MCX
METAL & ENERGY
Trade with Trust

MCX INVESTOR PROTECTION FUND



SILVER

HEDGING BROCHURE


10015
SWISS BANK
CORPORATION



Silver has been used for thousands of years for ornaments and utensils, trade, and as the basis for many monetary systems. Its value as a precious metal was long considered second only to gold. Silver and silver alloys are used in the construction of high-quality musical wind instruments of many types. Silver's catalytic properties make it ideal for use as a catalyst in oxidation reactions, for example, the production of formaldehyde from methanol and air by means of silver screens or crystallites containing a minimum 99.95 weight-percent silver. Silver (upon some suitable support) is probably the only catalyst available today to convert ethylene to ethylene oxide (later hydrolyzed to ethylene glycol used for making polyesters—an important industrial reaction). It is also used in the Oddy test to detect reduced sulphur compounds and carbonyl sulfides. Because silver eadily absorbs free neutrons, it is commonly used to make control rods to regulate the fission chain reaction in pressurized water nuclear reactors, generally as an alloy containing 80% silver, 15% indium, and 5% cadmium. Silver is used to make solder and brazing alloys, and as a thin layer on bearing surfaces can provide a significant increase in galling resistance and reduce wear under heavy load, particularly against steel.

Source: Wikipedia, Silver Institute

The chemical symbol for silver - 'Ag' comes from the latin word for silver, 'argentum', which in turn is derived from the sunskrit word 'argunas', which means shining.



OVERVIEW

Silver is a brilliant grey-white metal that is soft and malleable. Its unique properties include its strength, malleability, ductility, electrical and thermal conductivity, sensitivity, high reflectance of light, and reactivity. Silver is found in native form, as an alloy with gold (electrum), and in ores containing sulphur, arsenic, antimony or chlorine.

PRICE RISK MANAGEMENT

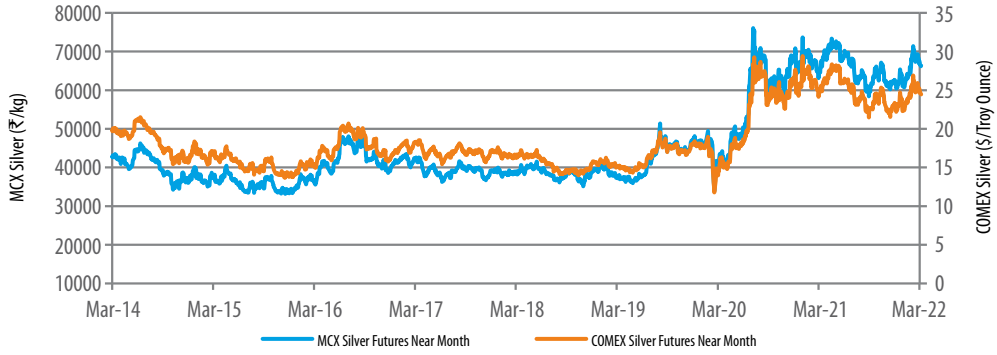
Risk management techniques are of critical importance for participants, such as producers, exporters, marketers, processors, and SMEs. Modern techniques and strategies, including market-based risk management financial instruments like 'Silver Futures and Options', offered on the recognized and well-regulated platforms, such as MCX, can improve efficiencies and consolidate competitiveness through price risk management. The importance of risk management cannot be overstated; risk management through hedging enables the hedger to mitigate the risks arising from uncertainty and volatility in Silver prices and focus on their core business activity.

IMPORTANCE OF HEDGING

Hedging is 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 bearers' 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 by companies to get a clear picture of their risk profile and benefit from hedging techniques.

SILVER PRICE MOVEMENT



HEDGING MECHANISM

Hedging is the process of reducing or controlling risk. It involves taking equal and opposite positions in two different markets (such as physical and futures or options market), with the objective of reducing or limiting risks associated with price change. 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 derivatives platform, thereby reducing or limiting risks associated with unpredictable changes in price.

In the international arena, hedging in Silver derivatives takes place on a number of exchanges, the major ones being Chicago Mercantile Exchange (CME), Multi Commodity Exchange of India Ltd. (MCX), Shanghai Futures Exchange (SHFE) and Tokyo Commodity Exchange (TOCOM).

PARTICIPANT HEDGERS

Commodity exchanges offer a transparent hedging platform, besides bringing about economic and financial efficiencies by de-risking production, processing, and trade. Exchange's engagement has led to large efficient gains in supply chains, with exporters gaining a larger share of global prices, and producers getting better prices and much better access to markets.

All those who have or intend to take positions in physical silver are participant hedgers. These are:

- Importers
- Exporters
- Refiners
- Jewellers
- Designers
- Market intermediaries
- Merchandisers

FACTORS AFFECTING PRICE VARIATIONS

Economic events such as industrial growth, macroeconomic conditions and inflation affect metal prices.

- Governments set trade policy (implementation or suspension of taxes, penalties, and quotas) that affect supply by regulating (restricting or encouraging) the material flow.
- Geopolitical events involving governments or economic paradigms and armed conflict can cause major changes.
- A faster growth in demand against supply often leads to a drop in stocks with the government and investors.
- Silver demand is underpinned by the demand from jewellery and silverware, industrial applications, and the overall industrial growth.
- In India, the real industrial demand occupies a small share in the total industrial demand for silver. This is in sharp contrast to most developed economies.
- In India, silver demand is also determined to a large extent by its price level and volatility.

REGULATORY BOOSTS FOR HEDGERS

1. Income tax exemptions for hedging. Commodity derivatives transactions undertaken in recognized exchanges enjoy benefits under the ambit of Section 43(5) of the Income Tax Act, 1961 and the gains / losses from such transactions are not considered 'speculative'.

   This effectively means that business profits/ losses can be offset by losses profits undertaken in 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 in order to prove that their transactions are in the nature of hedging and not 'speculation'.

2. Limit on open position as against hedging. This enables hedgers to take positions to the extent of their exposure on the physical market and are allowed to take position over and above prescribed position limits on approval by the exchange.

Silver is exceptionally shiny! It is the most reflective element, which makes it useful in solar cells. Polished silver reflects 95% of the visible light spectrum. Silver's demand increased by 23 per cent last year with its usage in solar photovoltaic applications.



APPRECIATING THE BENEFITS OF HEDGING –

A situation prevailing in the Silver industry are given below, which will demonstrate how commodity exchange platform may be used by participants to manage price risk by entering into Silver Futures contracts. We will look at the effect of price movement in either direction.

THE SITUATION

G.K Jewellers is a company involved in the manufacture and retail sales of jewellery and silverware. Due to upcoming festive season silverware segment has seen a sharp growth in consumer demand in sales volume. Price volatility is of big concern to the company. A consultant appointed by the management has recommended that price risk should be managed by taking up position in futures market.

The company, G.K Jewellers has routine sales of 5000 pieces of silverware every month. Based on experience, the company has put forward the following facts:

1. The company purchases 2.1 tonnes of Silver every week to conduct routine production
2. The processed material will be ready to be sold in 2 weeks
3. The sale price of finished goods will be as per prevailing price at the time of final sales
4. It is difficult to predict the sales price 2 weeks ahead
5. The company's objective is to lock prices

SCENARIO 1: IF PRICES WERE TO FALL

DATE	FUTURES PLATFORM	PHYSICAL MARKET
12-07-201X	SELL Silver Futures Contract	Raw material bought
30-07-201X	BUY Silver Futures Contract	Processed material sold at ruling price

The net position of the above transactions will negate price risk

(₹/1 kg)

DATE	SILVER SPOT PRICE	SILVER FUTURES PRICE (expiry 5th September 201X)
12-07-201X	60,500	60,600
30-07-201X	59,400	59,500

(₹/1 kg)

Futures	12-07-201X	SELL	60,600	30-07-201X	BUY	59,500	1,100 (profit)
Spot	12-07-201X	BUY	60,500	30-07-201X	SELL	59,400	

Net selling price: ₹60,500 (₹59,400 + ₹1,100)

EXPLANATION

The Treasury Team of G. K Jewellers, short sells 70 lots (1 lot = 30 Kg) of 5th September contract on 12th July and squares the contracts on 30th July. The value of raw material in the finished goods sale is ₹12,47,40,000 (59,400x70x30) and cash inflow from futures market due to fall in prices is 23,10,000 (1,100x70x30). Thus, the net value realized from the sale of finished goods is ₹12,70,50,000 (12,47,40,000 + 23,10,000), making the net selling price ₹60,500 per kg (12,70,50,000/2100), which is the budgeted price.

SCENARIO 2: IF PRICES WERE TO RISE

DATE	FUTURES PLATFORM	PHYSICAL MARKET
12-07-201X	SELL Silver Futures Contract	Raw material bought
30-07-201X	BUY Silver Futures Contract	Processed material sold at ruling price

The net position of the above transactions will negate price risk

(₹/1 kg)

DATE	SILVER SPOT PRICE	SILVER FUTURES PRICE (expiry 5th September 201X)
12-07-201X	60,500	60,600
30-07-201X	61,600	61,700

Futures	12-07-201X	SELL	60,600	30-07-201X	BUY	61,700	1,100 (loss)
Spot	12-07-201X	BUY	60,500	30-07-201X	SELL	61,600	

Net Selling price: ₹60,500 (₹61,600-₹1,100)

EXPLANATION

The Treasury Team of G. K. Jewellers, short sells 70 lots (1 lot = 30 kg) of 5th September contract on 12th July and squares the contract on 30th July, making a loss of ₹ 1,100 per kg. The value of raw material in the finished goods sale is ₹12,93,60,000 (61,600x70x30) on 30th July and cash outflow on futures market due to rise in prices is ₹23,10,000 (1,100x70x30). Thus, the net value realized from the sale of finished goods is ₹12,70,50,000 (12,93,60,000 - 23,10,000), making the net selling price ₹60,500 per kg (12,70,50,000/2100), which is the budgeted price.

Note: The objective is to lock in prices, to obtain protection from unwanted price volatility, which affects the balance sheet of the company. This has been achieved, through hedging in futures market in both the scenario of rising and falling prices, by which G. K. Jewellers has been able to sell the finished material at the budgeted price itself.

THE SITUATION

Bharat Silver Ltd primarily a silver importer, who imports, stocks and sells silver in various denominations to a host of users. The silver market has been extremely unpredictable due to price volatility, which is a reflection of international and domestic factors and currency movements. Bharat Silver imports large quantities of silver and sells them in a staggered manner to the physical market at the prevailing prices. The huge stock of imported silver it holds over a long time-period exposes Bharat Silver to very high risks as silver prices are highly volatile. The company hedges on commodity exchanges to effectively manage its commodity and currency risk.

Hedging monthly consumption

GOING LONG: Scenarios where prices either rise or fall

Bharat Silver Ltd, imports silver in huge quantities and sells it in a staggered manner in the physical market, at the prevailing market prices

1. The company imports on 20th October 5,000 kg of Silver
2. The company imports and caters to the physical demand of the buyers at the prevailing market price
3. The company manages to sell 500 kg of the imported 5,000 kg on 20th October itself. Thus, there is no price risk in the sale of the first lot.
4. The remaining 4,500 kg will be sold in subsequent days at ruling prices
5. The company hedges for 4,500 kg

DATE	PHYSICAL MARKET	FUTURES PLATFORM	Open Interest in lots on FUTURES MARKET
20-10-201X	IMPORT 5000 kg and SELL 500 kg	SELL 150 lots of Silver Futures contract (30 kg each)	150
27-10-201X	SELL 1500 kg	BUY 50 lots of Silver Futures	100
04-11-201X	SELL 2100 kg	BUY 70 lots of Silver Futures	30
11-11-201X	SELL 900 kg	BUY 30 lots of Silver Futures	0

(₹/1 kg)

DATE	SILVER SPOT PRICE	SILVER FUTURES PRICE (expiry 5th December 201X)
20-10-201X	60,550	60,600
27-10-201X	60,850	60,900
04-11-201X	60,150	60,200
11-11-201X	60,350	61,400

Explanation

DATE	SPOT MARKET ACTION		FUTURES MARKET ACTIONS		PROFIT/LOSS per kg in FUTURES MARKET	NET SELLING PRICE per kg
20-10-201X	BUY	IMPORT 5000 kg	SELL	150 lots @ ₹60,600		₹60,550
	SELL	Sell 500 kg @ ₹60,550				
27-10-201X	SELL	Sell 1500 kg @ ₹60,850	BUY	50 lots @ ₹60,900	₹300 (Loss)	₹60,550 (₹60,850 - ₹300)
04-11-201X	SELL	Sell 2100 kg @ ₹60,150	BUY	70 lots @ ₹60,200	₹400 (Profit)	₹60,550 (₹60,150 + ₹400)
11-11-201X	SELL	Sell 900 kg @ ₹61,350	BUY	30 lots @ ₹61,400	₹800 (Loss)	₹60,550 (₹61,350 - ₹800)

The Treasury Team of Bharat Silver Ltd, short sells 4,500 kg (1 lot = 30 kg) of 5th December contract on 20th October and squares the position in a staggered manner on subsequent days, whenever the company sells Silver to the physical market at the prevailing spot market price. The company by hedging its position and making a staggered exit from the futures contract makes the net selling price at ₹60,550 per kg, which is the budgeted price.

"Purge the dross from the silver, and the material for a vessel comes forth for the silversmith".
– The Bible

APPRECIATING THE BENEFITS OF HEDGING – using call options on futures

Silver stakeholders, such as risk averse jewellers, on entering into an agreement with customers, often face the risk of an unexpected rise in silver price when they would procure silver for processing. This risk 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 May 15, the spot price of Silver is ₹49,000 per Kg. G.K. Jewellers has received an order for 1 kg silverware, to be delivered by 1st week of September, for which the selling price has been fixed based on current spot prices. The company would require physical processing for processing the order in the last week of June.

However, the entity faces the risk of a rise in price of silver in the near future. To hedge against the expected price increase, company buys Silver Call Option on future expiring on June 27, at the strike price of ₹50,000 per Kg for a premium of ₹500. The underlying to this option contract is Silver September futures contract trading at ₹50,000 per Kg.

The following two scenarios are possible at options expiry:



SCENARIO 1: IF SILVER PRICES WERE TO RISE

PRICE & ACTION	SILVER PRICES (₹/KG)	SILVER SEPTEMBER FUTURES PRICES (₹/KG)	SILVER JUNE CALL OPTIONS (UNDERLYING: SILVER SEPTEMBER FUTURES CONTRACT)	CALL OPTION PREMIUM (₹)
Traded Price on May 15	49,000	50,000	50,000 (strike price)	Out: 500
Action on May 15			Buy Call option contract by paying premium	
Position in market	Nil	Nil	Long 1 lot	
Close price on June 26 (Option expiry day)	50,500	51,300	50,000 (strike price)	1,300
Action on June 26 after close of market hours		On exercise, the call options contract will devolve into a long position in the underlying silver futures contract at 50,000 (strike price)		
Position on June 26 post-devolvement		long 1 lot	Nil	
Traded Price on June 27	52,300	53,000		
Action on June 27	Buy in physical market	Sell the long open futures position		
Flow of money	Out: 52,300	In: 3,000 (53,000-50,000)		Out:500

Thus, the net purchase price of silver on June 27 is ₹52,300 (Physical market purchase) – ₹3,000 (gains in futures market on devolvement of options position) + ₹500 (option premium paid) = ₹49,800 per Kg, which is close to spot prices prevailing on May 15. Thus, by buying a 'Call' Option on future and allowing it to devolve into futures position on expiry, G.K. Jewellers was able to protect its business margins, in the event of a rise in prices.



Scenario 2: If Silver prices were to fall

PRICE & ACTION	SILVER PRICES (₹/KG)	SILVER SEPTEMBER FUTURES PRICES (₹/KG)	SILVER JUNE CALL OPTIONS (UNDERLYING: SILVER SEPTEMBER FUTURES CONTRACT)	CALL OPTION PREMIUM (₹)
Traded Price on May 15	49,000	50,000	50,000 (strike price)	Out: 500
Action on May 15			Buy Call option contract by paying premium	
Position in market	Nil	Nil	Long 1 lot	
Close price on June 26 (Option expiry day)	46,000	46,300	50,000 (strike price)	0
Action on June 26 after close of market hours		As strike price of the Call option contract is more than that the underlying futures prices, it expires worthless.		
Position on June 26 post-devolvement				
Traded Price on June 27	47,950			
Action on June 27	Buy in physical market			
Flow of money	Out: 47,950			Out:500

Net purchase price of silver on June 27 is ₹47,950 (Physical market purchase) + ₹500 (option premium paid) = ₹48,450 per Kg, much less than the spot prices prevailing on May 15.

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

India: Silver Fabrication

YEAR	MILLION OUNCE
2012	17.7
2013	22.6
2014	30.6
2015	37.0
2016	34.1
2017	39.7
2018	46.4
2019	41.2
2020	17.4
2021	24.4

Source: World Silver Survey 2022

Global Silver Supply

(million ounces)	2016	2017	2018	2019	2020	2021
Mine Production	900.00	863.70	850.20	835.90	781.10	822.60
Recycling	145.90	147.20	148.60	147.70	162.20	1730
Net Hedging Supply	-	-	-	15.20	8.50	-
Net Official Sector Supply	1.10	1.00	1.20	1.00	1.20	1.50
Total Supply	1,046.90	1,011.90	1,000.00	999.80	953.00	997.20

Source: World Silver Survey 2022

Weight Conversion Table

To convert from	To	Multiply by
100 Troy Ounces	kg	3.11031
Ton	Troy Ounces	32,150.7466
Ton	Grams	1,000,000

APPRECIATING THE BENEFITS OF HEDGING – using put options on futures

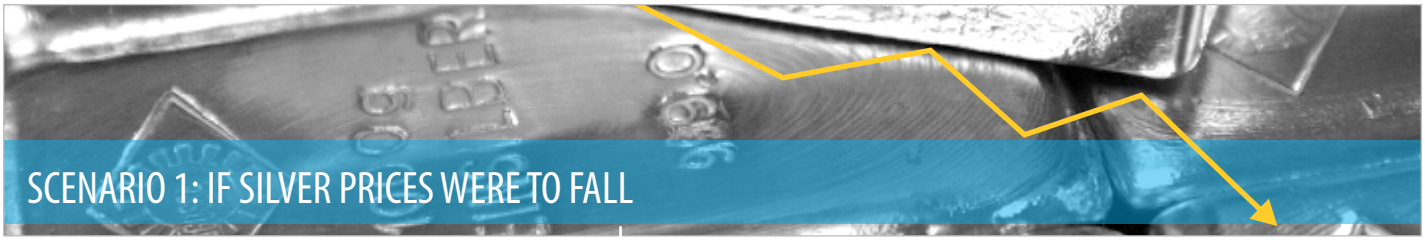
Silver market stakeholders often store the commodity before processing and selling to prospective customers. They, therefore, face the risk of a fall in silver prices. By buying a put option, they can hedge against such a risk, as the following example shows.

THE SITUATION

On March 15th, the spot price of Silver is ₹54,500 per Kg. A jeweller has procured 1 kg of silver jewellery stock for sale at spot price. A customer has agreed to buy this jewellery from the jeweller by end of April at the then prevailing silver prices.

As a result, a jeweller faces a risk of fall in silver prices. Hence, to hedge against this, jeweller buys Silver Put Options expiring on April 28th at the strike price of ₹55,000 per Kg for a premium of ₹500. The underlying to this option contract is Silver May futures contract trading at ₹55,000 per Kg.

Following two scenarios are possible at options expiry:

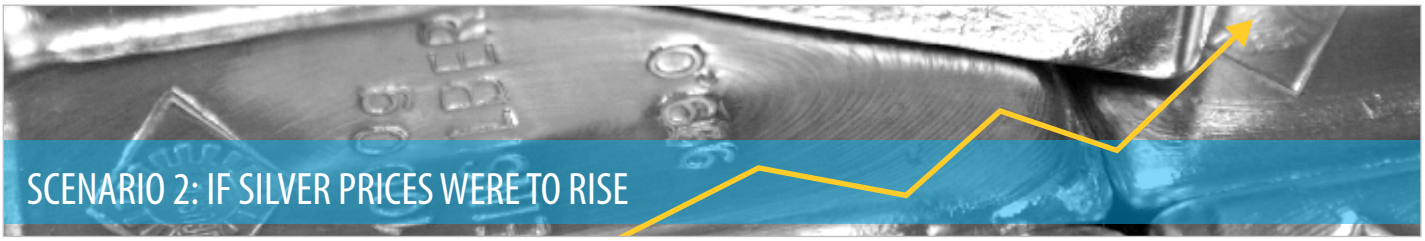


SCENARIO 1: IF SILVER PRICES WERE TO FALL

PRICE & ACTION	SILVER PRICES (₹/KG)	SILVER MAY FUTURES PRICES (₹/KG)	SILVER APRIL PUT OPTIONS (UNDERLYING: SILVER MAY FUTURES CONTRACT)	PUT OPTION PREMIUM (₹)
Trade Price on March 15	54,500	55,000	55,000 (strike price)	Out: 500
Action on March 15			Buy Put option contract by paying premium	
Position in market	Nil	Nil	Long 1 lot	
Close price on April 28 (Option expiry day)	52,600	52,700	55,000 (strike price)	4,700
Action on April 28 after close of underlying silver market hours		On exercise, the put options contract will devolve into a short position in the futures contract at 55,000 (strike price)		
Position on April 28 post-devolvement		Short 1 lot	Nil	
Traded Price on April 29	52,300	52,400		
Action on April 29	Sell in physical market	Buy, to Square off the short open futures position		
Flow of money	52,300	In: 2600 (55,000-52,400)		Out:500

Thus, the net sale price of Silver on April 29 is ₹52,300 (Physical market sale) + ₹2,600 (gains in futures market on devolvement of options position) – ₹500 (option premium paid) = ₹54,400 per Kg, which is close to spot prices prevailing on March 15.

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 SILVER PRICES WERE TO RISE

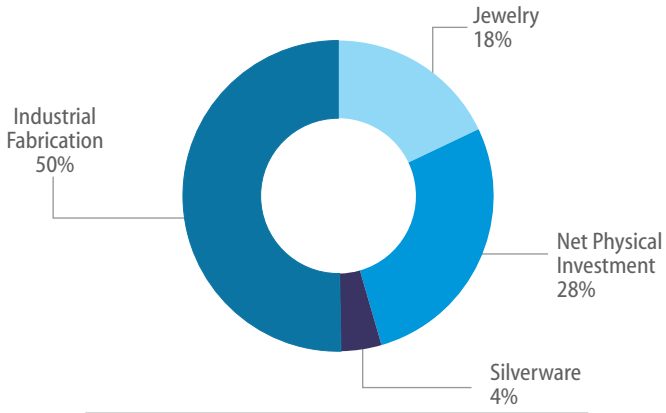
PRICE & ACTION	SILVER PRICES (₹/KG)	SILVER MAY FUTURES PRICES (₹/KG)	SILVER APRIL PUT OPTIONS (UNDERLYING: SILVER MAY FUTURES CONTRACT)	PUT OPTION PREMIUM (₹)
Trade Price on March 15	54,500	55,000	55,000 (strike price)	Out: 500
Action on March 15			Buy Put option contract by paying premium	
Position in market	Nil	Nil	Long 1 lot	
Close price on April 28 (Option expiry day)	55,500	55,600	55,000 (strike price)	0
Action on April 28 after close of market hours		As strike price of the Put option contract is less than that the underlying futures prices, it expires worthless.		
Position on April 28 post-devolvement		Nil	Nil	
Traded Price on April 29	55,700			
Action on April 29	Sell in physical market			
Flow of money	55700			Out:500

Thus, the net sale price of silver on April 29 is ₹55,700 (Physical market sale) – ₹500 (option premium paid) = ₹55,200 per Kg, which is much more than the spot prices prevailing on March 15.

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



World Physical Silver Demand - 2021

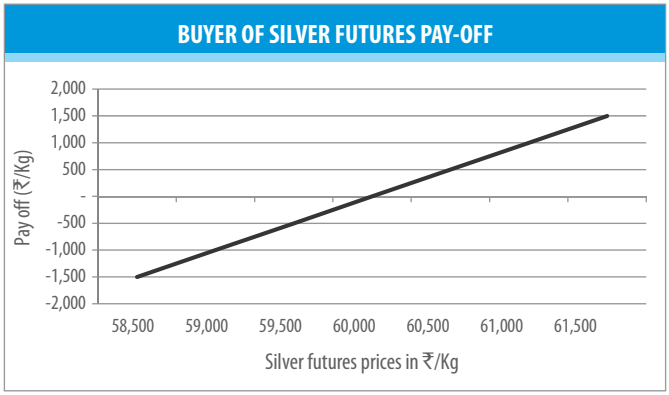


Source: World Silver Survey 2022

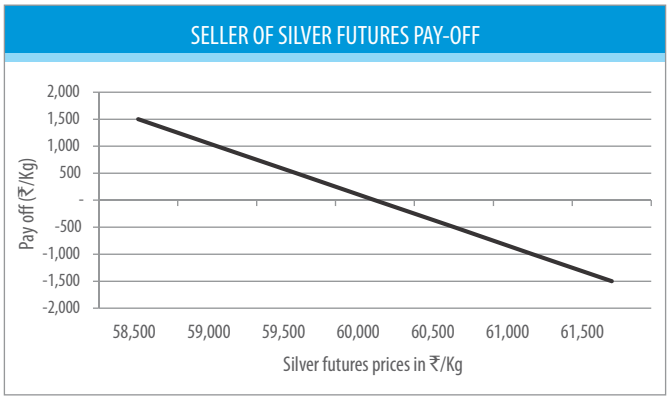
FUTURES AND OPTIONS PAYOFFS

A. Commodity Futures

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

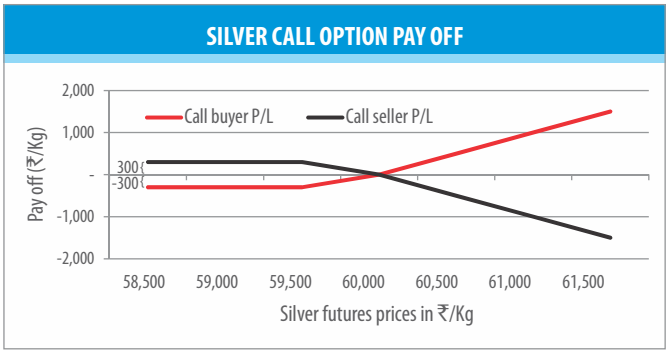


2. Assume a market participant sells a silver futures contract at ₹60,000 per Kg. His pay-off on his futures position with change in silver futures prices is as shown below.

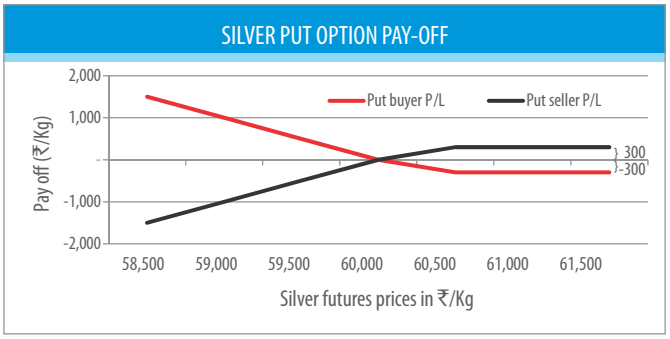


B. Commodity Options on Futures

3. Assume a market participant buys a silver call option contract with a strike price at ₹60,000 per Kg at a premium of ₹300. His pay-off on his call option contract with change in the underlying silver 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 silver put option contract with a strike price at ₹60,000 per Kg and premium at ₹300. His pay-off on his put option contract with change in the underlying silver futures prices is as shown below. Pay-off for put option seller is also shown in same figure.





The mining of silver began some 5000 years ago. Silver was first mined in about 3000 B.C. in Anatolia (modern day Turkey). The principal sources of silver are the ores of silver, silver-nickel, lead, and lead-zinc obtained from Peru, Bolivia, Mexico, China, Australia, Chile, Poland, and Serbia. Peru, Bolivia, and Mexico have been mining silver since 1546, and are still major world producers. The top three silver-producing mines are Cannington (Australia), Fresnillo (Mexico), and San Cristobal (Bolivia), In Central Asia, Tajikistan is known to have some of the largest silver deposits in the world. The metal is primarily produced as a byproduct of electrolytic silver refining, gold, nickel, and zinc refining, and by application of the Parkes process on lead metal obtained from lead ores that contain small amounts of silver. Secondary silver sources include coin melt, scrap recovery, and dis-hoarding from countries where export is restricted. Secondary sources are price sensitive.

Source: Wikipedia, Silver Institute

HEDGING EXPERIENCES

Endeavour Silver Corp.

"The Company has not engaged in any hedging activities, other than short term metal derivative transactions less than 90 days, to reduce its exposure to commodity price risk."

Source: Annual Report, 2020.

Johnson Matthey

"Fluctuations in precious metal prices can have a significant impact on Johnson Matthey's financial results, our policy for all manufacturing businesses is to limit this exposure by hedging against future price changes where such hedging can be done at acceptable cost. The group does not take material exposures on metal trading. A proportion of group's precious metal inventories are unhedged due to the ongoing risk over security of supply."

Source: Annual Report, 2020.

Odyssey Marine Exploration, Inc

"Odyssey Marine Exploration, Inc., a pioneer in the field of deep-ocean exploration has to-date monetized over 900,000 troy ounces of the silver recovered from the Gairsoppa shipwreck in July 2013 at an average price per ounce of $23.56 for a gross total of $21.5 million.

The company estimates that the monetization and hedging program generated total gross proceeds of approximately $39 million from the 2013 recovery, in addition to approximately $41 million generated in the prior year from the 2012 recovery."

Source: Odyssey's Gairsoppa Silver Monetization Strategy Results.

Parko Commodities

"As hedgers we use these contracts to manage price risk on an expected purchase or sale of the physical metal."

Parker Bullion

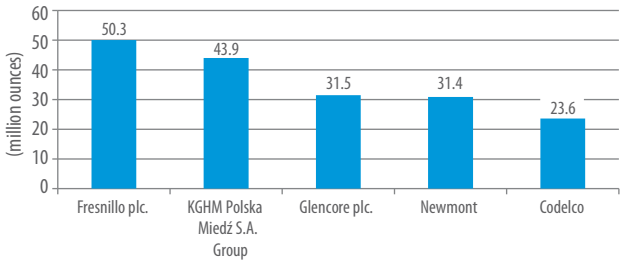
"Price Risk Management is an important aspect in managing our balance sheet and futures trading has been of immense importance to our industry considering the volatile price scenario."

Siemens India Limited

"The Company uses Commodity futures contracts to hedge against fluctuation in commodity prices."

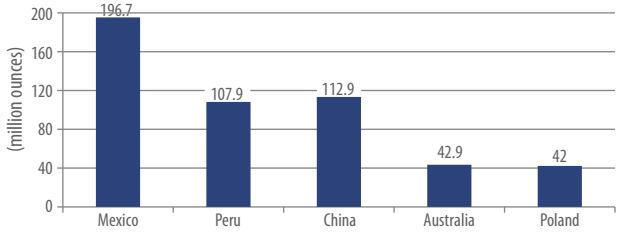
Source: Annual Report, 2020.

Top Silver-Producing Companies in 2021



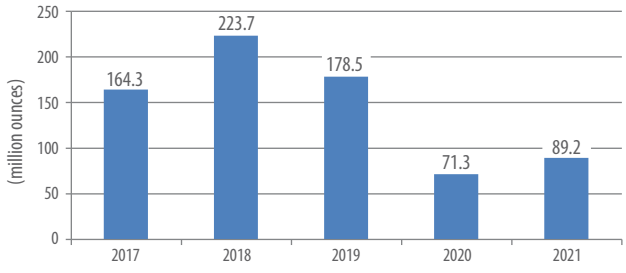
Source: World Silver Survey 2022

Top Silver - Producing Countries in 2021



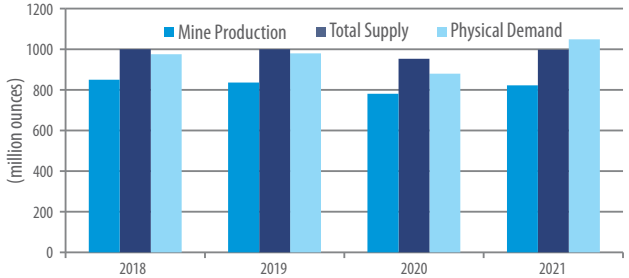
Source: World Silver Survey 2022

India Silver Imports



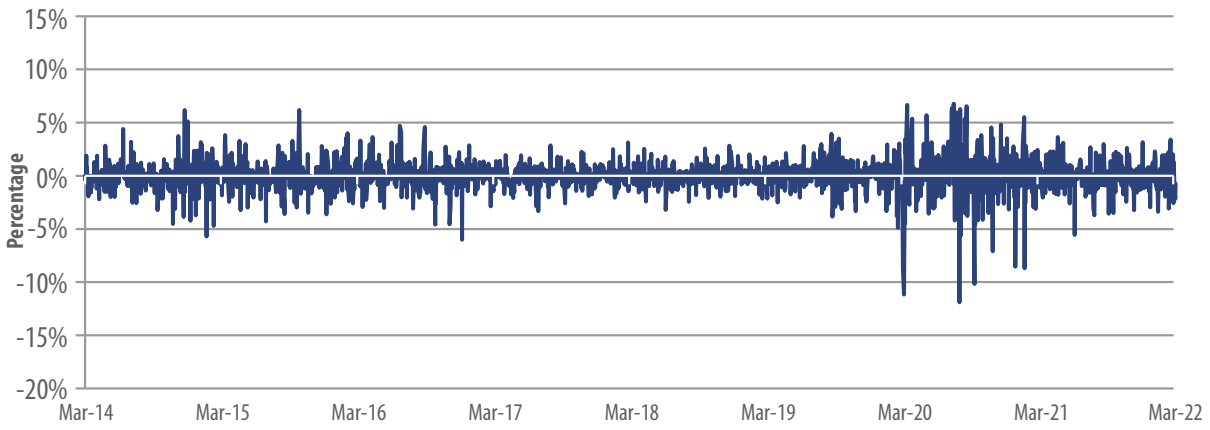
Source: World Silver Survey 2022

World Silver Statistics



Source: World Silver Survey 2022

AVERAGE DAILY VOLATILITY OF SILVER*



*MCX Silver Futures Near Month Prices | #till March 31, 2022

YEAR	2013	2014	2015	2016	2017	2018	2019	2020	2021
ANNUALIZED VOLATILITY	29%	21%	23%	22%	15%	15%	18%	42%	25%



HOW MUCH VOLATILITY RISK ARE YOU EXPOSED TO?

Silver: Witnessed annualized price volatility of about 25% in 2021

Which means:

A firm in the silver business, with an annual turnover of ₹100 crore was exposed to a price risk of ₹25crore in 2021.

India, with an annual silver market size of around 4,000 tonnes, worth about ₹26,250 crore, is exposed to price volatility risk of about ₹6,562 crore (i.e. 25% of the holding value).

SILVER FACTS

Silver has innumerable applications in art, science, industry and beyond. At the highest level, though, demand for silver breaks down into three important categories: silver in industry, investment, and silver jewellery and décor. Together, these three areas represent more than 95% of the annual silver demand. With unique properties, including its strength, malleability, and ductility; its electrical and thermal conductivity; its sensitivity to and high reflectance of light; and the ability to endure extreme temperature; it is an element without substitution. In the Americas, high temperature silverlead cupellation technology was developed by pre-Inca civilizations as early as AD 60–120. Silver plays no known natural biological role in humans, and possible health effects of silver are a disputed subject. Commercial-grade fine silver is at least 99.9% pure, and purities greater than 99.999% are available.

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

TRANSACTION TAXES ON OPTIONS CONTRACT
CASE: SILVER (30 KG) OPTIONS CONTRACT WITH A NOTIONAL VALUE OF ₹12 LAKHS AND OPTION PREMIUM OF ₹18,000

PARTICULAR	CALL OPTION		PUT OPTION	
	Buyer	Seller	Buyer	Seller
CTT on premium (@ 0.05% of premium – Seller)		9		9
CTT on exercise (@ 0.0001% of FSP* – Purchaser)	1.8		1.8	
Total Transaction Taxes (₹/lot)	1.8	9	1.8	9

*Final Settlement Price

SALIENT SPECIFICATIONS OF MCX SILVER FUTURES CONTRACTS

SYMBOL	SILVER	Silver Mini	Silver Micro
Contract Months	Mar, May, July, Sept & Dec.	Feb, April, June, Aug & Nov	
TRADING			
Last Trading Day	5th of the Contract month	Last day of the contract expiry month	
Trading session	Monday to Friday: 9:00 a.m. to 11:30 p.m. / 11:55# p.m.		
Trading unit	30 kg	5 kg	1 kg
Quotation/Base value	₹ / kg		
Maximum order size	600 kg		
Price Quote	Ex-Ahmedabad*		
Tick size (minimum)	₹ 1/ kg		
Daily price limits	The base price limit will be 4%. 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% and inform the regulator immediately.		
Initial margin	Minimum 10% 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 and 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 clients 100 MT or 5% of the market wide open position, whichever is higher for all silver contracts combined together For a member collectively for all clients: 1000 MT or 20% of the market wide open position, whichever is higher for all silver contracts combined together		
DELIVERY			
Delivery Unit	30 kg	5 kg (five nos. of 1Kg Bars)	1 Kg
Delivery period margin	Delivery period margins shall be higher of: a. 3% + 5 day 99% VaR of spot price volatility Or b. 25%		
Staggered Delivery Tender Period	The staggered delivery tender period would be the last 5 trading days (including expiry day) of the contracts.		
Delivery Center	Ahmedabad & Additional centers: Mumbai, Delhi, Chennai, Agra, Salem, Rajkot & Jaipur	Ahmedabad	
Quality Specification	999 fineness (Serially numbered Silver bars supplied by LBMA approved suppliers)		
Due Date Rate:	Due Date Rate is calculated on the expiry day of the contract. This is calculated by way of taking simple average of last 3 days spot market prices of Ahmedabad.		
Delivery Logic	Compulsory		

#Based on US daylight saving time period.

*Incl. of all taxes and levies relating to import duty, customs but excl. 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 .

Note: Please refer to the exchange circulars for detailed contract specifications.

SALIENT FEATURES OF MCX SILVER OPTIONS CONTRACT WITH SILVER (30KG) FUTURES AS UNDERLYING AND MCX SILVER MINI OPTIONS CONTRACT WITH SILVER (5KG) FUTURES AS UNDERLYING

Symbol	SILVER OPTIONS	SILVER MINI OPTIONS
Underlying	(30 KG) Underlying shall be Silver Futures contract traded on MCX	(5 KG) Underlying shall be Silver Mini Futures contract traded on MCX
Expiry Day (Last Trading Day)	Three business days prior to the first business day of Tender Period of the underlying futures contract.	
Trading Session	Monday to Friday: 9.00 a.m. to 11.30 / 11.55 p.m. (based on US daylight saving time period)	
Trading Unit	One MCX Silver futures contract	One MCX Silver Mini futures contract
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 CE and 51 PE).The Exchange, at its discretion, may enable additional strikes intraday, if required.	
Strike Price Intervals	Rs. 250	
Tick Size (Minimum Price Movement)	Rs. 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)	
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	
Real time computation	The margins shall be recomputed using SPAN at Begin of Day, 9.30 am, 11.00 am, 1.00 pm, 3.00 pm, 5.00 pm, 7.00 pm, 8.30 pm, 10.30 pm and End of Day.	
Mark to Market	The option positions shall be marked to market by deducting / adding the current market value of options positions (positive for long options and negative for short options) times the number of long / short options in the portfolio from / to the margin requirement. Mark to Market gains and losses would not be settled in Cash for Options Positions.	
Maximum Allowable Open Position	Position limits for options would be separate from the position limits applicable on futures contracts. For individual client: 200 MT for all Silver Options contracts combined together or 5% of the market wide open position whichever is higher, for all Silver Options contracts combined together. For a member collectively for all clients: 2000 MT for all Silver Options contracts combined together or 20% of the market wide open position whichever is higher, for all Silver Options contracts combined together. Upon expiry of the options contract, after devolvement of options position into corresponding futures positions, open positions may exceed their 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.	
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 underlying futures contract on the expiry day of options contract.	

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

Content by: **MCX Research** | Prepared by : **PMT Agri, MCX** | Designed by: **Graphics Team, MCX**

Please send your feedback to: research@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

MCX METAL & ENERGY Trade with Trust
MCX INVESTOR PROTECTION FUND

0622

This hedging brochure is not intended as professional counsel or investment advice, and is not to be used as such.While the exchange has made every effort to assure the accuracy, correctness and reliability of the information contained herein, any affirmation of fact in the hedging brochure shall not create an express or implied warranty that it is correct. This hedging brochure is made available on the condition that errors or omissions shall not be made the basis for any claims, demands or cause of action. MCX shall also not be liable for any damage or loss of any kind, howsoever caused as a result (direct or indirect) of the use of the information or data in this hedging brochure. ©MCX 2022. All rights reserved. No part of this document may be reproduced, or transmitted in any form, or by any means - electronic, mechanical, photocopying, recording, scanning, or otherwise - without explicit prior permission of MCX.