339,510	2365

Source: Compiled from NSE website**Table 6:** Number of contract Traded at NSE Derivatives Segment

Year	Index Futures	Stock Futures	Index Options	Stock Options	Interest Rate Futures	Total
2022-23	136476747	149159997	116790708	7826231	0	410253683
2021-22	156598579	203587952	55366038	9460631	0	425013200
2020-21	81487424	104955401	25157438	5283310	0	216883573
2019-20	58537886	80905493	12935116	5240776	0	157619271
2018-19	21635449	47043066	3293558	5045112	0	77017185
2017-18	17191668	32368842	1732414	5583071	10781	56886776
2016-17	2126763	10676843	442241	3523062	-	16768909
2015-16	1025588	1957856	175900	1037529	-	4196873
2014-15	90580	-	-	-	-	90580

Source: complied from NSE website

Table 7:

Average Daily Transaction at NSE in Derivatives and Cash Segment

Year	Derivatives Segment	Cash Segment
2022-23	52153.30	14,148
2021-22	29543	7,812
2020-21	19220	6,253
2019-20	10107	4,506
2018-19	8388	4,328
2017-18	1752	2,462
2016-17	410	2,078
2015-16	11	5,337

Source: Compiled from NSE website and NSE fact book 2008**Table 8:** BSE Derivatives Segment Turnover

Year	Index Futures	Stock Futures	Index Options		Stock Options		Total
			Call	Put	Call	Put	
2022-23	234660	7609	31	8	0	0	242309
2021-22	55491	3515	0	0	0	0	59006
2020-21	5	1	3	0	0	0	9
2019-20	13600	213	1471	827	2	0	16112
2018-19	6572	5171	0	0	174	157	12452
2017-18	1811	644	1	0	21	0	2478
2016-17	1276	452	39	45	79	35	1922
2015-16	1673	-	-	-	-	-	1673

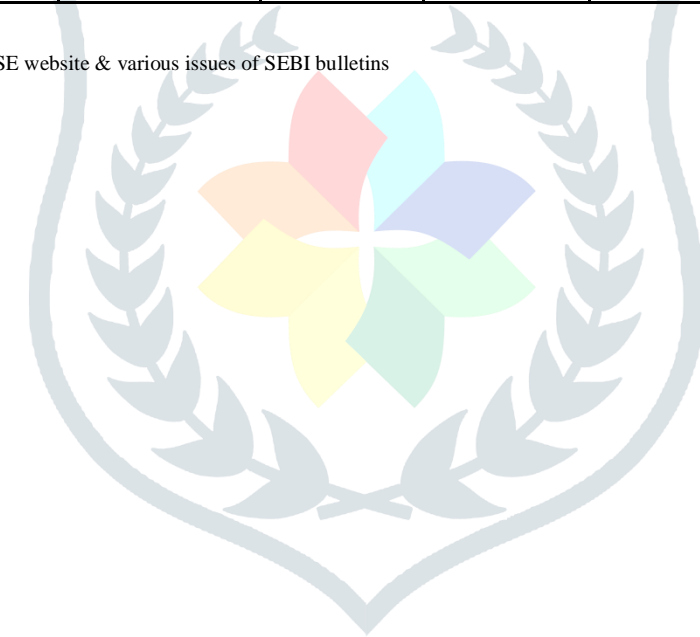
Source: Compiled from BSE website & various issues of SEBI bulletins

Table 9: Number of Contract Traded at BSE Derivatives Segment

Year	Index Futures	Stock Futures	Index Options		Stock Options		Total
			Call	Put	Call	Put	
2022-23	7157078	295117	951	210	9	6	7453371
2021-22	1638779	142433	2	2	0	1	1545169
2020-21	89	12	100	0	2	0	03
2019-20	449630	6725	48065	27210	72	17	531719
2018-19	246443	128193	1	0	4391	3230	382258
2017-18	111324	25842	41	2	783	19	138037
2016-17	79552	17951	1139	1276	3605	1500	105527
2015-16	77743	-	-	-	-	-	77743

Source: Compiled from BSE website & SEBI bulletin

Table 10: BSE Cash & Derivatives Segment Turnover

(Rs. in Cr.)

Year	Cash Segment	Derivatives Segment
2022-23	1578857	242309
2021-22	956185	59006
2020-21	816074	9
2019-20	518715	16112
2018-19	503053	12452
2017-18	314073	2478
2016-17	307292	1922
2015-16	1000032	1673

Source: Compiled from BSE website & SEBI bulletin

Despite of encouraging growth and developments, industry analyst feels that the derivatives market has not yet, realized its full potential in terms of growth & trading. Analysts points out that the equity derivative markets on the BSE and NSE has been limited to only four products- index futures, index options and individual stock futures and options, which in turn, are limited to certain select stocks only. Although recently NSE and BSE has added more products in their derivatives segment (Weekly Options, Currency futures, Mini Index etc.) but still it is far less than the depth and variety of products prevailing across many developed capital markets.

Section III

3. Status of Indian Derivatives Market vis-a vis Global Derivatives Market

The derivatives segment has expanded in the recent years in a substantial way both globally as well as in the Indian capital market. The figures revealed by Futures Industry Association (FIA)⁹ Annual Volume Survey and reported here under Table 11 and Fig. 5 bring out the fact that more than 15 billion futures and options contracts were traded during 2023 on the 54 important exchanges that report to the FIA, reflecting a remarkable increase of 28% from the previous year. Looking back at the last four years, it can be worked out that these figures reflect that the growth rate was 29 % in 2020, 19% in 2006, 12% in 2005, and 9% in 2021. From the same table it also follows that of the total volume traded globally over the period 2018-23, the US exchanges alone constituted as much as 35 percent share. Fig. 6 presents the break down of derivatives volume by region and it is clearly evident that after North America with a share of about 40 percent, Asia-Pacific occupies the second slot with a share of 28 percent and Europe falls at the third place with its contribution of 24 percent.

If we compare the turnover-wise performance of the derivatives segments over the last five years, it may be noticed from an inspection of the relevant columns of Table 5 and Table 11 that the Indian segment has expanded phenomenally as compared to the global segment. The turnover of the NSE derivatives segment in 2016-17 stood at Rs. 2130610 crores. It grew to an astonishing level of Rs.13090477 crores during the year 2022-23, displaying a more than six-time increase over the five-year period. In marked contrast, at the global level the increase was less than even two-fold: the turnover was \$ 8163 million in 2003 and \$ 15187 million in 2023.

Table 11: Global Trend in Turnover of Derivatives Trading

Year	US Exchanges	Non- US Exchanges	(in millions) Global
2023	1313.65	1675.80	2989.45
2022	1578.62	2768.70	4347.32
2021	1844.90	4372.38	6217.28
2020	2172.52	5990.22	8162.54
2019	2795.21	6069.50	8864.71
2018	3525.00	6448.67	9973.67
2017	4616.73	7245.48	11862.21
2016	6137.20	9049.47	15186.67
2016 to 23	23983 (35.48)	43620 (64.52)	67604 (100)

Source: FI Futures Industry, March/April 2023

Section IV

4. Summary and Concluding Remarks

The derivatives market in India has a rich history that traces back to the 19th century when cotton futures were traded in Bombay. However, organized derivatives trading gained momentum in the early 2000s with the establishment of the National Stock Exchange (NSE) and the Bombay Stock Exchange (BSE). The reintroduction of derivatives in 2000 marked the beginning of a new era, initially focusing on index and stock futures.

Over the years, the market expanded to include index and stock options, interest rate futures, and eventually commodity derivatives. The regulatory framework underwent significant changes, with the Forward Markets Commission (FMC) merging with the Securities and Exchange Board of India (SEBI) in 2015, bringing both securities and commodity derivatives under a unified regulatory authority.

The derivatives market in India has been characterized by continuous innovation, introducing products like currency futures and options. Despite its growth, challenges such as market manipulation, liquidity concerns, and risk management issues persist. SEBI plays a crucial role in overseeing and regulating the derivatives markets to ensure transparency, investor protection, and market integrity. Today, the derivatives market in India serves as a vital platform for risk management, price discovery, and speculation across various financial instruments.

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