MCX
METAL & ENERGY
Trade with Trust

GOLD DERIVATIVES –
Deepening the Market and The Road Ahead in India

Contents . . .

Executive Summary

Gold derivatives have played a transformative role in evolving India's gold market from a predominantly physical and traditional asset into a sophisticated, financially integrated ecosystem. Since the introduction of Gold Futures, the financialisation of the metal has democratized access to price discovery and risk management, extending participation beyond bullion dealers to include retail investors, jewellers, refiners, importers, and financial institutions. This evolution has been driven by continuous innovations such as the introduction of Options contracts, multiple contract sizes catering to diverse investor needs, extended trading hours aligned with global markets and the establishment of Indian Good Delivery standards that reduce dependence on international benchmarks.

The Indian gold derivatives market has grown substantially, with average daily turnover exceeding Rs. 2.2 Lakh Crore and significant volumes of physical gold delivery through exchange mechanisms, reflecting strong market trust and efficiency. These instruments provide critical socio-economic benefits by enabling transparent and reliable price discovery, which supports fair pricing across the gold value chain from miners and refiners to end consumers. Gold derivatives also serve as powerful tools for managing price volatility, which has historically been high due to both domestic and global factors, thereby stabilizing cash flows and protecting profit margins for businesses, including small and medium-sized jewellers.

Moreover, gold derivatives facilitate inventory hedging and promote efficient supply chain management, which reduces costs and enhances operational resilience. The derivatives market also plays a strategic role in global price discovery, leveraging India's position as one of the largest gold consumers and exporters of gems and jewellery. By allowing investors to gain exposure to gold through financial instruments rather than physical holdings, gold derivatives help reduce import dependence and support macroeconomic stability.

As an investment asset class, gold derivatives offer diversification benefits due to their low correlation with equities and bonds, act as a hedge against inflation and deliver competitive risk-adjusted returns. Institutional participation has been gradually increasing, bringing liquidity and depth to the market, though regulatory restrictions still limit the involvement of key players like banks and foreign portfolio investors.

In conclusion, gold derivatives in India are not merely financial instruments but catalysts for inclusive economic growth, risk mitigation and global integration of the gold ecosystem. With continued regulatory support, innovation and broader market participation, India is well-positioned to establish itself as a global gold hub where derivatives will not only support but actively drive the future of gold trading and investment.

Gold – Some perspectives

Gold has always been more than a metal. Across dynasties and disasters, it has stood tall. First as currency, then as a store of wealth, and now as a versatile financial asset.

But today, gold is evolving again.
It's no longer just held in vaults or worn on occasions. It's digitized, dematerialized, and deployed through ETFs, Digital Gold and even as collateral for credit. Yet one of the most underappreciated forces in this evolution lies in gold derivatives.

Often misunderstood, these instruments aren't just about short-term profit, they are about transforming how we manage risk, allocate capital, and build resilience into financial systems.

The world understood this early, gold futures were first introduced in the 1970s on the COMEX exchange in New York (part of CME Group now), setting the stage for organized trading in precious metals. Over time, global markets like London, Tokyo, and Shanghai joined the derivatives ecosystem.

In India, the turning point came in 2003, when MCX (Multi Commodity Exchange of India) launched its gold futures contract. This marked a democratization of gold trading, extending access beyond bullion dealers to retail investors, institutions, and hedgers. The evolution didn't stop there. In the years that followed, we witnessed the launch of mini contracts, options on gold futures, and the introduction of indices based on gold futures. Regulatory reforms by SEBI have further enhanced transparency and participation

This paper takes a closer look at that transformation.
We begin with gold's current presence in Indian markets, explore how derivatives are shaping its ecosystem, assess their unrealized potential, and identify what it will take to unlock their full strategic value.

Because if India is to become a global gold hub, then gold derivatives won't just support that vision they'll drive it.

1. Indian Gold derivatives market

India's gold derivatives have been one of the shining examples of how financial instruments can bring in long-term transformation and usher in benefits not just for those who invest in these instruments, but also the larger ecosystem. Starting from 2003, gold derivatives transactions today have reached significant levels: Average Daily Turnover exceeding ₹2.2 Lakh Crore and Average Daily Open Interest (signifying long-term interest of participants) at 43 tonnes. About 175 tonnes of Gold has been physically delivered since inception through the exchange mechanism, highlighting the trust of market stakeholders on the robustness and efficiency of this mechanism.

Some of the key metrics showing the significance of gold derivatives market in India are provided in Table 1.

Table 1: Recent Trade Performance of Gold Futures and Options in India

GOLD (Futures)	FY25-26	FY24-25	FY23-24	FY22-23	FY21-22	Last 5 years Average
Average Daily Volume (tonnes)	23	11	8	9	10	12
Average Daily Turnover (₹ Cr)	28484	8449	4775	4596	4728	10206
Average Daily Open Interest (tonnes)	23	22	20	19	17	20
Delivery (₹ cr)	28285	5222	4045	3371	3080	8801
Delivery (kg)	21525	7119	6784	6323	6412	9633

GOLD (Options)	FY25-26	FY24-25	FY23-24	FY22-23	FY21-22	Last 5 years Average
Average Daily Volume (tonnes)	156	36	10	3	2	41
Average Daily Notional Turnover (₹cr)	193564	28148	6130	1703	857	46080
Average Daily Premium Turnover (₹cr)	1127	141	31	17	10	265
Average Daily Open Interest (tonnes)	20	13	7	5	3	10

Note: All metrics refer to MCX

"We hedge our trading position on MCX, which aligns our physical inventory risk with futures markets and ensures a transparent benchmark price for our bullion clients."

Prithviraj Kothari
Managing Director-RiddiSiddhi Bullions Limited

2. Innovations in Gold Derivatives

India's gold derivatives market has been the source of many an innovation in India's commodity markets. Gold Futures was the first commodity Futures launched on MCX when the Exchange started its operations in November 2003 - the first time in decades[1] that an exchange-traded financial instrument on gold was made available in India. It brought hedgers such as jewelers, investors, intermediaries such as broking firms, and all stakeholders in the gold value chain on a rules-based Exchange platform operating under the supervision of a market regulator. The subsequent growth of the market over the next two decades was on riding innovations such as the following:

Different types of derivative instruments: While Futures contracts on Gold were introduced in November 2003, the market witnessed Options contracts in October 2017. MCX was the first Exchange in India to launch both. Significantly, the underlying of Gold Options contracts are Gold Futures and the former devolve to the latter on expiry. The nature of underlying and devolution (with associated levy of 'devolution margin') in Options are innovations in the Indian gold market.

In 2019, MCX launched the MCX iCOMDEX Indices, which includes a single commodity index like Gold Index (symbol: MCXGOLDEX), apart from a sectoral index called Bullion Index (Symbol: MCXBULLDEX). The Gold Index and Bullion Index have Gold Futures as a constituent - another innovation in the Indian market. There are tradeable Futures contracts on Bullion Index and the Gold Index is used a benchmark by the financial services industry to track investments in gold and gold-related instruments.

Size Variants: To cater to the hedging and investment requirements of a wide cross-section of the stakeholder community, different variants of Gold Futures have been made available in India's commodity derivatives market. They include Gold (1 kg), Gold Mini (100 grams), Gold Ten (10 grams), Gold Guinea (8 grams) and Gold Petal (1 gram) contracts – the underlying values[2] ranging from ₹1 crore to Rs.10,000/-. There are also Options contracts overlying the Gold (1 kg) and Gold Mini (100 gram) Futures contracts. Apart from enabling market inclusion of stakeholders of all dimensions, availability of multiple size variant derivative contracts also enable more nuanced (and so, more efficient) hedging using contracts of multiple sizes.

Tenure variants: Similar to the innovation in underlyings' size in gold derivatives, is also the variation available in the tenure of derivative contracts. In alignment with market need, the expiries of certain gold derivative contracts are kept as monthly, while for others they are bi-monthly – providing flexibility to hedgers and investors through flexibility in the contracts' tenure.

Trade timing: A major innovation in the gold derivatives market has been the market timings – from 9.00 AM till 11.30 PM or 11.55 PM, depending on US Daylight Saving hours. The purpose of extended trade timing, which is not available in any other segment in India's financial market, is to provide opportunity to stakeholders to trade/ align trades to match with active hours of global markets. This is significant considering that gold, like many other metals, is a 'global' commodity, prices being significantly influenced by fundamentals and factors emanating from across the world. This necessitates investors and hedgers to track global market fundamentals and trade almost round-the-clock, as real-time response to changes in the global fundamentals, which the Indian gold derivatives market is able to provide.

Setting standards: Being one of the biggest consumers of gold, India should not only set prices but also quality standards for industry to follow. In the absence of uniform acceptable standards, the gold ecosystem often uses international standards (e.g. those set by London Bullion Market Association, of LBMA) for reference. India's gold derivatives market has been breaking this status quo and creating standards that are widely accepted and more relevant to the Indian stakeholders. Indeed, to make bullion derivatives contracts more relevant to the physical market players and in line with the broader national objective of 'Atmanirbhar Bharat', MCX established Good Delivery norms for BIS standard gold, and embarked upon the path of recognizing domestic bullion refiners for gold delivery of gold bars, initially against Gold Mini (100 grams) and Gold Ten (10 grams) contracts. By July 2026, MCX adopted India Good Delivery standards for all gold futures contracts i.e. Gold (1kg), Gold Mini (100gm), Gold Ten (10gm), Gold Guinea (8gm) and Gold Petal (1gm). Moreover, seven Indian Gold refiners have been empaneled till July 2026 and more are in the process of being empaneled.

Box 1: MCX Good Delivery serving multi purposes

Initiative of creating and popularizing domestic standards make the standards more relevant to the Indian markets and less dependent on international standards. Besides, empaneling domestic gold refiners server the nation by integrating more physical market stakeholders with the regulated derivatives markets, reducing disparities, encouraging quality gold recycling and reducing import dependence.

1 Gold Futures was available on a platform created by Bombay Bullion Association as early as 1920. In fact, India had a vibrant derivatives market in commodities in the pre-independence period.

2 Assuming gold price at ₹1 lakh per 10 grams.

3. Risk Management and Other Socio-economic Roles

Since their launch, gold derivatives in India have been appropriately reflecting the market fundamentals emanating from domestic and global markets – the reflection being manifested in the prices being discovered on the Exchange platform. The Exchange-traded gold derivatives prices are also widely disseminated through digital, electronic and other media for the benefit of everyone in the gold value chain – down to the end-consumer.

Price discovery and transparency

The efficiently-discovered gold prices on the Exchange, the efficiency being reflected in the high Hedging Efficiency[3] of gold derivatives, helps to provide a reliable price reference to everyone in the metal's value chain. Such price reference helps to set prices in the market for physical gold, where both the buyer and the seller benefit from knowledge of real-time prices discovered on a trustworthy regulated Exchange platform. The benchmarking to Exchange-discovered price often takes the form of jewelers quoting gold price to their customers in reference to the price being quoted on the Exchange, whose price ticker is displayed at the Point of Sale to build customer confidence. This confidence is a valuable asset in business growth of jewelers, which are mostly small enterprises. Price transparency is also valuable for consumers, for whom gold purchase is an infrequent high-value economic transaction requiring reliable reference prices.

As much is the strength of price discovery on the commodity Exchange, is also the expanse of dissemination of these prices. Thanks largely to Information and Communication Technology and social media, gold prices discovered on the Exchange is instantaneously available through multiple channels. This brings in a significant amount of transparency in setting of gold prices, leading to the reliance on the exchange-discovered prices as reference prices by the entire value chain.

Box 2: A Push towards 'Price in India'

Polling and publishing of spot prices of commodities is an essential part of Exchange operations, and MCX's polled spot prices have widely been used as benchmarks by the industry for a long time. In this context, SEBI recently directed Mutual Funds to value physical Gold and Silver by using polled spot prices published by recognized stock exchanges, from the earlier practice of referring to global prices. The move not only enables the use of more relevant and transparently discovered spot prices for valuation, but also promotes the use of domestic commodity prices for transactions which are primarily domestic in nature.

> "We include gold futures and options in our risk management program to mitigate variability in market values of our mined output, ensuring more stable revenue forecasts."
>
> **Mahendra Bafna**
> *Director, Augmont Enterprises Private Limited*

3 Hedging Efficiency (H.E.) is the extent to which price changes in the Futures market can offset the price changes in the spot market. Closer H.E. is to 1.00, higher is the futures instrument considered 'efficient'. For Gold Futures, H.E. of MCX Gold has been estimated at 0.79 in 2024-25.

4 Measured by Standard Deviation of MCX Gold Futures prices

5 Goel, Ankur, and Gutierrez, Genaro (2011), "Multiechelon Procurement and Distribution Policies for Traded Commodities", Management Science, 57(12), 2228-2244

> “MCX plays a pivotal role in organizing India’s bullion sector, safeguarding imports through futures and hedging, while empowering local refiners and strengthening the gold-silver ecosystem.”
>
> **Haresh J Acharya**
> *Partner, Parker Precious Metals LLP.*

Price Risk Management – Across the value chain

Arguably, the most significant economic contribution of gold derivatives is their ability to enable everyone in the value chain – be they buyers or sellers of the commodity - to manage the risk arising out of volatility in gold prices. Annualized volatility[4] in gold prices has been as high as 11, 14 and 17 percent in 2023, 2024 and 2025 respectively – which give rise to huge uncertainty in the profitability and cash flows of every economic entity connected to this commodity. Exchange-traded gold futures and options help to lock-in the current price of gold and thereby mitigate the adverse impact of price volatility.

Box 3: Indian Gold Derivatives Protects from both Domestic and Global Price Volatility

Consider the two events:

A. **Brexit Vote:** Following the unexpected results of the referendum held in the U.K. on 23 June 2016, for U.K. to be out of the European Union, there was a sudden spike in global gold prices. Gold price in the Indian derivatives market went up by almost 6.5 percent on 24 June 2016, i.e. day of result.

B. **Duty cut on gold:** Presenting the Union Budget on 23 July 2024, the Union Finance Minister announced a steep cut in the total Customs Duty rate on gold imports, from 15 percent to 6 percent. This led to a steep fall in gold prices, mirrored in the gold derivatives market.

In both these events, the Indian gold derivatives prices fully reflected the fundamentals – whether emanating from domestic or global markets – and enabled Indian consumers, sellers and traders to manage the price volatility that resulted from either domestic or global factors. It may be noted that Indian stakeholders hedging on global platforms are not able to manage their risks arising from domestic reasons (like the event B above), while those hedging on Indian platforms are able to manage their risks arising from any factor - domestic or global.

It may be pertinent to note that Indian exchange-traded gold derivatives reflect duty-paid prices of the underlying metal in Rupee terms. This implies that market stakeholders are able to hedge their exposure in this international commodity, affected by international factors, in Rupee-denominated financial instruments within the Indian geography, without having to seek international hedging markets. This enables traders to hedge from their exposure either in domestic or to global markets, with equal efficiency (see Box 3 for this dual case).

Hedging of inventory

One of the corollary benefits of managing risks of price uncertainty is the benefit of hedging of inventory. As increasing price volatility adversely affects cost of inventory management, firms can seek recourse to price risk mitigation controls such as hedging through derivatives. Goel and Gutierrez (2011)[5] investigated inventory risk caused by fluctuating procurement prices and suggested that it is possible to reduce inventory-related costs by trading appropriate numbers of futures/forward commodity contracts for effective hedging. As such, with effective usage of commodity derivatives, firms can lower inventory costs by having close to 'Just-In-Time' inventory management.

Box 4: Hedging By The Gold Mining Industry

The Gold mining industry provides a classic case of hedging. Being an industry which is very homogenous in nature, it suffers from high exposure to gold prices and volatility. In addition, it does not offer much scope for vertical integration and diversification, unlike the oil and gas industry. Gold price risk can be easily hedged by investors, using for instance, exchange-listed futures. Various researchers have examined how this industry has benefited from hedging. Tufano (1996)[6] had done a case study for the gold mining industry, which confirms that firms in this industry hedge their own production. He found that almost all firms in the gold mining industry employ some form of hedging in gold-derivatives markets. Adam and Fernando (2006)[7] showed that firms with gold hedging programmes have consistently realised economically significant cash flow gains over the period 1990 to 2000. Similarly, Jin and Jorion (2007)[8] studied the hedging activities of 44 North American gold mining firms from 1991 to 2000 and showed that hedging with derivatives reduces risk from gold price exposure of most firms.

The hedging and price discovery functions of derivatives markets also enhances the efficiency of production, storage and marketing operations. An industry which has benefited from hedging is gold mining (Box 4).

Hedging ensures continuity of cash flows

Price volatility has an adverse effect on the revenue streams and can thereby disrupt cash flows. In this context, hedging insulates the firms from volatile price movements and ensures stable input cost / assured revenue streams. With certainty in cash-flows, firms, by choosing to hedge, can also bring about certainty in their production process. This is especially critical for small firms such as small to medium-sized jewellers, which are usually characterised by high costs, where unmitigated price volatility can pose existential threats. Besides, with assured price realization and cash flows through hedging, firms can not only protect themselves against price uncertainties but also are in better position for strategic planning on capital formation and expansion.

Usage of gold derivatives to manage systemic risks

Gold prices, being reactive to a number of domestic and global factors, has typically been highly volatile. By helping mitigate the impact of price volatility on business bottomlines, gold futures and options have been enabling mitigate a source of systemic risk in the economy. To put in perspective, volatility of 17 percent means that India's jewellery industry with demand estimated at 563 tons, bears a risk tantamount to ₹95,710 crore, assuming price of ₹1 lakh per 10 grams.

The Government of India's Sovereign Gold Bonds (SGB) is a source of sovereign risk on account of uncertainty in gold prices. Under the guidelines, SGB subscribers pay and receive amounts equivalent to the price of gold, rendering the issuer, that is, the Government of India, bear the risk of increase in gold prices. A total of 67 SGB series were issued between November 2016 and February 2024, selling a total of 146.96 tons of gold units. Cumulatively, government raised ₹72,274 Crore from SGBs. Again, with a volatility of 17 percent, the Government of India is exposed to a risk of ₹12,286 crore[10].

Increasing role in global price discovery

India has long been one of the highest consumers of gold, behind only China in recent years. Apart from public savings in the form of gold (about 30,000 tons held by Indian households, as per estimates by IBJA) and the central bank's reserves (about 880 tons held by RBI in March 2025), the vibrancy of India's gold jewellery industry (demand estimated at 563 tonnes in 2024, amounting to ₹3.6 trillion[9]) and gems and jewellery exports (contributes about 7 percent to India's GDP, as

6 Tufano, P. (1996), "Who Manages Risk? An Empirical Examination of Risk Management Practices in the Gold Mining Industry", Journal of Finance, 51(4), 1097-1137.

7 Adam, Tim and Chitru S. Fernando (2006), "Hedging, Speculation and Shareholder Value." Journal of Financial Economics 81(2), 283-309.

8 Jin, Yanbo and Philippe Jorion (2006), "Firm Value and Hedging: Evidence from the U.S. Oil and Gas Producers", Journal of Finance, 61(2), 893-919.

9 Source: World Gold Council and Gem and Jewellery Export Promotion Council (GJEPC).

10 Out of 146.96 tons of gold equivalent collected through SGBs, around 16.29 tons equivalent of gold bonds were fully redeemed till March 2025, while another 0.55 tons equivalent of gold bonds were redeemed early. That still left the government with 130.12 tons equivalent of gold bonds waiting to be redeemed.

per IBEF 2022) point towards the central role of gold in the Indian economy. Against this background, gold futures has been playing a critical role in integrating the regional markets into one 'India' market and providing a reference-able price to Indian stakeholders. Additionally, given the traditional and strong linkage of gold trade between India and geographies such as other South Asian nations and the Gulf Cooperation Council (GCC) region, as well as the presence of Indian diaspora in these regions, Indian gold futures has the capacity to emerge as the most referenced benchmark in these geographies also. Thus, Indian trade connections in gold can facilitate price discovery of the metal from the Indian markets to the global stage.

Understanding hedging with examples

Hedging is a critical risk management tool across the gold value chain, protecting refiners, dealers, jewelers, manufacturers, and institutional traders. Because price volatility directly impacts procurement costs, inventory valuations, and profit margins, stakeholders use gold derivatives to lock in prices and mitigate uncertainty. Ultimately, hedging stabilizes cost planning, safeguards margins, and drives informed commercial decisions. The following examples illustrate how different stakeholders deploy these strategies to manage specific price risks.

Long Hedge using MCX Gold Futures

Who can use it: Jewellers, manufacturers, importers and banks purchasing gold.

ABC Jewellers expects to buy 10 kg of gold after one month. To protect against rising prices, it buys MCX Gold Futures at ₹1,45,000 per 10 grams. Any increase in physical purchase cost is offset by gains on futures, while a fall in prices results in lower purchase cost offset by futures losses. The effective purchase price remains largely locked.

Particulars	Price Rises	Price Falls
Spot Price	₹1,50,000	₹1,40,000
Physical Gain/(Loss)	(₹50,00,000)	₹50,00,000
Futures Gain/(Loss)	₹50,00,000	(₹50,00,000)
Net Result	Purchase price protected	Purchase price protected

Long Hedge using MCX Gold Call Options

Who can use it: Jewellers, manufacturers and importers.

ABC Jewellers buys ATM Call Options instead of futures. By paying a premium of ₹2,000 per 10 grams, it protects itself against rising prices while retaining the benefit if prices decline. The maximum loss is limited to the premium.

Particulars	Price Rises	Price Falls
Spot Price	₹1,50,000	₹1,40,000
Option Pay-off	₹50,00,000	Nil
Premium Paid	₹20,00,000	₹20,00,000
Net Option Result	₹30,00,000	(₹20,00,000)

Short Hedge using MCX Gold Futures

Who can use it: Bullion dealers, refiners, banks and jewellers holding inventory.

PQR Bullion holds 10 kg of physical gold inventory and sells MCX Gold Futures at ₹1,45,000 per 10 grams. Losses on inventory due to falling prices are offset by gains in futures.

Particulars	Price Rises	Price Falls
Spot Price	₹1,40,000	₹1,50,000
Inventory Gain/(Loss)	(₹50,00,000)	₹50,00,000
Futures Gain/(Loss)	₹50,00,000	(₹50,00,000)
Net Result	Selling price protected	Selling price protected

Short Hedge using MCX Gold Put Options

Who can use it: Bullion dealers, refiners, banks and jewellers holding inventory.

XYZ Bullion purchases ATM Put Options by paying a premium of ₹2,000 per 10 grams. The put option protects against a fall in gold prices while allowing the company to benefit if prices rise.

Particulars	Price Rises	Price Falls
Spot Price	₹1,40,000	₹1,50,000
Inventory Gain/(Loss)	(₹50,00,000)	₹50,00,000
Put Option Pay-off	₹50,00,000	Nil
Premium Paid	₹20,00,000	₹20,00,000
Net Result	Protection of ₹30,00,000	Physical gain retained; premium paid

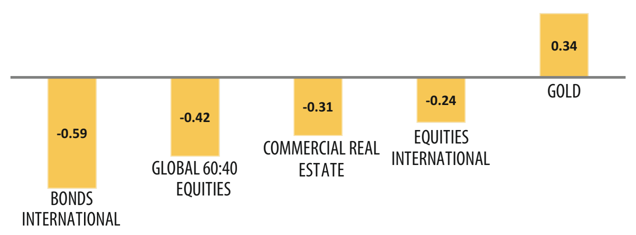
4. Gold Derivatives as an investment avenue

Gold has always held a cultural and emotional gravitas in India. But beyond tradition, savvy investors view gold as a strategic asset one that enhances risk-adjusted returns, an inflation hedge, and stabilizes portfolios during periods of stress in other market segments. Some of the advantages of using gold derivatives as an asset class include:

a) Exposure to international asset class: Gold being an asset traded in huge volumes internationally, and whose price are affected by international factors, is truly an international asset class. Investors looking for exposure to international assets in their portfolios can, therefore, invest in gold derivatives to satiate this element of their asset demand.

b) Hedge against inflation: Gold experiences price increase when inflation accelerates, which makes it a natural hedge against inflation. As evident from Chart 1, over a long timeframe, the correlation between inflation and real returns is the highest for gold compared with other asset classes.

Chart 1: Correlations between inflation and real asset returns (1900-2024)

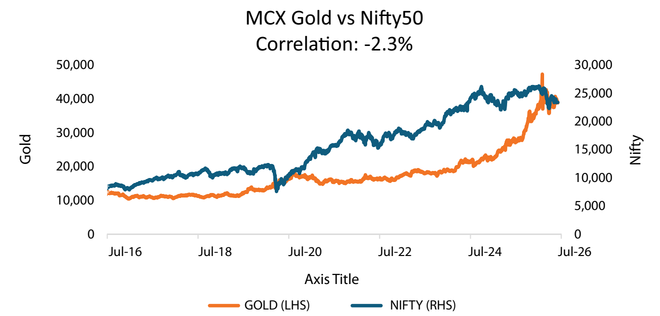


Source: World Gold Council

c) Low correlation with other asset classes: Gold has a low/ negative correlation with other asset classes like equities, bonds and currency like the US Dollar, making it highly attractive for its diversification benefits. Over the last decade, price correlation between MCX Gold Futures and Nifty 50 has been a low (-) 0.03 percent (Chart 2), exhibiting the diversification benefit of investing in Gold derivatives.

> "Hedging on MCX has provided us an efficient price risk management mechanism—this platform has brought stability to our trading strategies, even when spot prices moved by more than 10% in a single session."
>
> **Nayan Gogri**
> *VP-Qcap Securities Pvt Ltd.*

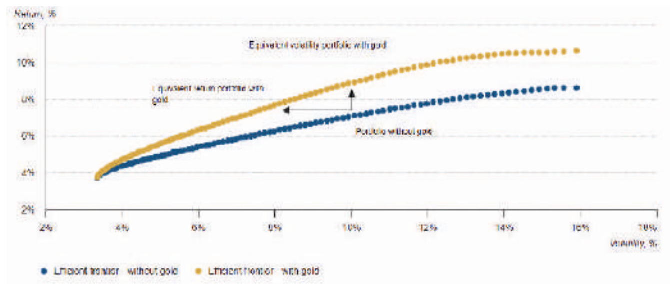
Chart 2: Movement of Nifty 50 and MCX Gold[11] (July 2016 – July 2026)



d) High risk-adjusted returns: Risk-adjusted returns of Gold is comparable to other traditional asset classes. Chart 3 shows that for the same level of volatility (signifying risk), efficient returns frontier for a portfolio with gold is always higher than one without gold. Thus, addition of gold can improve risk-adjusted portfolio returns of any portfolio across any level of risk.

e) Relationship with currencies: Some currencies like the Canadian Dollar, Australian Dollar, etc. have strong correlation with gold. As such, holding gold is akin to holding currencies such as these.

Chart 3: Gold's Significance in Improving Risk-Adjusted Returns



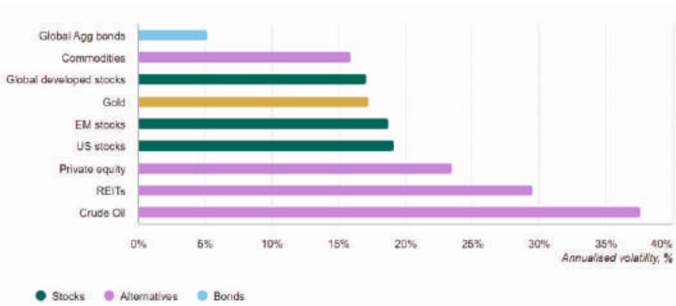
Source: World Gold Council

f) A related, and often underappreciated, point is that gold is not as volatile as people often assume, especially compared to other assets. As Chart 4 shows, gold's day-to-day price swings since 2004 have been about the same as global and emerging-market stocks, and much smaller than crude oil, REITs, private equity, or broader commodities. This is mainly because gold is traded in very large volumes, is easy to buy and sell, and is bought for many different reasons – jewellery, investment, technology, and by central banks. This is relevant for India's gold derivatives market too: the 11–17 percent annual volatility mentioned earlier may sound high on its own, but it is on the lower side when compared to the other assets that investors and hedgers deal with.

11 MCXGOLDEX index considered as substitute for continuous MCX Gold prices

Chart 4: Gold Has Been Less Volatile Than Many Equity Indices, Alternatives and Commodities Because of Its Scale, Liquidity and Diverse Sources of Demand

Annualised daily volatility of major assets since 2005.



Source: World Gold Council, "Gold as a Strategic Asset"

Gold Derivatives - Precision Tools for Portfolio Strategy

Being exchange-traded, centrally cleared and regulated instruments, derivatives offer the best way to invest in Gold. As discussed in the earlier sections, India's gold derivatives market offers a range of instruments: Futures and Options and different size variants within each, catering to the need of retail and institutional investors.

Institutional Participation in Gold Derivatives

Starting from 2016, financial institutions are progressively been allowed to participate in India's gold derivatives market. This has not only provided a fresh source of liquidity to the market and made it deeper, but also led to market inclusion of many new (especially retail) investors. Mutual Funds, Alternate Investment Funds and Portfolio Managers pool in investors' funds and participate in gold derivatives, thereby indirectly providing the benefits of this asset class to new investors who probably would not have otherwise directly participated in this market. Hybrid and multi asset funds now deploy gold futures and options tactically, not just spot gold, to optimize returns.

Globally, institutional investors are prominent participants in gold derivatives. In the U.S.A, for instance, large funds (PIMCO, BlackRock) have created schemes that overlay gold derivatives transacted through COMEX (CME Group) using strategies that enhance investors' portfolios.

Investing in Gold derivatives – the Macroeconomic impact

Given the nearly insatiable demand for gold in India and low domestic mining as a source, nearly all of the gold demand is imported. Indeed, gold has for a long time been one of the top items of import in India and, therefore, a major reason for persistent Current Account Deficit in India's Balance of Payments. Even financial instruments like Gold Exchange Traded Funds (ETFs) also help little to alleviate this macroeconomic problem, as each unit of gold ETFs is fully backed by physical gold.

Gold futures and options, on the other hand, allow investors to get exposure in gold against a small margin or premium. The exposure is a fully financial play without corresponding backing of physical gold. Other than the element of settlement through delivery (even within which only a small percentage of the 'delivered' gold actually moves out of accredited vaults), derivatives trade in gold provides investors the benefit of returns corresponding to gold price movement, without having to hold/ own physical gold. Thus, by eschewing physical gold and, by extension, gold imports, gold derivatives not just emerge as a medium for wealth creation, but also as instruments promoting macroeconomic discipline.

"We, MMTC PAMP processes and hedges tonnes of gold and silver annually. MCX's deep order book and standardized contracts have allowed us to execute large volume hedges efficiently without significantly impacting market prices"

Vipin Raina
President-Bullion & Trading, MMTC-PAMP India Pvt Ltd

5. Key enablers to achieve potential of Gold derivatives

Despite the real, tangible benefits gold derivatives have already delivered — reliable price discovery, a rupee-denominated hedging tool, and a deepening link to mainstream retail products through ETF pricing — India's gold derivatives market remains meaningfully underdeveloped relative to the sheer size of the physical gold market it serves. One way to see this is through the Futures-Physical Multiplier — the ratio of derivatives turnover to the size of the underlying physical market. A higher multiplier signals a deeper, more liquid derivatives market that's easier for participants, especially hedgers, to use.

Futures turned over at a multiplier of about 7 times the size of India's physical gold market – this number is much smaller than the corresponding multipliers in many other countries, especially ones with large gold physical markets, like India. That gap isn't a weakness so much as a measure of headroom. It points to a market still early in its development curve: as awareness spreads, as more of India's enormous physical gold trade gradually finds its way into formal, exchange-based hedging, and as participation — both retail and institutional — continues to widen, MCX's gold derivatives market has substantial room to grow before it even catches up to where comparable economies already stand, let alone reaches its own full potential. The full potential of the gold derivatives market can be realized with its further development, some of which include the following:

Expansion of institutional participation

Participation of financial institutions in commodity derivatives, including gold derivatives, is rather restrictive in India. Till early-2016, financial institutions were not allowed to participate in this market, a restriction that was removed with permission being progressively accorded to Category III Alternate Investment Funds (2016), Mutual Funds, Portfolio Management Service Providers, Foreign Portfolio Investors (2022) and Specialized Investment Funds (2025). It is widely recognized that participation of financial institutions brings in a rich source of liquidity and market depth, while also enabling retail investors to participate indirectly.

However, the window of permissibility to financial institutions in commodity derivatives is still rather narrow. For instance, FPIs are not allowed in gold futures and options despite a recognized demand from these participants. Some other enablers for institutional participation in gold derivatives include the following:

a. Asset Management Companies (AMCs) should be allowed to hold gold bars meeting India Good Delivery Standards, rather than current practice of mandating only LBMA standards

> “We at P N GADGIL AND SONS LTD are really blessed by MCX with platform which we use for Hedging our Gold underlying priced commodity which is very price sensitive, we are getting International price and currency movement effect hedging opportunity thru Gold bi monthly 1 kg 995 Gold contract, exchange has very effective entire system which give us comfort for safe trade. Thanks to entire Team MCX and confidant that experience which we had since 2005 will continue for another coming 100s of year.”
>
> **Amit Modak**
> *Director,P.N.Gadgil & Sons Ltd.*

b. Portfolio Management Services should be allowed to be net short in commodity derivatives, which is currently disallowed.

c. Alternate Investment Funds (AIFs) should not have the 10% investment restriction in a single commodity derivative

d. Existing leverage of only 2X for AIFs to invest in commodity derivatives is too restrictive. It should be relaxed.

At another level, a number of financial institutions are not even allowed to participate in this market, prominent among them being banks, arguably the most important class of financial institutions. In several developing economies, banks play a critical role in connecting the small stakeholders exposed to commodity price risks to hedging instruments[12]. Several expert committees[13] of the Reserve Bank of India and Government of India, among others, have advocated allowing banks to participate in the commodity derivatives market in their own interest and in the interest of their customers.

12 A more complete analysis of why banks should be allowed to participate in the commodity derivatives market is available at https://www.mcxindia.com/docs/default-source/education-training/occasional-papers/banks_participation.pdf?sfvrsn=2

13 For instance, Abhijeet Sen Committee (2008), Working Group on Warehouse Receipts & Commodity Futures, RBI (2005), Working Group to Review Guidelines for Hedging of Commodity Price Risk by Residents in Overseas Markets, RBI (2017), etc.

Like banks, other financial institutions like insurance companies and pension funds are also not allowed to participate in commodity derivatives, which is keeping these institutions away from the benefits that this market can offer them. As discussed in the previous section, addition of gold derivatives in a portfolio adds unique features like diversification and inflation proofing to the portfolio, while enhancing its risk-adjusted returns. These features make a compelling case for institutions, as much as individuals, to include gold derivatives for efficient treasury management and ensuring inflation-beating returns to their customers.

Electronic Gold Receipts - Solutions on GST issue

In response to the market demand for a gold spot exchange, a mechanism was created to trade gold on a regulated spot platform in electronic form. These Electronic Gold Receipts (EGRs) are considered as 'securities' under the Securities Contracts (Regulation) Act, 1956, are tradable on exchanges and enjoy the benefits and protection by virtue of being securities. Yet, investor interest in EGRs has been lackluster so far.

The main reason for EGR trading not eliciting much interest is the issue of GST applicability and credit availability. GST is not applicable on the EGR, which means that a seller on depositing gold and converting into Demat form to create tradeable EGR, does not get the GST credit back till the time the EGR is re-matted by a buyer. Beyond the stipulated 6-months' time, the seller cannot set off GST liability even if they get GST credit from a buyer.

Success of the EGR market will not only create a vibrant spot market for gold, but also support the further development of gold derivatives market. Greater synergies can be created between the electronic spot and derivatives markets, with more efficient deliveries and tighter convergence between the two markets.

Beneficial effect of reducing CTT: Commodity Transaction Tax (CTT), when introduced in the Exchange-traded gold derivatives in India from July 2013, has had significant adverse impact on the volumes and trading interest of market participants in this instrument. This tax, which is the single largest component in the cost of transactions, steeply reduced traded volumes on gold futures, which increased the bid-ask spread and increased the indirect cost of trading simultaneously. For adding vibrancy in gold futures market, it is important that this tax either be removed or at least minimized significantly in order to promote trading in the regulated, exchange-traded platforms.

> "Titan has proudly partnered with the Multi Commodity Exchange (MCX) for over 16 years on the Hedging front. The exchange has consistently provided a reliable and transparent trading environment, enabling us to effectively hedge our gold exposure as part of risk mitigation."
>
> **S. Keerthivasan**
> *General Manager-Bullion Management, Titan*

6. Conclusion

From the vaults of ancient civilizations to the screens of modern trading platforms, gold has remained a timeless asset; but it's through derivatives that this age-old metal finds its most dynamic expression in today's economy.

India's journey with gold derivatives is more than a financial evolution; it's a socio-economic shift empowering households, traders, investors and policymakers alike. Whether it's a rural farmer hedging price volatility, a portfolio manager seeking stability, or a policymaker assessing inflation drivers, gold derivatives serve as a strategic interface between tradition and innovation.

Realising this potential is no longer a distant dream it's an ongoing journey powered by progressive regulation, expanding market participation and platforms like MCX that are committed to innovation and accessibility. With growing awareness, digital outreach and strategic alignment with India's financial aspirations, gold derivatives are poised to become a cornerstone of inclusive financial growth. The foundation has been laid and the future much like gold itself shines bright.

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