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GOLD

HEDGING BROCHURE





One of the oldest civilisations known to man, the Sumerians of Mesopotamia, who lived in what is modern-day Iran and Iraq, first used gold as sacred, ornamental, and decorative instruments in the fifth millennium B.C. Around the same period, the early Egyptians —the richest gold-producing civilisation of the ancient world — began the art of gold refining. Like the Sumerians, the Egyptians used gold primarily for personal adornment, rather than for monetary purposes, although the kings of the fourth to sixth dynasties (c. 2700-2270 B.C.) did issue some gold coins. The first large-scale, private issuance of pure gold coins was under King Croesus (560-546 B.C.), the ruler of ancient Lydia, modern-day western Turkey. Stamped with his royal emblem of the facing heads of a lion and a bull, these first known coins eventually became the standard of exchange for worldwide trade and commerce.

The value of gold is rooted in its rarity, easy handling, easy smelting, non-corrosiveness, distinct colour and non-reactiveness to other elements—qualities most other metals lack.



OVERVIEW

Gold, the most sought-after of all precious metals, is acquired throughout the world for its beauty, liquidity, investment qualities, and industrial properties. As an investment vehicle, gold is typically viewed as a financial asset that maintains its value and purchasing power during inflationary periods. However, globalization has increased volatility across asset classes, including gold, which can be dealt with using various risk management instruments.

PRICE RISK MANAGEMENT

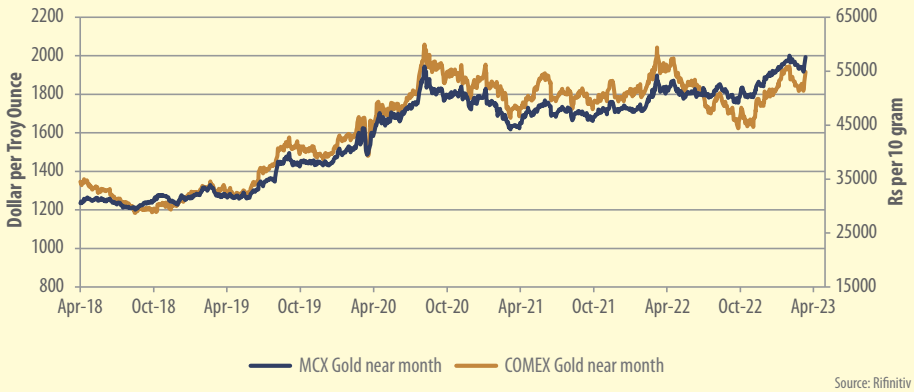
Risk management techniques are of critical importance for participants, such as mining companies, processors, companies dealing in gold and gold products, jewellers and even governments which rely on the proceeds of bullion consumption and trade. Modern techniques and strategies, including market-based risk management financial instruments, such as Gold Futures and Gold Options on Futures, offered on the commodity derivatives exchange platform can improve efficiencies and consolidate competitiveness.

The importance of risk management cannot be overstated; India, one of the world's largest markets for gold jewellery and a key driver of global gold demand needs such financial instruments like futures and options to get its bullion industry protected from price risk.

HEDGING MECHANISM

Hedging is the process of reducing or controlling risk. The dictionary meaning of hedging is 'a way of protecting oneself against financial loss or other adverse

PRICE MOVEMENT



Source: Rifinitiv Eikon

circumstances.' Hedging on commodity derivatives exchange can be undertaken using futures contracts or options contracts.

Hedging using futures contracts involves taking equal and opposite positions in two different markets: physical and futures market. It is a two-step process where a gain or loss in the physical position due to changes in price will be offset by changes in the value on the futures platform, thereby reducing or limiting risks associated with unpredictable changes in prices. The principle on which hedging using futures contract works is that spot physical market prices and futures market prices tend to move up and down largely in sync, and the prices converge at the time of expiry of futures contract. This enables the hedger to offset gains/loss in one market through loss/gain in other market via their counter positions.

While hedging using options, a hedger can not only get protection against undesired price movement in the underlying commodity, but also benefit from an advantageous price movement in it. Ownership to options contracts comes at a small fee called as 'option premium'. Broadly, options are of two types, i.e. Call Option and Put Option.

A call option gives the buyer (holder) of the option the right to buy the underlying (i.e. commodity futures contract), at a fixed price on the expiration date. A put option gives the buyer (holder) of the option the right to sell the underlying (i.e. a commodity futures contract), at a fixed price on the expiration date.

In the international arena, gold futures as well as gold options are available on various global exchanges, the major ones being Chicago Mercantile Exchange (CME) and Tokyo Commodity Exchange (TOCOM).

IMPORTANCE OF HEDGING

Critical for stabilizing incomes of corporations and individuals, reducing risks may not always improve earnings, but failure to manage risk will have direct repercussion on the risk-bearer's long-term income. To gain the most from hedging, it is essential to identify and understand the objectives behind hedging.

A good hedging practice, hence, encompasses efforts on the part of companies or individuals to get a clear picture of their risk profile and benefit from hedging techniques.

HEDGERS

Those who have or intend to have positions in physical gold, including:

- Corporations
- Mining companies
- Market intermediaries
- Merchandisers
- Jewellers and designers
- Importers and exporters
- Bullion and jewellery traders

FACTORS IMPACTING PRICE VARIATIONS IN GOLD

- Currency exchange rates movements, especially USD.
- Gold demand from major consumer countries like India and China.
- Gold supply: China, the U.S., South Africa etc.
- Changes in import duties.
- Economic factors: Employment and housing data from major economies especially U.S.
- Interest rate movements especially in U.S.
- Political turmoil.

FACTS ON HEDGING

- Understanding the risk profile and appetite while formulating clear hedging objectives.
- Hedging can shield the revenue stream, the profitability, and the balance sheet against adverse price movements.
- Hedging can maximize shareholder value.
- Under International Financial Reporting Standards (IFRS), beneficial options arise in effective hedges.
- Common avoidable mistake is to book profits on the hedge while leaving the physical leg open to risk.
- Hedging provides differentiation to companies in a highly competitive environment.
- Hedging also significantly lowers distress costs in adverse circumstances confronting a company.
- To gain the most from hedging, it is very essential to identify and understand the objectives behind hedging and get a clear picture of their risk profile.

Gold has been a valuable and highly sought-after precious metal for coinage, jewellery, and other arts since long, even before the beginning of recorded history.



APPRECIATING THE BENEFITS OF HEDGING - using futures (Long position)

A situation prevailing in the gold industry is given below. It demonstrates how the futures platform may be used by participants to manage price risk by entering into Gold Futures contracts. We will look at the impact on price movements in either direction.

THE SITUATION

Gold BOX, a company in the jewellery design business, has been competing in the overseas market. Its designer jewellery has a steady but growing market. To develop its market share the management has realized that it needs to price its designer products competitively. In the past, the company resorted to buying and storing gold bars.

This strategy led to many problems relating to raw-material procurement decisions, especially timing of decisions and storage concerns.

Although the highly experienced personnel have been astute in most decisions, the recent movements in gold prices caused by currency movements (Quantitative Easing, interest rate movement in Europe, and import duty structure), have led to margins getting eroded.

A consultant appointed by the management has recommended that price risk should be mitigated by taking up positions on the commodity exchange.

On 1st January, Gold BOX, a company in the jewellery design business, enters into a contract for delivery of finished designer jewellery after three months. Based on experience, the company has put together the following facts and observations.

- The selling price of finished product and gold content in these
- products cannot be altered
- Raw material (gold bars) will be required for actual use in mid-March
- Risk of change in gold prices is perceived
- Estimated requirement or consumption is 80 kg per quarter
- Going long means buying the futures contract

HOW CAN 'GOLD BOX' HEDGE AGAINST PRICE RISK?

We will look at both possibilities, that is, price rise and price fall. Let's take the situation when prices rise first.

SCENARIO 1: IF PRICES WERE TO RISE

DETAILS	FUTURES PLATFORM	PHYSICAL MARKET
1st January	BUY Gold Futures Contract	
15th March	SELL Gold Futures Contract	BUY the required quantity of gold in the physical market

The net position of the above transactions will negate price risk

(₹/10 grams)

DATE	GOLD SPOT PRICE	GOLD FUTURES PRICE (expiry 5th April)
1st January	57,555	56,780
15th March	60,700	60,255

MARKET	DATE	ACTION	PRICE	DATE	ACTION	PRICE	PROFIT/LOSS
Futures	1st January	BUY	56,780	15th March	SELL	60,255	3,475(profit)
Spot	15th March			15th March	BUY	60,700	

Net purchase price: ₹57,225, i.e. (₹60,700 - ₹3,475)

EXPLANATION

The treasury department of Gold BOX buys a futures contract on 1st January and squares up or sell the contract on the 15th of March thereby making a profit of ₹3,475 per contract . They then buy in the spot market the required physical quantity at ₹60,700. The net cost works out to ₹57,225 for 10 g. The impact on the bottom line is ₹26.4 lakh. i.e. (₹57,555 - ₹57,225) x 80 kg.

SCENARIO 2: IF PRICES WERE TO FALL

DETAILS	FUTURES PLATFORM	PHYSICAL MARKET
1st January	BUY Gold Futures Contract	
15th March	SELL Gold Futures Contract	BUY the required quantity of gold in the physical market

The net position of the above transactions will negate price risk

(₹/10 grams)

DATE	GOLD SPOT PRICE	GOLD FUTURES PRICE (expiry 5th April)
1st January	57,555	56,780
15th March	55,985	55,335

MARKET	DATE	ACTION	PRICE	DATE	ACTION	PRICE	PROFIT/LOSS
Futures	1st January	BUY	56,780	15th March	SELL	55,335	1,445 (loss)
Spot	15th March			15th March	BUY	55,985	

Net purchase price: ₹57,430, i.e. (₹55,985+₹1,445)

EXPLANATION

The treasury department of Gold BOX buys a futures contract on 1st January and squares up or sells the contract on the 15th of March thereby making a loss of ₹1,445 on the contract. They then buy in the spot market the required physical quantity at ₹55,985. The net cost for 10 g being ₹57,430.

Note: Although both the scenarios in the above example result in a small profit, the objective is to lock into the price so that whichever direction the price moves Gold BOX is not adversely affected. Loss in one market is offset by a gain in the other. Profits are only incidental.

APPRECIATING THE BENEFITS OF HEDGING - using futures (Short position)

Gold CHEST is confronted with a scenario where volatile prices could erode its balance-sheet value. It now uses the futures platform to manage risk by taking positions on the Gold Futures contract and thereby protect the company value. We now look at the impact of price movement in either direction.

THE SITUATION

Gold CHEST is a bullion dealer which imports and sells gold biscuits and bars to a number of users. This market has been extremely unpredictable due to price volatility, a reflection of international and domestic fundamentals.

Although Gold CHEST has customers only in the local market, it is severely affected by currency fluctuations, and customers have become non-committal, resulting in an increase of stocks in its vaults. In a recent board meeting, the management's suggestion, based on international practices, to hedge its stocks against price movement on the futures platform has been approved.

A treasury team has been put in place, besides a broker has been identified after a critical assessment of alternative service providers.

Gold CHEST is now ready to take the plunge.

On 1st January, 'Gold CHEST', a bullion dealer, enters into a futures contract for protecting its rising inventory against adverse price movement. Experts have put forward the following facts and observations.

- Falling prices would adversely affect the bottom line as inventory 'valuations' would fall
- Valuation will take place at the end of March and inventory has been estimated at 50 kg
- Risk of change in gold prices is perceived
- Going short means selling the futures contract

HOW CAN 'GOLD CHEST' HEDGE AGAINST PRICE RISK AND PROTECT ITS BALANCE SHEET?

We will look at both possibilities, that is, price fall and price rise. Let's take the situation when prices fall first.

SCENARIO 1: IF PRICES WERE TO FALL

DETAILS	FUTURES PLATFORM	PHYSICAL MARKET
1st January	SELL Gold Futures Contract	
31st March	BUY Gold Futures Contract	Values inventory on hand, based on the ruling spot price

The net position of the above transactions will negate price risk and protect value

(₹/10 grams)

DATE	GOLD SPOT PRICE	GOLD FUTURES PRICE (expiry 5th April)
1st January	60,000	60,150
31st March	59,240	59,080

MARKET	DATE	ACTION	PRICE	DATE	ACTION	PRICE	PROFIT/LOSS
Futures	1st January	SELL	60,150	31st March	BUY	59,080	1,070 (profit)
Spot	31st March			31st March	VALUATION	59,240	

Net Valuation /10 g: ₹60,310, i.e. (₹59,240+₹1,070)

EXPLANATION

The treasury team Gold CHEST short sells a 5th April futures contract on 1st January and squares the contract on 31st March. Its inventory valuation will be based on March 31 spot price of ₹59,240; however, this fall in value (₹60,000-₹59,240) will be partially offset by the profit of ₹1,070 on the futures platform. Hence, the bottom line will enhance by ₹310 per 10 g. The effect on the bottom line is ₹15.5 lakh (₹310/10 g x 50 kg).

SCENARIO 2: IF PRICES WERE TO RISE

DETAILS	FUTURES PLATFORM	PHYSICAL MARKET
1st January	SELL Gold Futures Contract	
31st March	BUY Gold Futures Contract	Values inventory on hand, based on the ruling spot price

The net position of the above transactions will negate price risk and protect value

(₹/10 grams)

DATE	GOLD SPOT PRICE	GOLD FUTURES PRICE (expiry 5th April)
1st January	60,000	60,150
31st March	60,600	60,425

MARKET	DATE	ACTION	PRICE	DATE	ACTION	PRICE	PROFIT/LOSS
Futures	1st January	SELL	60,150	31st March	BUY	60,425	275 (loss)
Spot	31st March			31st March	VALUATION	60,600	

Net Valuation /10 g: ₹60,325, i.e. (₹60,600-₹275)

EXPLANATION

The treasury department of Gold CHEST sells a futures contract on 1st January and squares up the contract on 31st March thereby making a loss of ₹275 . The valuation in its books will be at ₹60,600. This rise in value will be tempered by the loss of ₹275 on the futures platform. Hence, the bottom line gets enhanced by ₹325 (₹60,600-₹60,000 less ₹275) .

Note: In the first case the prices fall as per expectations, resulting in an overall gain. In the second, prices rise unexpectedly, resulting in a minor loss on the futures platform; however, overall valuations rise. The objective to lock into the price is achieved and, 'Gold CHEST's, balance sheet remains protected. Profits are only incidental.

APPRECIATING THE BENEFITS OF HEDGING – using call options on futures

Gold stakeholders, such as risk averse jewellers on entering into an agreement with customers, often face the risk of an unexpected rise in gold price when they would procure gold for processing, which cannot be passed on to the customers. By buying a call option, they can hedge against such a risk, as the following example shows.

THE SITUATION

On August 25th, the spot price of Gold is ₹60,400 per 10 grams. A jeweller has received an order for 1 kg of gold jewellery, to be delivered by 1st week of October, for which the selling price has been fixed based on current spot prices. He would require physical gold for processing the order in the last week of September.

However, the jeweller expects a rise in price of gold in the near future, against which he wants to protect himself. To hedge himself against the expected price increase, he buys Gold Call Option on future expiring on September 27th, at the strike price of ₹60,500 per 10 grams for a premium of ₹600. The underlying to this option contract is Gold October futures contract trading at ₹60,500 per 10 grams.

The following two scenarios are possible at options expiry:



SCENARIO 1: IF GOLD PRICES WERE TO RISE

PRICE & ACTION	GOLD SPOT PRICES (₹/10 GRAMS)	GOLD OCT FUTURES PRICES (₹/10 GRAMS)	GOLD SEPT CALL OPTIONS (UNDERLYING: GOLD OCT FUTURES CONTRACT)	CALL OPTION PREMIUM (₹)
Traded Price on August 25	60,400	60,500	60,500 (strike price)	Out:600
Action on August 25	-	-	Buy Call option contract by paying premium	
Position in market	Nil	Nil	Long 1 lot	
Close Price on September 27 (Option expiry day)	61,710	61,870	60,500 (strike price)	1,370
Action on September 27 after close of market hours	-	On exercise, the call options contract will devolve into a long position in the underlying gold futures contract at ₹60,500 (strike price)		
Position on September 27 post-devolvement	-	Long 1 lot	Nil	-
Traded Price on September 28	61,960	62,150	-	-
Action on September 28	Buy in physical market	Sell the long open futures position	-	-
Flow of money	Out: 61,960	In: 1,650 (62,150 – 60,500)	-	Out: 600

Thus, the net purchase price of gold on September 28 is ₹61,960 (Physical market purchase) – ₹1,650 (gains in futures market on devolvement of options position) + ₹600 (option premium paid) = ₹60,910 per 10 grams, which is close to spot prices prevailing on August 25. Thus, by buying a 'Call' Option on future and allowing it to devolve into futures position on expiry, the jeweller was able to protect his business margins, in the event of a rise in prices.



SCENARIO 2: IF GOLD PRICES WERE TO FALL

PRICE & ACTION	GOLD SPOT PRICES (₹/10 GRAMS)	GOLD OCT FUTURES PRICES (₹/10 GRAMS)	GOLD SEPT CALL OPTIONS (UNDERLYING: GOLD OCT FUTURES CONTRACT)	CALL OPTION PREMIUM (₹)
Traded Price on August 25	60,400	60,500	60,500 (strike price)	Out:600
Action on the August 25	-	-	Buy Call option contract by paying premium	
Position in market	Nil	Nil	Long 1 lot	-
Close Price on September 27 (Option expiry day)	57,900	57,930	60,500 (strike price)	0
Action on September 27 after close of market hours	-	As strike price of the Call option contract is more than the underlying futures prices, it expires worthless.		
Position on September 27 post-devolvement	-	-	-	-
Traded Price on September 28	57,890	-	-	-
Action on September 28	Buy in physical market	-	-	-
Flow of money	Out: 57,890	-	-	Out: 600

Net purchase price of gold on September 28 is ₹57,890 (Physical market purchase) + ₹600 (option premium paid) = ₹58,490 per 10 grams, much less than the spot prices prevailing on August 25.

Thus, by hedging risk of rise in gold prices using a Gold Call Options Contract, a jeweller would just not be protected against price rise but would also benefit from fall in gold prices, if any, in form of lower net purchase price.

In Europe, most countries left the gold standard with the start of World War I in 1914 and, with huge war debts, did not return to gold as a medium of exchange.



APPRECIATING THE BENEFITS OF HEDGING – using put options on futures

Gold market stakeholders often store the commodity before processing and selling to prospective customers. They, therefore, face the risk of a fall in gold prices. By buying a put option, they can hedge against such a risk, as the following example shows.

THE SITUATION

On October 25th, the spot price of Gold is ₹59,400 per 10 grams. A jeweller has procured 1 kg of gold jewellery stock for sale at spot price. A customer has agreed to buy this jewellery from the jeweller by end of November at the then prevailing gold prices.

As a result, a jeweller faces a risk of fall in gold prices. Hence, to hedge against this, jeweller buys Gold Put Options expiring on November 28th at the strike price of ₹59,500 per 10 grams for a premium of ₹600. The underlying to this option contract is Gold December futures contract trading at ₹59,500 per 10 grams.

Following two scenarios are possible at options expiry:



SCENARIO 1: IF GOLD PRICES WERE TO FALL

PRICE & ACTION	GOLD SPOT PRICES (₹/10 GRAMS)	GOLD DEC FUTURES PRICES (₹/10 GRAMS)	GOLD NOV PUT OPTIONS (UNDERLYING: GOLD DEC FUTURES CONTRACT)	PUT OPTION PREMIUM (₹)
Traded Price on October 25	59,400	59,500	59,500 (strike price)	Out:600
Action on October 25	-	-	Buy Put option contract by paying premium	
Position in market	Long 1 kg	Nil	Long 1 lot	-
Close Price on November 28 (Option expiry day)	57,000	57,050	59,500 (strike price)	2,450
Action on November 28 after close of market hours	-	On exercise, the Put options contract will devolve into a short position in the underlying gold futures contract at ₹59,500 (strike price)		
Position on November 28 post-devolvement	Long 1 kg	Short 1 lot	Nil	-
Traded Price on November 29	56,980	57,020	-	-
Action on November 29	Sell in physical market	Buy, to Square off the short open futures position	-	-
Flow of money	In: 56,980	In: 2,480 (59,500 – 57,020)	-	Out: 600

Thus, the net sale price of gold on November 29 is ₹56,980 (Physical market sale) + ₹2,480 (gains in futures market on devolvement of options position) - ₹600 (option premium paid) = ₹58,860 per 10 grams, which is close to spot prices prevailing on October 25.

Thus, by buying a 'Put' Option and allowing it to devolve into futures position on expiry of the Options contract, the jeweller was able to protect his business margins, in the event of a fall in prices.



SCENARIO 2: IF GOLD PRICES WERE TO RISE

PRICE & ACTION	GOLD SPOT PRICES (₹/10 GRAMS)	GOLD DEC FUTURES PRICES (₹/10 GRAMS)	GOLD NOV PUT OPTIONS (UNDERLYING: GOLD DEC FUTURES CONTRACT)	PUT OPTION PREMIUM (₹)
Traded Price on October 25	59,400	59,500	59,500 (strike price)	Out:600
Action on October 25	-	-	Buy Put option contract by paying premium	
Position in market	Long 1 kg	Nil	Long 1 lot	-
Close Price on November 28 (Option expiry day)	61,250	61,280	59,500 (strike price)	0
Action on November 28 after close of market hours	-	As strike price of the Put option contract is less than the underlying futures prices, it expires worthless.		
Position on November 28 post-devolvement	Long 1 kg	Nil	Nil	-
Traded Price on November 29	61,260	-	-	-
Action on November 29	Sell in the physical market	-	-	-
Flow of money	In: 61,260	-	-	Out: 600

Thus, the net sale price of gold on November 29 is ₹61,260 (Physical market sale) – ₹600 (option premium paid) = ₹60,760 per 10 grams, which is much more than the spot prices prevailing on October 25.

Thus, by hedging risk of fall in gold prices using a Gold Put Options Contract, a jeweller would just not be protected against price fall, but would also benefit from rise in gold prices, if any, in form of higher net sale price.

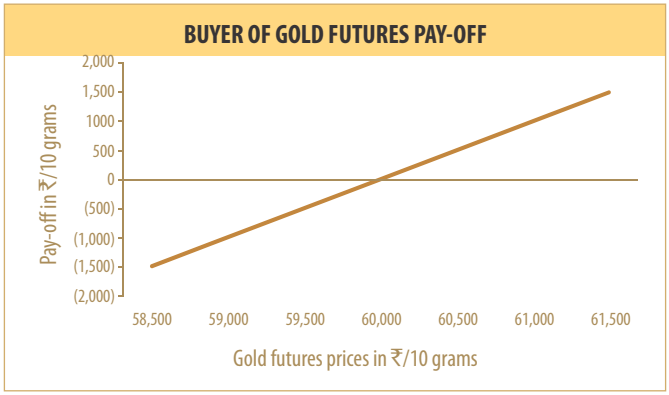


In the past, the Gold Standard had been implemented as a monetary policy, but it was widely supplanted by fiat currency starting in the 1930s. The last gold certificate and gold coin currencies were issued in the U.S. in 1932.

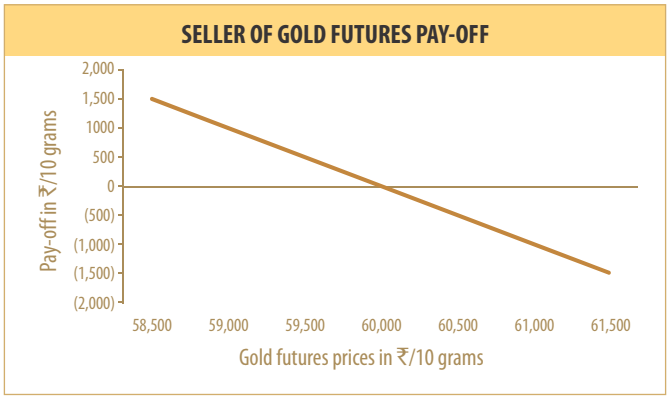
FUTURES AND OPTIONS PAYOFFS

A. Commodity Futures

1. Assume a market participant buys a gold futures contract at ₹60,000 per 10 grams. His pay-off on his futures position with change in gold futures prices is as shown below.

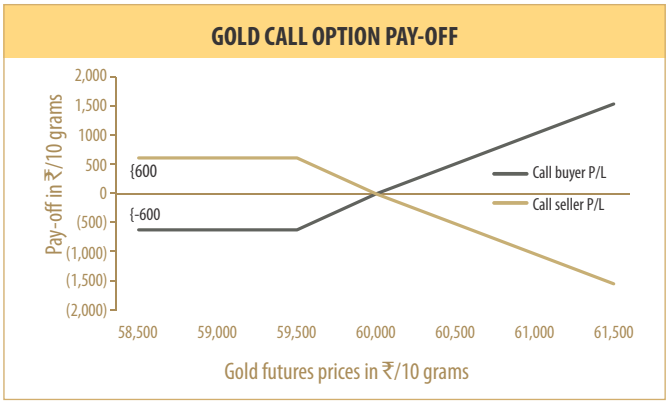


2. Assume a market participant sells a gold futures contract at ₹60,000 per 10 grams. His pay-off on his futures position with change in gold futures prices is as shown below.

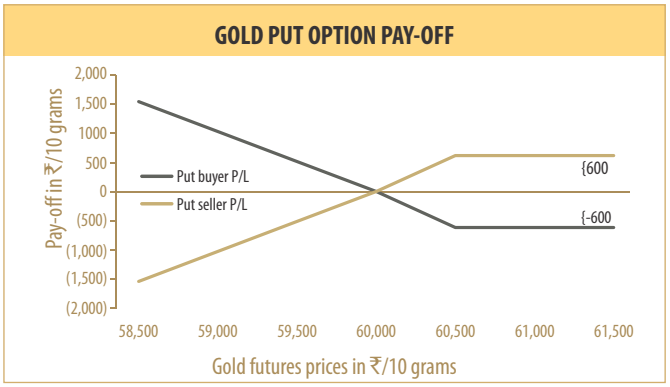


B. Commodity Options on Futures

3. Assume a market participant buys a gold call option contract with a strike price at ₹60,000 per 10 grams at a premium of ₹600. His pay-off on his call option contract with change in the underlying gold futures prices is as shown below. Pay-off for call option seller is also shown in same figure.



4. Assume a market participant buys a gold put option contract with a strike price at ₹60,000 per 10 grams and premium at ₹600. His pay-off on his put option contract with change in the underlying gold futures prices is as shown below. Pay-off for put option seller is also shown in same figure.





"The desire for gold is not for gold. It is for the means of freedom and benefit"
(Ralph Waldo Emerson, 19th century American poet)

"All the gold on Earth would weight 91000 tons – less than the amount of steel made around the world in an hour. That's rare."
(Daniel M. Kehrer, Thought Leader)

HEDGING EXPERIENCES

1. Titan Industries Ltd

Titan Industries is a leader in the Indian market for branded Jewelry and is also known for their watches."The Company uses derivative financial instruments to manage risks associated with gold price fluctuations relating to certain highly probable forecasted transactions, foreign currency fluctuations relating to certain firm commitments. The Company has designated derivative financial instruments taken for gold price fluctuations as 'cash flow' hedges relating to highly probable forecasted transactions." (Source: Annual Report)

2. Barrick Gold Corp

The US-based gold mining company is the world's largest producer, operating mines and undertaking exploration on five continents. "We use derivatives as part of our risk management program to mitigate variability associated with changing market values related to the hedged item. (Source: Annual Report)

3. Kaloti Jewellery Group

"The group trades and hedges hundreds of tonnes of bullion annually…." (Source: Group brochure)

4. Signet Jewelers Ltd

"Signet uses gold and currency hedges to reduce its exposure to market volatility in the cost of gold...." (Source: Annual Report; largest jewellery retailer in the U.S., the UK, and Canada)

TOP REPORTED OFFICIAL GOLD HOLDING

COUNTRY	TONNES	% OF RESERVES	COUNTRY	TONNES	% OF RESERVES
United States	8,133.5	69%	Spain	281.6	18%
Germany	3,354.9	68%	Austria	280.0	50%
IMF	2,814.0	-	Thailand	244.2	7%
Italy	2,451.8	65%	Poland, Rep. of	228.7	9%
France	2,436.8	67%	Belgium	227.4	34%
Russian Federation	2,326.5	25%	Singapore	222.4	4%
China, P.R.: Mainland	2,068.4	4%	Algeria	173.6	14%
Switzerland	1,040.0	7%	Venezuela, Republica Bolivariana de	161.2	84%
Japan	846.0	4%	Philippines	159.0	10%
India	794.6	9%	Iraq	130.3	8%
Netherlands, The	612.5	58%	Brazil	129.7	2%
Turkey	572.0	34%	Sweden	125.7	13%
ECB	506.5	39%	Egypt, Arab Rep. of	125.7	25%
Taiwan Province of China	423.6	5%	South Africa	125.4	13%
Portugal	382.6	70%	Mexico	120.3	4%
Uzbekistan, Rep. of	381.3	68%	Libya	116.6	9%
Kazakhstan, Rep. of	332.0	58%	Greece	114.3	55%
Saudi Arabia	323.1	4%	Korea, Rep. of	104.4	2%
United Kingdom	310.3	11%	Romania	103.6	10%
Lebanon	286.8	54%	BIS	102.0	-

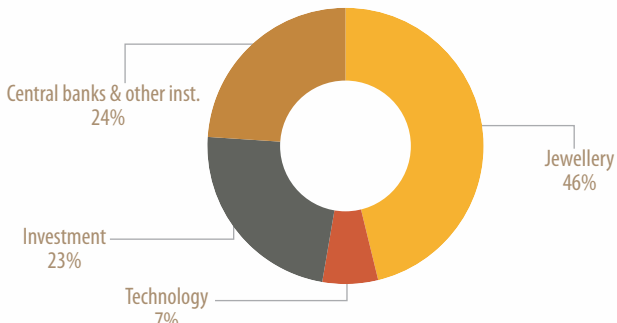
Source: IMF IFS, World Gold Council (as at March 2023)

COUNTRY-WISE CONSUMER DEMAND - 2022
(IN TONNES)

COUNTRY	JEWELLERY	BARS & COINS	TOTAL
Greater China	598.30	226.64	824.94
India	600.40	173.56	773.96
Europe ex CIS	70.60	314.22	384.82
United States	143.70	112.86	256.56
Middle East	190.40	77.80	268.20
Turkey	36.70	84.85	121.55
Russian Federation	35.70	25.00	60.70
Indonesia	28.30	21.47	49.77
Vietnam	18.10	41.03	59.13
Pakistan	23.50	20.83	44.33

Source: World Gold Council

GLOBAL DEMAND STATISTICS - 2022



Total demand 4,740.73 tonnes

Source: World Gold Council

REGULATORY BOOSTS FOR HEDGERS

1. Income tax exemptions for hedging. The Finance Act, 2013, has provided for coverage of commodity derivatives transactions undertaken in recognized commodity exchanges under the ambit of Section 43(5) of the Income Tax Act, 1961, on the lines of the benefit available to transactions undertaken in recognized stock exchanges.

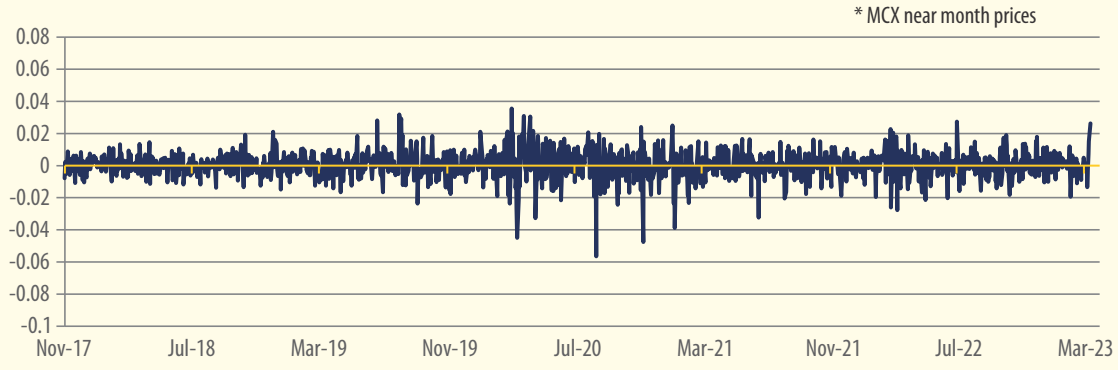
   This effectively means that business profits/losses can be offset by losses/ profits undertaken in the commodity derivatives transactions. This enhances the attractiveness of risk management on recognized commodity derivative exchanges and incentivizes hedging. Hedgers are no longer forced to undertake physical delivery of commodities to prove that their transactions are for hedging and not speculation'.

2. Limit on open position as against hedging. This enables hedgers to take positions over and above prescribed position limits on approval by the exchange and thus can hedge to a great extent of their exposure in the physical market.

3. Early pay-in benefit. If a hedger makes an early pay-in of commodity, he is exempted from paying all applicable margins.

A comprehensive Hedge Policy Document is available at https://www.mcxindia.com/docs/default-source/market-operations/trading-surveillance/reports/hedgepolicy.pdf?sfvrsn=2

AVERAGE DAILY PRICE VOLATILITY OF GOLD PRICES*



YEAR	2015	2016	2017	2018	2019	2020	2021	2022
ANNUALIZED VOLATILITY	12.8%	15%	8.9%	9.01%	12%	18.94%	12.97%	13.1%

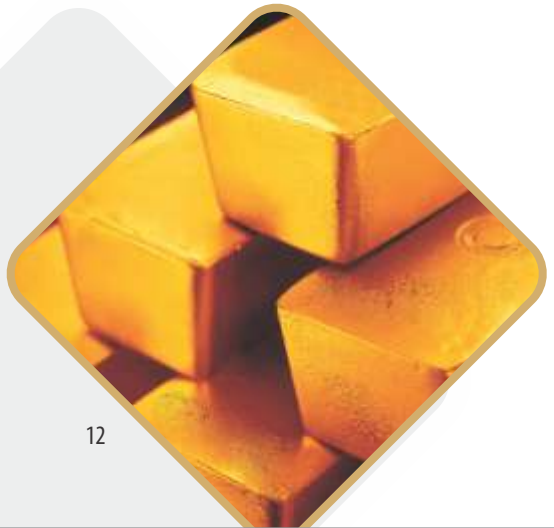
HOW MUCH VOLATILITY RISK ARE YOU EXPOSED TO?

Gold: Witnessed an annualized price volatility of 13% in 2022, which means:

- A firm in the gold business with an annual turnover of ₹1,000 cr was exposed to a price risk of about ₹130 cr in 2022
- India, with an annual gold market size of 800 tonnes worth about ₹5,50,000 cr, is exposed to a risk on account of price volatility to the tune of ₹71,500 (that is, 13% of the holding value).

ARE YOU PREPARED FOR VOLATILITY RISK?

Adoption of a risk management practice, such as hedging on the commodity derivatives platform can help shield against the perils of price volatility.



VOLATILITY IN GOLD

Commodity price volatility act as a source of risk to commodities-related business, as it instills a degree of uncertainty over the actual finances involved in the business.

According to the Washington-based Corporate Executive Board's survey, of the top 10 risks faced by corporate participants, commodity price risk was pronounced as number one.

"But in truth, should I meet with gold or spices in great quantity, I shall remain till I collect as much as possible, and for this purpose I proceed solely in quest of them"
(Christopher Colombus)



SALIENT SPECIFICATIONS OF MCX GOLD FUTURES CONTRACTS

Symbol	GOLD	GOLD MINI	GOLD GUINEA	GOLD PETAL
Contracts Available	Feb, Apr, Jun, Aug, Oct, Dec	Jan, Feb, Mar, Apr, May, Jun, Jul, Aug, Sep, Oct, Nov, Dec		
Last Trading Day	5th day of contract expiry month. If 5th day is a holiday then preceding working day.		Last calendar day of the contract expiry month. If last calendar day is a holiday then preceding working day.	
Trading Period	9.00 a.m. to 11.30 / 11.55 p.m.#			
Trading Unit	1 kg	100 grams	8 grams	1 gram
Quotation/ Base Value	10 grams	10 grams	8 grams	1 gram
Price Quote	Ex-Ahmedabad*			Ex-Mumbai*
Maximum Order Size	10 kg			
Tick Size	₹1/10 grams		₹1/8 grams	₹1/1 gram
Daily Price Limit	The base price limit will be 3%. Whenever the base daily price limit is breached, the relaxation will be allowed upto 6% without any cooling off period in the trade. In case the daily price limit of 6% is also breached, then after a cooling off period of 15 minutes, the daily price limit will be relaxed upto 9% In case price movement in international markets is more than the maximum daily price limit (currently 9%), the same may be further relaxed in steps of 3%.			
Initial Margin	Minimum 6% or based on SPAN whichever is higher			
Extreme Loss Margin	Minimum 1%			
Additional and/ or Special Margin	In case of additional volatility, an additional margin (on both buy & sell side) and/ or special margin (on either buy or sell side) at such percentage, as deemed fit; will be imposed in respect of all outstanding positions.			
Maximum Allowable Open Position**	For individual client: 5 MT for all Gold futures contracts combined together or 5% of the market wide open position whichever is higher, for all Gold futures contracts combined together. For a member collectively for all clients: 50 MT or 20% of the market wide open position whichever is higher, for all Gold futures contracts combined together.			
Delivery Unit	1 kg	100 grams	8 grams	1gram
Delivery Period Margin	Delivery period margins shall be higher of a. 3% + 5 day 99% VaR of spot price volatility or b. 25%			
Delivery Centre	Ahmedabad			Mumbai
Additional Delivery Centres	Chennai, Hyderabad, Kochi, Bengaluru, Kolkata, Mumbai and New Delhi		Mumbai & New Delhi	Ahmedabad & New Delhi
Quality Specifications	995 purity		999 purity	
Delivery Logic	Compulsory			

Note: Please refer to the exchange circulars for latest contract specifications. | #based on US daylight saving time period

* Inclusive of all taxes and levies relating to import duty, customs but excluding GST, any other additional tax, cess, octroi or surcharge as may be applicable

** Genuine hedgers having underlying exposure that exceed the prescribed OI limits given in the contract specifications can be allowed higher limits based on approvals

SALIENT FEATURES OF MCX GOLD OPTIONS CONTRACT WITH GOLD (1KG) FUTURES AS UNDERLYING AND MCX GOLD MINI OPTIONS CONTRACT WITH GOLD (100 grams) FUTURES AS UNDERLYING

Symbol	**GOLD**	**GOLDI MINI**
Underlying	MCX Gold Futures (1 kg) contract	MCX Gold Futures (100 grams) contract
Option type	European Call & Put Options	
Expiry Day (Last Trading Day)	3 business days prior to the first business day of Tender Period of the underlying futures contract.	
Trading Period	Monday to Friday 9.00 a.m. to 11.30 / 11.55 p.m.#	
Trading Unit	One MCX Gold 1 Kg futures contract	One MCX Gold Mini futures contract
Underlying Quotation/ Base Value	₹/10 grams	
Underlying Price Quote	Ex-Ahmedabad (inclusive of all taxes and levies relating to import duty, customs but excluding sales tax and VAT, any other additional tax or surcharge on sales tax, local taxes and octroi or GST as applicable)	
Strikes	25 In-the-money, 25 Out-of-the-money and 1 Near-the-money. (51 Call European and 51 Put European). Exchange, at its discretion, may introduce additional strikes, if required.	
Strike Price Intervals	₹100	
Tick Size (Minimum Price Movement)	₹0.50	
Daily Price Limit	The upper and lower price band shall be determined based on statistical method using Black76 option pricing model and relaxed considering the movement in the underlying futures contract. In the event of freezing of price ranges even without a corresponding price relaxation in underlying futures, if deemed necessary, considering the volatility and other factors in the option contract, the Daily Price Limit shall be relaxed by the Exchange.	
Margins	The Initial Margin shall be computed using SPAN (Standard Portfolio Analysis of Risk) software, which is a portfolio based margining system. To begin with, the various risk parameters shall be as under: A. Price Scan Range – 3.5 Standard Deviation (3.5 sigma) B. Volatility Scan Range – Minimum 4% or as decided by MCXCCL from time to time. For applicable VSR refer latest circulars issued by MCXCCL. C. The Short Option Minimum Margin (SOMM) and Margin Period of Risk (MPOR) shall be in accordance with SEBI Circular no. SEBI/HO/CDMRD/DRMP/CIR/P/2020/15 dated January 27, 2020. For applicable SOMM and MPOR refer latest circulars issued by MCXCCL from time to time. D. Extreme Loss Margin – Minimum 1% (to be levied only on short option positions)	
Extreme Loss Margin	Minimum 1% (to be levied only on short option positions)	
Premium	Premium of buyer shall be blocked upfront on real time basis.	
Margining at Client Level	Initial Margins shall be computed at the level of portfolio of individual clients comprising of the positions in futures and options contracts on each commodity.	
Maximum Allowable Open Position	Position limits for options would be separate from the position limits applicable on futures contracts. For individual client: 10 MT for all Gold Options contracts combined together or 5% of the market wide open position whichever is higher, for all Gold Options contracts combined together. For a member collectively for all clients: 100 MT for all Gold Options contracts combined together or 20% of the market wide open position whichever is higher, for all Gold Options contracts combined together. Upon expiry of the options contract, devolvement of options position into corresponding futures, open positions may exceed permissible position limits applicable for future contracts. Such excess positions shall have to be reduced to the permissible position limits of futures contracts within two trading days.	
Settlement of Premium/Final Settlement	T+1 day	
Mode of Settlement	On expiry of options contract, the open position shall devolve into underlying futures position as follows:- • long call (put) position shall devolve into long (short) position in underlying futures contract • short call (put) position shall devolve into short (long) position in underlying futures contract All such devolved futures positions shall be opened at the strike price of the exercised options.	
Exercise Mechanism at Expiry	All In the money (ITM)# option contracts shall be exercised automatically, unless 'contrary instruction' has been given by long position holders of such contracts for not doing so. The ITM option contract holders, who have not submitted contrary instructions, shall receive the difference between the Settlement Price and Strike Price in Cash as per the settlement schedule. In the event contrary instruction are given by ITM option position holders, the positions shall expire worthless. All Out of the money (OTM) option contracts shall expire worthless. All devolved futures positions shall be considered to be opened at the strike price of the exercised options. All exercised contracts within an option series shall be assigned to short positions in that series in a fair and non-preferential manner # ITM for call option = Strike Price < Settlement Price; ITM for put option = Strike Price > Settlement Price.	
Due Date Rate (Final Settlement price)	Daily settlement price of the underlying futures contract on the expiry day of the options contract.	

Note: Please refer to the exchange circulars for detailed contract specifications. | #based on US daylight saving time period

Content by: **PMT Bullion Team, MCX** | Designed by: **Graphics Team, MCX**

Please send your feedback to: **pmtbullion@mcxindia.com**
Multi Commodity Exchange of India Limited
Corporate address: Exchange Square, Chakala, Andheri (East), Mumbai - 400 093, India, Tel. No. 91-22-6731 8888
CIN: L51909MH2002PLC135594, info@mcxindia.com, www.mcxindia.com

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