



# India's Commodity Derivatives Market: A Retrospective and Forward Outlook

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**Abstract.** This paper discusses the development of commodity derivatives trading in India over decades. It examines important changes in the law and regulation that have impacted the development of the commodity derivative market. The aim is to provide an in-depth understanding of the historical development, the current state of the Indian commodity derivatives market, and its prospects for the future. Though helpful information has been provided by extant literature, limited study has been performed concerning the recent developments that have taken place in commodity trading in India. A more in-depth analysis of commodities futures trading in India would thus serve to fill these gaps for this study. The changes brought about in commodity trading by the establishment of MCX and NCDEX had given plenty of opportunities. However, entry barriers and regulations are still in place, which creates an overarching need to maintain development in efficiency and transparency. Some of the major observations made here include increased volumes of options traded, the impact of regulations on trade, and the diversification of stock exchanges into commodities.

**Keywords:** Commodity, Derivatives Market, Forward Outlook, India, Retrospective.

## 1. INTRODUCTION

Investments are essential for accumulating wealth, reaching financial objectives, and safeguarding one's financial future. Equities and bonds are two well-known avenues among the many accessible investment options, each of which has its own advantages and considerations. Along with stocks and bonds, commodities are regarded as an asset class. The tangible goods known as commodities can be traded on financial markets. The dynamics of supply and demand, geopolitical events, climatic circumstances, and other variables can all affect the value of commodities. Commodity investing can be used as a diversification tactic to balance the risk and return characteristics of a portfolio. Three ways exist to gain exposure to commodities. Direct physical investment is one of them, along with investing in stocks that are tied to commodities and commodity derivatives (Shine Shaji, Mahendra Varman P and Karunakaran N, 2024). In the first technique, the cost of storage is charged. Furthermore, it is not practical because the good is perishable. The performance of the underlying company affects the performance of the stock. Therefore, it does not give a user immediate access to the commodity.

Choosing the third approach offers the best way to gain exposure to commodities, mostly by using financial derivatives. These derivatives' performance is closely linked to the underlying asset's market swings. There is a wide range of products in the financial derivatives market, futures and options are the two important instruments. Futures and options are financial derivatives that get their value from an underlying asset, which may be equities, commodities and currencies. In more detail, futures contracts for commodities are actually agreements made on a futures exchange. Through these agreements, parties are bound to buy or sell a given quantity of a good at a fixed price at a later date.

The best way to gain exposure to commodities is through the third method. The performance of derivatives is based on the market performance of the underlying asset. Financial derivatives include both futures and options. The value of these instruments is derived from an underlying asset, which may be a stock, commodity, and currency etc. Commodity futures contracts are agreements made on a futures exchange to purchase or sell a commodity at an agreed-upon price in the future (Shibu P, Devasia M D and Karunakaran N, 2019, 2021). The futures contracts are traded on regulated exchanges and the terms of the contract are standardized by the exchange. Contracts for commodity options grant the holder the right, but not the obligation, to buy or sell a predetermined quantity of a commodity on or before a specified date in the future.

The Indian commodities derivative market has travelled a remarkable path from its historical infancy to its current relevance as a key element of the country's financial landscape. The objective of this paper is to take the reader on a historical journey through the Indian commodity derivative market, following its historical development while also exploring the market's contemporary structure, players, and the wide variety of commodities traded there.

## 2. REVIEW OF LITERATURE

Kabra (2007) addressed the evolution of India's futures market liberalization, highlighting committee recommendations and the subsequent expansion of the futures market for a number of commodities without sufficient regulatory support. The article provides a critical examination of the Indian commodities futures market, emphasizing its rapid expansion and uneven market participation that predominantly benefits speculators instead of those involved in the real trade. Bhattacharya (2007) provided a thorough analysis of the market's

development, infrastructure, and rules. The market's beginnings and how they have impacted the dynamics of production and resource use in the primary sector are explained historically by the author. There were many commodity exchanges and trading futures contracts for different commodities in India prior to the Second World (Bhattacharya, 2007).

An overview of the Indian commodity derivatives market and an analysis of its viability are given by (Gupta, 2011). It goes over the development of commodities derivatives in India over time, the difficulties the sector is currently facing, and its potential for future expansion. The chapter also looks at how the market is affected by regulatory and policy changes. With only 12 commodities being traded, the amount of trading in India's commodity derivative market has decreased. Speculative trades make up more than 95% of the trading volume in commodities futures (Gupta, 2011). Rajib (2015) explained how the Indian commodity derivatives market has developed, including the emergence of commodity exchanges and the institutionalization of the method for managing commodity risk. In order to enhance farmers' participation in commodity derivatives trading, his study highlights the requirement for an established futures market with sufficient liquidity and reliable physical delivery. The establishment of recognized commodity exchanges like Multi-Commodity Exchange (MCX), National Commodity and Derivatives Exchange (NCDEX), and National Multi-Commodity Exchange (NMCE) has signalled a considerable expansion of the Indian commodity derivatives sector. Despite challenges like sudden policy reactions and a small futures market, the market has succeeded in creating a formal framework for managing commodity risk in the nation (Rajib, 2015).

The features and effectiveness of the Indian commodity futures market were examined by (Gnyaneswer, 2017). He found that over time, the liquidity, effectiveness, and risk management of the Indian commodity futures market have all improved. (Kumar & Pandey, 2019) investigated the short-run and long-run market efficiency of Indian commodity futures markets using different asset pricing models. For this purpose, they took four agricultural commodities and seven non-agricultural commodities. The authors found that near month futures prices of most commodities are co integrated with spot prices in the long run. However, they did not find any co integration for the next to near month futures contracts with low trading volume.

The existing literature offers insightful information about the development, difficulties, and efficiency of India's commodity derivatives market. On the other hand, an in-depth analysis of the most recent changes in India's commodity trading and their implications for future prospect is notably lacking in study. Moreover, there exists an absence of literature about the comparative assessment of futures and options trades among other exchanges, such as the NSE and BSE. In view of these gaps, study is necessary to give a comprehensive understanding of the dynamics of commodities futures trading in India.

### 3. OBJECTIVES

1. Examine the historical development and expansion path of the commodity derivatives market in India.
2. Examine the current landscape of the commodity derivatives market in India and identify future outlooks and opportunities for growth and development.

### 4. METHODOLOGY AND MATERIALS

The study utilized historical data from sources such as Securities and Exchange Board of India (SEBI), Multi-Commodity Exchange (MCX), National Commodity and Derivatives Exchange (NCDEX), Bombay Stock Exchange (BSE), and National Stock Exchange (NSE) to comprehensively analyse the historical development and current status of the Indian commodity derivatives market. Special attention was given to options trading, particularly after the June 2020 launch of options on metal contracts at NSE and BSE. Performance indicators like NKrishi and iCOMDEX were employed to evaluate the overall performance of the market, while quantitative analysis included examining trade volumes, turnover percentages, and growth rates using Compound Annual Growth Rate (CAGR) computations.

### 5. RESULTS AND DISCUSSION

#### 5.1. Evolution of Commodity Derivative Trading in India

A major chapter in the history of the Indian financial system has been written by the development of commodities derivative trading, which represents a path of expansion, innovation, and regulatory change. Commodity derivative trading has emerged as a major force in shaping India's economy and offering a variety of opportunities for investors and market players.

Four major stages may be identified in the evolution of derivative trading in India. The developmental stage, which spanned from 1875 to 1959, saw the beginning of commodity trading in India and laid the foundation for subsequent market developments. Following this, the commodities trading environment experienced difficulties and regulatory changes between 1960 and 1994. In India, commodity derivative trading had a revival between 2002 and 2008, marked by the establishment of commodities exchanges and witnessed increased interest in these markets. India's commodities derivative trading environment has changed significantly since 2008 due to market evolution and considerable regulatory reforms, which is in line with the country's dynamic commodity trading environment.

##### 5.1.1. Development Stage: The Emergence of Commodity Trading:

Commodity futures trading in India has a long history and has seen considerable changes throughout the

years, reflecting the nation's economic, social, and legal changes. The history of commodities futures trading in India has been punctuated by turning points, obstacles, and regulatory changes from its ancient beginnings to the present. Since 1875, the Indian commodity derivatives market has changed; yet, in the early 2000s, it saw policy reversals and a sluggish recovery (Gnaneshwar, 2017). The Bombay Cotton Trade Association was founded in 1875, which was an important year in the economic history of India. As a result of this event, the first organized futures market for cotton contracts was established, setting the stage for the nation's formalized commodity trading. This revolutionary venture not only changed the way commodities were sold, but it also helped to shape India's financial and economic future. Early in the 20th century, India's commodity trading environment underwent substantial changes as a result of the emergence of important institutions and organisations that helped to broaden and diversify the commodity markets. The Gujarat Vyapari Mandali started trading oilseed derivatives in the year 1900. Beyond conventional agricultural products like cotton, this indicated a substantial growth of the commodity trading market. In 1919, the Calcutta Hessian Exchange was founded, which helped to expand the range of commodities markets beyond agricultural commodities. A significant moment in the history of commodities trade occurred in 1927 with the founding of the East India Jute Trade Association. The India Pepper and Spices Trade Association (IPSTA) was founded in 1957, added new dimension to the commodities trading landscape.

### 5.1.2. Challenging Period and Regulatory Changes

In India's history of commodity trading, the late 1960s was a challenging period, especially with regard to forward contracts. Significant disruptions and the eventual suspension of forward trade in major commodities were caused by a confluence of factors including severe droughts, market manipulation, and farmer defaults. These incidents demonstrated the system's weaknesses and emphasized the necessity of regulatory changes and risk management strategies. India's commodities trading environment saw substantial reforms and developments in the modern era with the goal of reviving the market, improving regulatory control, and increasing participation. These developments reflect a renewed interest in fostering a dynamic and transparent commodity trading ecosystem, aligning with global best practices and investor needs. The Committee on Forward Markets, also referred to as the Kabra Committee, suggested the launch of futures trading in 17 particular commodities in 1994. Given that the commodities futures market had been essentially dormant for decades, this recommendation represented an important change in policy.

### 5.1.3. Revival Period

**Establishing Commodity Exchanges:** India had an upturn in commodity futures trading between 2002 and 2003. Three national-level commodities exchanges, the Multi commodities Exchange of India (MCX), the National Commodity and Derivatives Exchange (NCDEX), and the National Multi Commodity Exchange of India (NMCE), were founded as a result of this revival. These exchanges offered innovative, open, and electronically facilitated trading platforms for a variety of commodities, which helped to increase market efficiency. The emergence of important commodity exchanges that offer trading platforms for a variety of commodities has significantly changed the commodity trading environment in India. As the first online multi-commodity exchange with a broad nationwide reach, the National Multi Commodity Exchange (NMCE) marked its launch on November 26, 2002. The electronic infrastructure of NMCE enabled the revival of futures trade, which not only brought more convenience to market participants but also advanced the development and deepening of India's commodity markets. The National Multi Commodity Exchange (NMCE) discontinued trading from September 24, 2018. This was due to a merger with the Indian Commodity Exchange Limited (ICEX). SEBI revoked ICEX's permanent recognition on May 19, 2022. The exchange was deemed to be non-compliant on multiple counts, including net worth and infrastructure criteria, which led to this withdrawal.

MCX, or the Multi commodities Exchange of India, is one of the top commodities exchanges in the nation. MCX was founded in 2003 and has its corporate office in Mumbai. It serves as a trading platform for a variety of commodity derivatives. Trading in a wide range of commodities is made possible through MCX, including those related to metals (such as gold, silver, and copper), energy sources (such as crude oil and natural gas), agricultural products (such as soybean, cotton, and spices), and more. A noteworthy commodity exchange founded in 2003 is the National Commodity and Derivatives Exchange of India (NCDEX). The Mumbai-based NCDEX, which operates a platform for trading commodities derivatives, is similar to MCX in that it also provides a trading venue. Agriculture-related products are NCDEX's field of specialization. These products include a range of grains (including wheat, rice, and maize), oilseeds (including soybean, mustard, and castor seed), pulses, spices, and more.

The trade volumes for two well-known Indian commodities exchanges, Multi commodities Exchange of India (MCX) and National Commodity and Derivatives Exchange of India (NCDEX), are presented in the following table for the twelve-year period between 2010–11 and 2021–22. The table show the total trading volume for each exchange throughout the course of the corresponding years. Let's examine the patterns and contrast the volumes of trading on the MCX and NCDEX during this time:

**Table 1:** Futures' trade volume for two commodity exchanges.

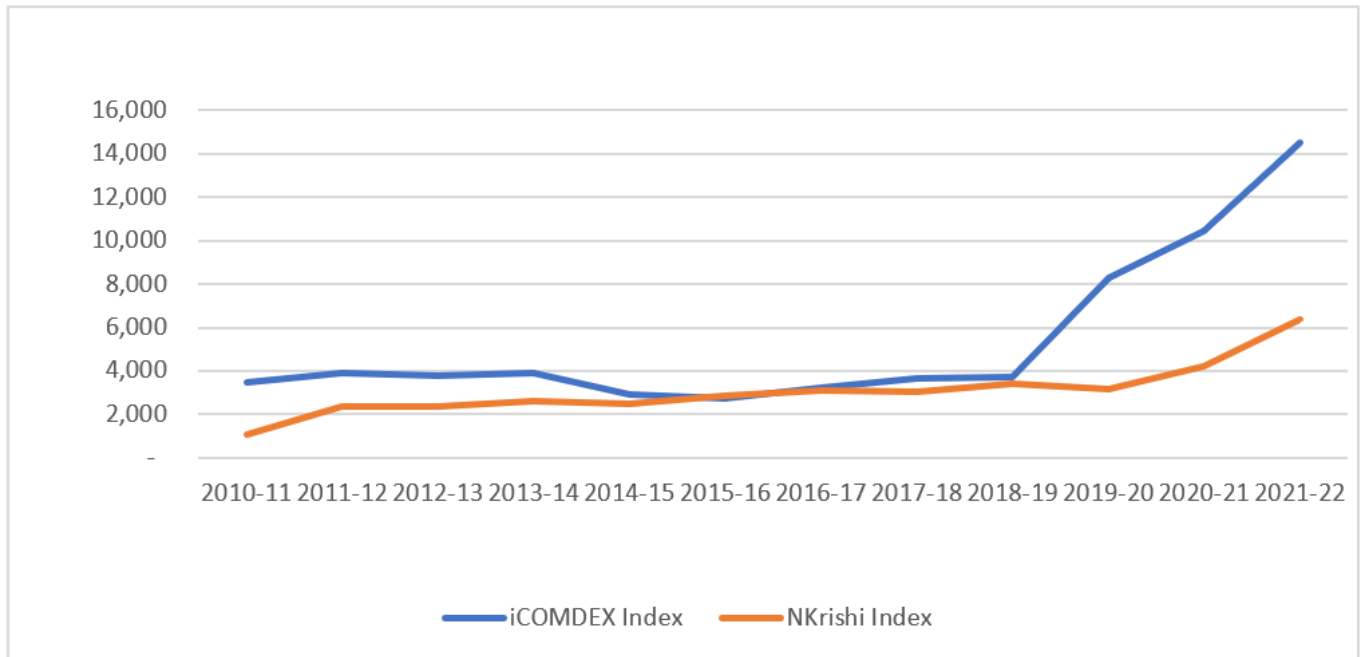
Year	MCX	Year-to-year growth	NCDEX	Year-to-year growth
2010-11	212797866		4,59,70,043	
2011-12	389854613	83.20	4,70,97,369	2.45
2012-13	375045541	-3.80	3,92,72,687	-16.61
2013-14	214201536	-42.89	3,36,99,370	-14.19
2014-15	148575942	-30.64	2,73,04,397	-18.88
2015-16	234234439	57.65	2,97,54,642	8.97
2016-17	222510543	-5.01	1,77,51,961	-40-34
2017-18	205925012	-7.45	1,51,87,625	-14.45
2018-19	246449027	19.68	1,40,05,485	-7.78
2019-20	295695862	19.98	1,30,80,142	-6.61
2020-21	204007629	-31.01	98,33,640	-24.82
2021-22	144906303	-28.97	1,10,68,212	12.55

**Source:** Security and Exchange Board of India, Author's calculation

In comparison to NCDEX, MCX continuously maintained larger trading volumes during the study period. NCDEX has an expertise, in agricultural and agricultural-commodity derivatives. They primarily focus on commodities related to agriculture. This specialization could potentially restrict the number of people involved in their market unlike MCX which offers trading opportunities across a range of commodities. This shows that MCX has had a greater trading activity advantage. Neither exchange's trading volume remained constant from year to year. Over time, MCX's trade volumes grew remarkably. It began at over 212 million contracts in 2010–11 and reached a high of almost 295 million contracts in 2019–20 before declining in the years that followed. The year-to-year growth rate of trade volume for MCX and NCDEX is also shown in the table. From the table, we can observe that the highest growth rate for MCX trade volume was in 2011–12, with an increase of 83.20 percentage points. The lowest growth rate was in 2020–21, with a decrease of -31.01 percentages.

Although normally smaller than MCX's NCDEX's trade volumes also fluctuated. From roughly 4.6 million contracts in 2010–2011 to roughly 4.7 million contracts in 2011–2012, there was growth. However, starting in 2012–2013, the volumes started to decrease and fluctuate. As shown in the table 2, the NCDEX trade volume increased at its greatest pace of 2.45 percentage points in 2011–12. The year with the lowest growth rate, 206-17, saw a drop of -40.34 %.

Trading volumes can be influenced by a number of variables, including market circumstances, price volatility, economic trends, and geopolitical events. For MCX which enables trading in gold, silver, and other precious metals can be impacted by changes in international pricing, import tariff revisions, and global geopolitical events. A few factors that can impact NCDEX prices are weather, crop yield, government policies pertaining to agriculture, and changes to import-export laws. The regulatory changes also will impact trade volumes. For example, the implementation of peak-margin rules has put pressure on trade volumes. The MCX futures average daily turnover for the years 2018–19 to 2021–22 exhibits both an increase and a decline in pattern. The average daily turnover for 2018–19 was 25,648 contracts. In 2019–20 this 'knclimbed to 32424 contracts; suggesting an increase in trading activity. Nonetheless, there was a minor decline to 31,471 contracts per day in 2020–21. The average daily turnover dropped to 26,178 contracts per day in 2021–2022, continuing the downward trend. At the same time, the historical values of the iCOMDEX and NKrishi indices show an increasing trend. This is depicted in the Figure 1.



**Figure 1:** Trends in benchmark Commodity Indices.  
Source: SEBI, Authors' calculation.

The total performance of the commodities market in MCX is displayed by the iCOMDEX Index. The iCOMDEX index has risen consistently over time, despite occasional fluctuations. It increased from 3,504 in 2010–11 to 14,516 in 2021–22. This shows an increase of over 314% over the previous 11 years. The index value recorded the largest year-over-year growth between 2019–20 and 2020–21, rising by about 26%. Though more slowly than the iCOMDEX index, the NKrishi index has also showed a consistent upward trend over time. From 1,106 in 2010–11 to 6,347 in 2021–22, it rose. This indicates a roughly 474% rise over the previous 11 years. The index value went up by over 50% between 2020–21 and 2021–22, which was the biggest year-over-year gain. Both indices have steadily increased over time, although the NKrishi index has increased by a larger percentage than the iCOMDEX index. In contrast to the NKrishi index, the iCOMDEX index is greater in absolute terms.

#### 5.1.4. Recent Developments

**Regulatory Reforms and Market Evolution:** India's commodity derivative trading environment has undergone several recent changes. The Commodities Transaction Tax (CTT) was introduced by the Indian government in 2008 as a regulatory tool to control the trading of commodities. CTT is levied on the sale of commodity futures contracts and is comparable to securities transaction tax (STT) in equities markets. This tax serves as a regulatory instrument to regulate commodity trading and guarantee market transparency. Another important development in the commodity derivatives market is the merger of the Forward Markets Commission with the Securities and Exchange Board of India. The regulatory organization in charge of overseeing commodity trade, the Forward Markets Commission (FMC), merged with the Securities and Exchange Board of India (SEBI) in 2015. The regulatory structure was simplified as a result of this merger, which also brought commodities trading regulations into line with those of other financial markets. The merging of FMC and SEBI has improved regulatory efficiency. This has facilitated the introduction of new products and trading platforms, contributing to the continued growth of the commodities derivatives market. In 2017, the Securities and Exchange Board of India (SEBI) approved the trading of commodity derivatives by Category III Alternative Investment Funds (AIFs). This change broadened the range of investors who may participate in commodities markets and enabled them to trade commodity futures. The changes have aligned the commodity derivatives market in India with international standards. In order to increase market depth and liquidity, SEBI allowed FPIs to participate in Indian Exchange-Traded Commodity Derivatives (ETCDs) in 2022–2023. These FPIs were primarily focused on cash-settled non-agricultural commodity derivative contracts. Furthermore, in order to promote greater participation in the commodity derivatives market, SEBI decided to let exchanges to offer several contracts for each commodity, accommodating to both large and small participants in the securities market.

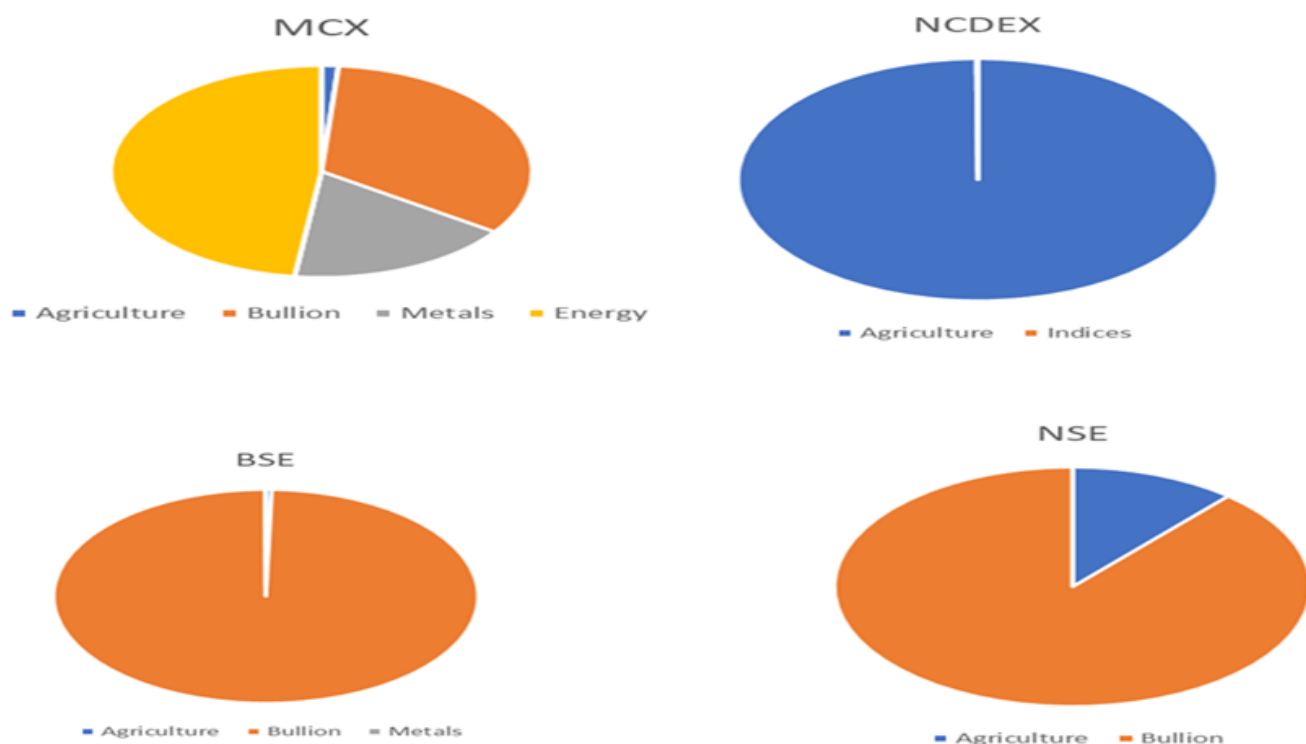
The market has become even more diverse as a result of the entry of stock exchanges like the National Stock Exchange (NSE) and the Bombay Stock Exchange (BSE) into the commodity derivative sector. On October 1, 2018, the BSE entered the commodity futures market. This was an important turning point since it gave the BSE an opportunity to provide more products to traders than just equities and debt securities. In 2020, the NSE introduced its commodity futures division, following suit. Even with the BSE and NSE's entry, MCX and NCDEX still control a sizable portion of the commodity futures market. This is evident from the table 2

**Table 2:** Futures Trade Volume and Turnover of Different Exchanges (2021-22).

	BSE	NSE	NCDEX	MCX
Volume (Lots)	122003	31,039	1,10,68,212	14,49,06,303
Turnover (Crore)	4959	2,272	4,56,699	67,53,928

Source: SEBI

MCX, which specializes in non-agricultural commodities, holds a strong position in the market with over 80% of all commodities trading activity. This is also demonstrated by the volume and turnover percentages, where MCX accounts for 92.81% of the total volume and 93.41% of the entire turnover. But NCDEX, a major player in agricultural commodities, also has a sizable portion of the market. It accounts for 7.09% of the total volume and 6.31% of the overall turnover. Even though these figures are smaller than MCX, they still make up a significant amount in the commodity derivative trading. However, in the commodity futures market, BSE and NSE are not as well-known. To put it in perspective, BSE accounts for 0.07% of the total turnover and 0.08% of the total volume, whereas NSE represents 0.02% and 0.03% of the total volume, respectively. Despite their popularity in the equities market, they have a modest percentage in the commodities futures market. Futures trading are mostly done on five key segments: agriculture, energy, metals, index, and bullion. The distribution of futures trading over different exchanges varies for each category. Figure 2 provides a graphic depiction of this pattern. It shows the percentage of total futures trade on each exchange for each category. This enables a clear comparison of the exchanges' performance across the different segments.

**Figure 2:** Product-wise share in Commodity Derivatives Turnover (in per cent).

The Figure 2 represents the product-wise share in commodity derivatives turnover for the year 2021-22, expressed in percentages. Multi Commodity Exchange has a significant share in bullion (33.1 percentage), metals (17.2 percentage), and energy (47.5 percentage) derivatives. However, it has a relatively small share in agriculture derivatives (1.3 percentages). National Commodity & Derivatives Exchange (NCDEX) exchange primarily deals with agriculture derivatives, which make up 99.8 percentage of its turnover. It also has a small share in indices (0.1%). Bombay Stock Exchange (BSE) has a significant share in bullion derivatives (99.5 percentage), with a small share in agriculture derivatives (0.4 percentage) and metals (0.1 percentage). National Stock Exchange (NSE) exchange has a significant share in bullion derivatives (88.7 percentage), with a smaller share in agriculture derivatives (11.3 percentage). In comparison, NCDEX and BSE are heavily focused on specific commodities (agriculture and bullion respectively), while MCX and NSE have a more diversified portfolio. MCX has the most diversified portfolio among the four, with significant shares in bullion, metals, and energy derivatives. NSE, while having a significant share in bullion, also has a presence in agriculture derivatives. This diversification can help these exchanges manage risks and cater to a wider range of investors and traders.

Multi Commodity Exchange and National Commodity and Derivatives Exchange have long been in the main roles in the commodity derivative market. Nonetheless, the National Stock Exchange (NSE) and Bombay Stock Exchange (BSE), which are often linked with stocks, are putting a lot of effort into expanding their power in the commodity derivative market. The NSE's recent action to strengthen its position in the commodities derivatives market is a major advance in this strategic growth. The NSE made a significant move in October 2023 by

introducing a number of new commodity derivatives contracts. 'Options on futures' for a wide range of commodities, including gold, silver, copper, zinc, aluminium, lead, and nickel, are part of this expansions. There is growing interest in trading options at both MCX and NCDEX. In Table 2, we observe an increase in the trade volume of options contracts at both MCX and NCDEX.

**Table 3:** Options' Trade Volume for Two Commodity Exchanges.

Year	MCX	CAGR	NCDEX	CAGR
2017-18	34,752		6,609	
2018-19	14,95,517		3,974	
2019-20	36,84,845	176%	1,540	16%
2020-21	19,49,321		844	
2021-22	2,93,38,557		14,281	

Source: Security and Exchange Board of India, Author's calculation.

The number of options traded at MCX has increased drastically, from 34,752 in 2017–18 to a remarkable 29338557 in 2021–2022. This indicates an impressive increase in the options market at MCX, with a Compound Annual Growth Rate (CAGR) of 176%. Similarly, though more slowly, number of options trades at NCDEX has increased. The volume increased at a 16% CAGR from 6,609 in 2017–18 to 14,281 in 2021–2022. Despite being slower than MCX, the growth rate nevertheless shows that NCDEX options trading is becoming more and more popular. Numerous causes could be responsible for the rise in the volume of options trading at both MCX and NCDEX. Volatility expectations, regulatory changes, changes in hedging techniques, etc., may be among them. As traders look to hedge their positions and profit from price swings, the heightened market volatility tends to draw in additional options traders.

In June 2020, the National Stock Exchange NSE and the Bombay Stock Exchange launched options trading for bullion contracts. This is an important milestone in the development of the commodity derivative market in India. The NSE and BSE's increased selling of commodities derivatives, shows that they are making a deliberate attempt to diversify their product lines. The volume and value of options trading on the NSE and BSE for the 2020–21 and 2021–22 years are displayed in Table 4.

**Table 4:** Volume and value of options trading on the NSE and BSE.

Year	NSE		BSE	
	Volume (Lots)	Value (₹ crore)	Volume (Lots)	Value (₹ crore)
2020-21	4,43,160	22,355	11208542	605064
2021-22	3,58,889	17,472	16096753	765036

Source: SEBI.

BSE has a much larger volume and value of options trading compared to NSE. There is a downward trend in both the volume and value of options trading on NSE; the volume of options trading on NSE decreased by 19% and value decreased by 22 percentages. There is an upward trend in both the volume and value of options trading on BSE. The volume of options trading on BSE increased 43 percentages and the value of options trading increased by approximately 26%.

5.2. Insights into the Future of India's Commodity Derivatives Markets: The future course of India's commodity derivatives markets is anticipated to be shaped by a number of possible development areas and developing trends. In order to satisfy the changing needs of market participants and promote growth and innovation in the industry, it is necessary that product offerings in India's commodity derivatives markets be expanded to incorporate new commodities and derivative contracts. The Indian derivative market might benefit greatly from the introduction of live cattle futures and options, particularly for the agriculture sector and the economy as a whole. The importance of livestock in the Indian economy cannot be overstated, with the sector's Gross Value Added (GVA) accounting for roughly 30.87% of the Agricultural and Allied Sector GVA and 6.17% of the Total GVA, according to the First Revised Estimates of National Income for FY 2020–21 released by the National Statistical Office (NSO), Ministry of Statistics and Programme Implementation (MoSPI). Considering the livestock industry's significant contribution to the nation's GDP, live cattle futures and options can offer farmers and other livestock value chain participants useful risk management tools to protect themselves from price volatility and uncertainty.

Weather unpredictability is a persistent concern in India, where agriculture is a significant sector that contributes to the food security of the country and the livelihoods of millions of people. Given India's vulnerability to disastrous weather events, weather-linked derivatives, like European Monthly Weather CAT, are crucial to the country's agricultural sector because they give stakeholders efficient risk management tools that reduce the impact of climate variability on animal health and crop yields. Air pollution, water scarcity, deforestation, and climate change are the serious environmental issues that India must deal with. Implementing green finance projects and sustainable practices is essential for addressing these serious environmental issues. The larger players in the commodities market have largely prevailed over the intended beneficiaries, such as farmers. Farmers have been pushed to the sidelines by the complicated rules and barriers present in the market system. In order to address this disparity and promote increased farmer involvement, a comprehensive strategy is required. These steps include using farmer cooperatives as aggregators, implementing micro contracts, offering

market information in regional languages, and improving infrastructure. The future direction of India's commodities derivatives markets depends on how well product offerings are expanded, how infrastructures are developed and how properly farmers are included in the market.

## 6. CONCLUSION

Commodity futures trading in India has undergone a dynamic evolution influenced by changes in legislation, market dynamics, and historical turning points. The historical context highlights the amazing origins of commodity trade in India, followed by difficulties and suspensions brought on by unfair market practices and farmer defaults. India's commodity derivative market has changed significantly since the founding of the Bombay Cotton Trade Association in 1875 and the subsequent spike in options trading on the NSE and BSE. With the establishment of organizations like the Gujarat Vyapari Mandali and the Calcutta Hessian Exchange in the early 20th century, commodity markets became more diverse and included goods more than only conventional agricultural items. On the other hand, difficulties in the late 1960s—like delays and cancellations in forward contracts—emphasized the necessity of risk management techniques and legislative changes. The introduction of electronic trading platforms and innovation brought about by the development of national-level exchanges such as MCX, NCDEX, and NMCE in 2002 and 2003 greatly improved market efficiency. The implementation of the Commodities Transaction Tax (CTT) and the consolidation of SEBI and the Forward Markets Commission have resulted in additional regulatory layers and the alignment of the commodity market with global norms. The market was further diversified by the introduction of stock exchanges such as NSE and BSE into the commodities derivatives sector. With NCDEX's expertise in agricultural items and MCX's emphasis on non-agricultural commodities, MCX and NCDEX nevertheless maintain their dominance.

The process of developing a more advanced commodity derivative market requires a multimodal strategy that includes the implementation of various contracts, the construction of strong infrastructure, and proactive steps to get over hurdles including infrastructure constraints and price volatility. Through the resolution of these issues, the commodities derivative market can develop into a more complex and robust financial ecosystem that draws in a wider spectrum of players and makes a substantial contribution to the economy as a whole.

However, legislative changes and efforts to liberalize the market brought back commodity futures trading, with MCX and NCDEX emerging as key participants. NCDEX has been essential in fostering the expansion of India's commodity markets. MCX has constantly maintained higher trading volumes, showing its prominence in the whole trading ecosystem. This is due to its wide range of product offerings and electronic trading platform. NCDEX has become a market leader in the trading of agricultural derivatives thanks to its expertise in agricultural commodities, specialized products, and farmer-focused initiatives. The modern advances emphasized the value of investor involvement, risk management tools, and regulatory monitoring. The breadth and openness of commodity trading were increased by actions including the implementation of the Commodities Transaction Tax (CTT), the merging of regulatory organizations, and the inclusion of alternative investment funds (AIFs). By examining the trade volumes on the MCX, we were able to observe bullion's supremacy, the energy sector's constant expansion, and the agriculture and metals sectors' stable contributions throughout time. These patterns showed how the market reacted to shifting commodity prices, geopolitical events, and variables affecting the world economy. Overall, discussions highlight the Indian commodity derivative markets' resilience and adaptability. They have developed from ancient foundations to cutting-edge platforms fuelled by technological advancement, inventiveness, and legislative changes. These markets are essential for supporting price discovery, risk management, farmer support, and investment opportunities, which helps India's economy grow and remain stable in the context of international trade.

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