MCX
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BULLION

PERFORMANCE REVIEW

2023-2024

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1. BACKGROUND

a. Brief about the commodity such as sample picture, lifecycle and various varieties/grade of the commodity found in India

i) Introduction

Gold (Au) is primarily a monetary asset and partly a commodity. It is the world's oldest international currency and an important element of global monetary reserve.

Gold has diverse applications being one of the most malleable and ductile metals with high melting point and easy recyclability. It is useful in medicine and dentistry and, lately, has emerged as a key nanomaterial. Global gold demand hinges on four main categories: jewellery, investment, central bank reserves, and technology.

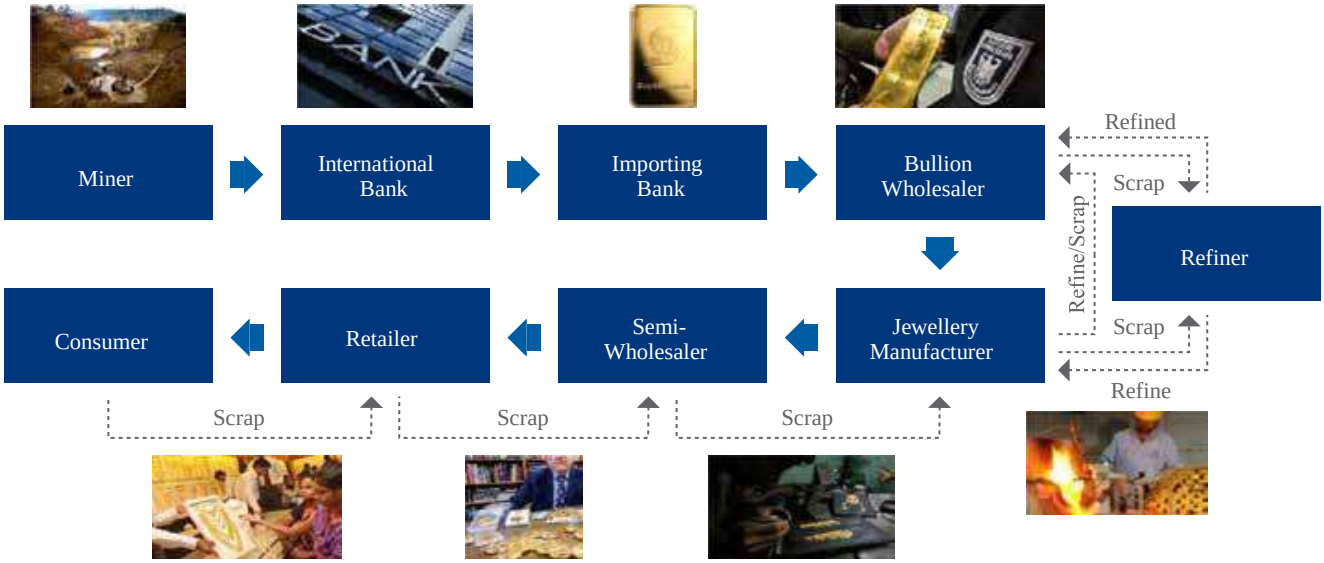
Silver (Ag) has been used for thousands of years for ornaments and utensils, trade, and as the basis for many monetary systems. Its value as a precious metal is considered second only to gold.

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. The main source of silver is lead ore, although it can also be found associated with copper, zinc and gold and produced as a by-product of base metal mining activities. Secondary silver sources include coin melt, scrap recovery, and dis-hoarding from countries where export is restricted.

ii) Sample Picture



iii) Lifecycle



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iv) Various varieties/grade of the commodity found in India

1. The Bureau of Indian Standards (BIS) has formulated the standard for Refined Gold and Silver Bars for Good Delivery - IS 17278 : 2019
2. The Bureau of Indian Standards (BIS) has formulated standards IS 1417:2016 for hallmarking gold jewellery in six grades -- 14 carat, 18 carat, 20 carat, 22 carat, 23 carat and 24 carat
3. As per BIS standard IS 2112:2014 silver hallmark consists of following fineness: 999.9,999.5,999, 990,970, 925, 900, 835, 800

b. Table - Fundamentals & Balance sheet (quantity)

GOLD (In Metric Tonnes)		
Global Scenario	2022	2023
Opening Stocks	NA	NA
Production[1]	4765	4882
Others (if any)	-	-
Consumption[2]	4699	4448
Closing Stocks	NA	NA

Note:

1. Mine Production + Recycled Gold

2. Consumption is considered as demand of Jewellery fabrication, Technology, Investment and Central Bank & other Inst.

Source: Metals Focus, Refinitiv GFMS, ICE Benchmark Administration, World Gold Council

SILVER (In Metric Tonnes)		
Global Scenario	2022	2023
Opening Stocks	NA	NA
Production[1]	26025	25830
Others (if any)	-	-
Consumption[2]	38365	35950
Closing Stocks	NA	NA

Note:

1. *Mine Production + Recycling,*
2. *Consumption is considered as demand of Jewellery, Silverware, Industrial and Net Physical Investment.*

**Source – Metals Focus, World Silver Survey 2024*

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GOLD (In Metric Tonnes)		
Indian Scenario	2022	2023
Opening Stocks	NA	NA
Production[1]	109	132
Imports[2]	741	862
Total Supply	760	913
Exports	1.36	1.30
Domestic Consumption[3]	774	748
Closing Supply	NA	NA

Note:

1. *Scrap + Domestic supply from local mine production, recovery from imported copper concentrates and disinvestment.*
2. *Gross Import of which dore was 249 and 221 tonnes for 2022 and 2023 respectively.*
3. *Domestic consumption is considered as Consumer demand.*

**Source – Metals focus, World Gold Council and export data taken from Ministry of Commerce (7108 GOLD (INCL GOLD PLTD WTH PLTNM) UNWROUGHT OR IN SEMI MNFCTRD FORMS/IN PWDR FORM Unit)*

SILVER (In Metric Tonnes)		
Indian Scenario	2022	2023
Opening Stocks	NA	NA
Production[1]	1174	1268
Imports	9450	3475
Total Supply	10624	4743
Exports[2]	94	170
Domestic Consumption[3]	8761	6334
Closing Supply	NA	NA

Note:

1. *Mine Production + Recycling*
2. *Export data was taken from Ministry of Commerce, available for Commodity: 7106 SILVER (INCLD SLVR PLTD WTH GOLD/PLTNM) UNWROGHT/IN SEMI MNFCTRD FORM/IN*
3. *Domestic consumption includes Industrial, Electrical & Electronics, Brazing Alloys & Solder, Photographic, Physical Investment, Coins & Medals, Jewellery, Silverware.*

**Source - Metals Focus, World Silver Survey 2024*

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GOLD (In Metric Tonnes)		
Top 10 Gold Producing Countries	2022	2023
China	372	370
Russia	309	310
Australia	311	310
Canada	190	200
United States	170	170
Kazakhstan	NA	130
Ghana	88	NA
Peru	97	90
Mexico	124	120
Indonesia	115	110
South Africa	90	100

** Source: https://www.statista.com/statistics/264628/world-mine-production-of-gold*

SILVER (In Metric Tonnes)		
Top 10 Silver Producing Countries	2022	2023
Mexico	6630	6290
China	3478	3399
Peru	3330	3331
Chile	1302	1617
Bolivia	1207	1326
Poland	1319	1323
Russia	1280	1236
Australia	1166	1071
United States	1032	996
Argentina	959	808
India	694	739

**Source - Metals Focus, World Silver Survey 2024*

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GOLD (In Metric Tonnes)		
Top 10 Major Consuming Countries	2022	2023
Greater China	825	959
India	774	747
United States	257	249
Germany	196	57
Turkey	122	202
Vietnam	59	56
Indonesia	50	45
Russia	61	71
Saudi Arabia	50	52
Switzerland	49	36

**Source – World Gold Council, Metals focus*

SILVER (In Metric Tonnes)		
Top 10 Major Consuming Countries	2022	2023
USA	11775	11520
China	7299	9802
India	8761	6334
Japan	5645	5615
Germany	3506	2380
Canada	1602	1099
Australia	1360	858
Italy	1030	1010
South Korea	971	950
Thailand	737	691

** Source – Metals Focus, World Silver Survey 2024*

Note: Consumption consider for demand of Industrial, Electrical & Electronics, Brazing Alloys & Solder, Photographic, Physical Investment, Coins & Medals, Jewellery, Silverware

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GOLD		
Top 10 Major Exporting Countries	2022	2023
-	-	-
SILVER		
Top 10 Major Exporting Countries	2022	2023
-	-	-

**Data not available publicly.*

GOLD		
Top 10 Major Importing Countries	2022	2023
-	-	-

**Data not available publicly.*

SILVER		
Top 10 Major Importing Countries	2022	2023
-	-	-

**Data not available publicly.*

GOLD (In Metric Tonnes)		
Top 10 Major Producing states in India for gold	FY 2022-23	FY 2023-24
Karnataka	1.25	1.58
Gujarat	13.8	15.04

**Source – Monthly Data of Ministry of Mines, Government of India, Hindalco production included*

SILVER (In Metric Tonnes)		
Top 10 Major Producing states in India for silver	FY 2022-23	FY 2023-24
Rajasthan	714	746

**Source – Monthly Data of Ministry of Mines, Government of India*

c) Major changes in the policies governing trade in the spot markets of the commodity.

- The Ministry of Consumer Affairs, Food & Public Distribution has notified that the sale of hallmarked gold jewellery or gold artefacts without a 6-digit alphanumeric HUID shall not be permitted to be sold after March

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31 2023. It is expected to safeguard and protect the consumers' interests and enhance their confidence in purchasing hallmarked gold jewellery with traceability and quality assurance.

- The guidelines on Anti-Money Laundering (AML) Standards and Combating the Financing of Terrorism (CFT) – obligations for dealers of precious metals and stones under the Prevention of Money Laundering Act 2022 were notified in February 2023. That this happened in the runup to the Financial Action Task Force (FATF) Mutual Evaluation (M.E.) of India, scheduled in 2024, is commendable in every way.
- In the Union Budget 2023-24 dated February 1, 2023, centre raises import duties on Silver to 15% and Silver Dore to 14.35%. The basic customs duty on Silver was raised to 10% from 7.5% and Agriculture Infrastructure and Development Cess (AIDC) on the imports to 5% from 2.5%. Silver Dore will carry a 10% basic import duty and 4.35% AIDC.
- India-UAE CEPA and its Impact on the Silver Import Landscape.
  The India-UAE Comprehensive Economic Partnership Agreement (CEPA) signed in 2022 has significantly changed India's import landscape. Under this agreement, the import duty on silver bullion from the UAE will fall by 1% each year, until it reaches zero in 2031. However, to qualify under the CEPA, the silver requires a Certificate of Origin (COO) and a 3% Value Addition (VA). To fulfil this, the importer must provide documents to prove that the silver has been refined in the UAE and that it has undergone this VA. As the UAE does not mine silver, local refineries are converting bars into grain, processing the metal to ensure it meets the 3% VA. While the CEPA came into effect in 2022, imports under this deal only started to ramp-up last year. To provide context, given the 3% VA, silver imports from the UAE into India were unviable unless the duty differential between regular Indian imports and CEPA exceeded 3%. This was not the case in 2022, as duty outside the CEPA was 10.75% whereas the duty under the trade deal was 10%. However, the Indian government's decision to raise the import duty (outside CEPA) to 15% in February 2023 made the UAE-India route profitable. In other words, while those delivering silver to India outside the CEPA faced the new 15% duty, imports under CEPA attracted a 9% duty in the second year of the agreement. With the duty differential now at 6%, imports under CEPA became far more attractive. As a result, 422t of silver was imported into India in 2023. The momentum has continued in 2024, with the first two months witnessing inflows of nearly 1,300t. Looking ahead, the duty under CEPA will fall to 8% starting April 2024 and so the duty differential will continue to widen. In the absence of any policy change or a reduction in Indian import duties for the rest of the world, the UAE is expected to remain the biggest supplier of silver to India in the coming years. Within the import mix, grain will dominate, gaining market share from London Good Delivery bars. That said, while this will not affect the overall total it will impact where the metal comes from as silver that used to come to India from the UK, and Hong Kong now makes its way into the country after undergoing VA in the UAE for importers to benefit from the duty differential.

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d) Geopolitical issues in the commodity and its impact on Indian scenario.

GOLD:

- The LBMA (PM) gold price ended 2023 at US$2,078.4/oz – a record high year-end close – generating an annual return of 15%.
- The average 2023 gold price of US$1,940.54 /oz – also a record – was 8% higher than 2022.
- Annual gold demand (excluding OTC) of 4,448t was 5% below a very strong 2022. Inclusive of significant OTC and stock flows 450t, total gold demand in 2023 was the highest on record at 4,899t.
- Central bank buying maintained a breakneck pace in 2023. Annual net purchases of 1,037t almost matched the 2022 record, falling just 45t short.
- Global gold ETFs saw a third consecutive annual outflow in 2023, losing 244t. The pace of outflows slowed markedly into year-end, but October's hefty outflows dominated the Q4 picture.
- Annual bar and coin investment saw a mild contraction (-3% y/y) in 2023 compared with 2022, as divergent trends in key Western and Eastern markets offset one another.
- Annual jewellery consumption in 2023 held steady at 2,093t, even in the very high gold price environment. China's recovery supported the robust global total.
- Despite a Q4 recovery in electronics, the annual volume in 2023 of gold used in technology fell below 300t for the first time
- Annual mine production increased 1% y/y in 2023 to 3,644t, but fell short of the 2018 record.
- Full year 2023 recycling responded to high gold prices, rising to 1,237t (+9% y/y), total gold supply was 3% higher y/y as a result.

SILVER:

- Silver demand in 2023 following a record 2022, total demand saw a fall in 2023 of 7% to 37,169t.
- Industrial silver demand rose by 11% to 20,353t in 2023, posting another record high
- Electronics & electrical demand grew by 20% thanks to green-related applications, steady gains in its core end-uses and limited thrifting. Brazing alloys rose by 2%, while other Industrial offtake fell by 5% as gains from EO capacity expansions were dragged down by lower changeouts.
- Jewellery fabrication in 2023 stood at 6,318t, down a steep 13% from 2022's record high.
- India's 25% slump due to price damage, import competition and limited stock build was mostly responsible, as demand outside of India only fell by 3%.
- Silverware demand fell by a steep 25% to 1,717t last year from 2022's record high (again due mainly to India)
- The biggest increase during 2023 was in China (+44%), which raised the East Asian total by 25%. Some of this was offset by one-off negatives in Europe and by Indian losses. Photographic demand's structural decline continued last year, leaving offtake at just 840t.
- After a record high in 2022, silver jewellery fabrication fell by 13% in 2023 to 6,318t. The losses were concentrated in India where demand eased after reaching its highest ever total in 2022. Excluding India, losses were far more modest at just 3%.
- Lastly, Chinese demand was hit by poor consumer sentiment and competition from gold jewellery. Witnessing a far bigger decline than jewellery, silverware demand in 2023 fell by 25% to 1,717t.
- Physical Investment After hitting an all-time high in 2022, fell by 28% y/y in 2023 to a three-year low.
- After five consecutive annual gains, physical investment fell by almost a third last year to a three-year low of 7,562t. While all major markets saw losses, the decline was particularly acute in Germany (-73%) following the VAT increase at the start of 2023. However, one partial exception was the US where losses were smaller at 13% due in part to 2023 Q1's local bank failures.
- In Europe, physical investment fell by 59% in 2023 to its lowest level since the 2008 financial crisis. Germany, with a share of over 70% in the region, posted a 73% drop and accounted for the bulk of losses. Excluding this country, the decrease in Europe came in at a far smaller 16%.
- Indian physical investment fell by a sharp 38% to 1,534t in 2023.
- Physical investment in China rebounded by 7% to 244t, driven by modest gains in both bar and coin markets

- Australian silver bar and coin demand fell by 38% in 2023 to 380t

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- Exchange-Traded Products (ETPs) Silver ETPs witnessed annual outflows for the second year in a row in 2023. Combined holdings fell by 4% or 1,310t over the year to 29,980t by end-2023, down by 20% from their 2021 all-time high and taking holdings to their lowest level since July 2020.
- Silver supply in 2023, global mine production fell by 1% y/y to 25,830t in 2023 due to weaker output in Mexico owing to the temporary suspension of Newmont's Peñasquito in Q2 &Q3 2023
- Production from primary silver mines fell marginally in 2023, down 0.6% y/y.
- In contrast, silver by-product output from lead-zinc operations rose by 1% y/y
- Silver derived from copper operations also increased, up 3.9% y/y
- On a country level, lower production from Mexico 340t, Argentina 152t, Australia 95t and China 78t was partially offset by higher production in Bolivia 119t and Chile 314t
- A total of 71.7% of annual silver mine supply was produced as a by-product in 2023. While the share of silver produced from gold mines declined y/y, from 15.5% to 13.7%, the contribution from copper and lead/zinc operations rose, from 25.5% to 26.7% and from 30.3% to 30.8% respectively. The share of production from primary silver mines was unchanged year-on-year, accounting for 28.3% of mine output in 2023
- Supply from lead/zinc and copper mines rose by 1.0% to 7,957t and 3.9% to 6,885t respectively.
- Primary silver mines, where silver revenues dictate economic viability, accounted for only 28.3% of global supply in 2023.
- Primary silver production slipped to 7,316t last year.
- Silver output from gold mines dropped by 12.2% in 2023 to 3,540t.
- The strike action at Peñasquito underpinned the first drop in Mexico's output since 2020, which fell by 5% y/y to 6,290t.
- In addition, lower ore grades and some mine closures negatively impacted production in Argentina 152t, Australia 95t and Russia 43t.
- However, these losses were somewhat mitigated by increased supply from Chile 314t as Kinross' La Coipa continues to ramp-up and output from lead/zinc operations in Bolivia rose 119t.
- If only by a marginal 1%, 2023 saw recycling grow for a fourth consecutive year to a 10-year high of 5,556t.
- Much like 2022, the industrial sector was the primary driver of volumes, which in turn was due to growth in the recycling of ethylene oxide (EO) catalysts.
- Jewellery scrap also rose, mainly due to record high silver prices in India. Similarly, the niche of coin scrap grew (by 3%).
- In contrast, photographic recycling saw its structural losses extend for another year (-7%) while silverware scrap contracted by 2%.
- After a healthy rise in 2022, net supply from the official sector fell by 6% in 2023. Nonetheless, absolute volumes remained trivial at just 51t.
- Silver total recycling in 2023 inched up by 1% to a 10-year high of 5,556t
  **Source – World Gold Council, Metals focus, World Silver Survey 2024*

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2. TRADING RELATED PARAMETERS

Monthly and Annual traded volume (quantity in appropriate units)

A) Monthly and annual traded Futures contract volumes (in Metric Tonnes):

Month	GOLD	GOLD GUINEA	GOLD MINI	GOLD PETAL	SILVER	SILVER MINI	SILVER MICRO
Apr-23	129	0.37	34	0.63	12,160	4,920	3,741
May-23	189	0.40	37	0.65	12,745	5,784	4,506
Jun-23	133	0.28	34	0.51	13,359	5,617	4,095
Jul-23	139	0.23	29	0.45	10,630	4,663	3,351
Aug-23	100	0.21	25	0.36	13,050	5,093	3,689
Sep-23	118	0.22	22	0.35	12,821	5,496	4,004
Oct-23	141	0.39	36	0.49	15,003	6,389	4,683
Nov-23	137	0.33	29	0.41	16,644	6,276	4,521
Dec-23	115	0.39	33	0.43	11,308	5,311	3,693
Jan-24	146	0.29	33	0.41	11,242	4,695	3,245
Feb-24	93	0.26	26	0.36	14,256	4,806	3,350
Mar-24	169	0.33	35	0.48	8,807	3,920	2,749
FY 23-24	1,610	3.69	372	5.52	1,52,025	62,972	45,627

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B) Monthly and annual traded volume of Options Contract (in Metric Tonnes):

Month	GOLD OPTIONS	GOLD MINI OPTIONS	SILVER OPTIONS	SILVER MINI OPTIONS
Apr-23	60	16	6,705	834
May-23	266	18	2,619	742
Jun-23	103	18	10,095	1,348
Jul-23	306	19	3,498	858
Aug-23	75	16	13,049	1,921
Sep-23	198	15	3,598	866
Oct-23	143	28	4,921	1,113
Nov-23	218	21	13,033	1,939
Dec-23	111	41	3,213	722
Jan-24	276	25	5,148	924
Feb-24	107	25	18,272	1,976
Mar-24	395	31	5,719	890
FY 23-24	2,256	274	89,872	14,133

a. Annual traded volume as proportion of total deliverable supply (quantity in Metric Tonnes)

Annual traded volume in gold all variants for calendar year 2023: 2060 MT

Total deliverable gold supply: 913 MT

Annual traded volume as proportion of total deliverable supply for gold: 2.26

Annual traded volume in silver all variants for calendar year 2023: 2,65,363 MT

Total deliverable silver supply: 4743 MT

Annual traded volume as proportion of total deliverable supply for silver: 55.95

Note: total deliverable supply is available publicly for calendar year 2023 so we have taken annual traded volume for calendar year 2023.

b. Annual traded volume as proportion of total annual production (quantity in Metric Tonnes)

Annual traded volume in gold all variants for calendar year 2023: 2060 MT

Total annual production of gold: 132 MT

Annual traded volume as proportion of total annual production for gold: 15.60

Annual traded volume in silver all variants for calendar year 2023: 2,65,363 MT

Total annual production of silver: 1268 MT

Annual traded volume as proportion of total annual production for silver: 209.28

Note: total annual production is available publicly for calendar year 2023 so we have taken annual traded volume for calendar year 2023.

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c. Annual average Open interest as proportion of total production (quantity in Metric Tonnes)

Annual average Open interest in gold all variants: 20 MT

Total annual production of gold: 132 MT

Annual average Open interest as proportion of total production for gold: 0.15

Annual average Open interest in silver all variants: 909 MT

Total annual production of silver: 1268 MT

Annual average Open interest as proportion of total production for silver: 0.72

Note: total annual production is available publicly for calendar year 2023 so we have taken annual average Open interest for calendar year 2023.

d. Annual average Open interest as proportion of total deliverable supply (quantity in Metric Tonnes)

Annual average Open interest in gold all variants: 20 MT

Total deliverable gold supply: 913 MT

Annual average Open interest as proportion of total deliverable supply: 0.02

Annual average Open interest in Silver: 909 MT

Total deliverable silver supply: 4743 MT

Annual average Open interest as proportion of total deliverable supply: 0.19

Note: total deliverable supply is available publicly for calendar year 2023 so we have taken annual average Open interest for calendar year 2023.

e. Monthly and Annual value of trade (in Rs. Crores)

Month	GOLD	GOLD GUINEA	GOLD MINI	GOLD PETAL	SILVER	SILVER MINI	SILVER MICRO
Apr-23	77,706	222	20,276	380	91,195	36,983	28,143
May-23	1,14,021	241	22,553	397	94,379	42,822	33,402
Jun-23	78,853	167	20,122	303	95,102	40,177	29,351
Jul-23	82,390	137	17,004	264	78,290	34,336	24,725
Aug-23	59,023	127	14,925	213	94,676	37,055	26,904
Sep-23	69,491	128	12,930	204	92,696	39,813	29,044
Oct-23	83,830	235	21,273	289	1,05,654	45,080	33,104
Nov-23	83,819	203	17,436	245	1,21,191	45,809	33,003
Dec-23	71,809	248	20,301	262	84,598	39,780	27,615
Jan-24	90,895	181	20,389	251	81,263	34,051	23,527
Feb-24	58,017	162	16,040	219	1,01,190	34,336	23,943
Mar-24	1,11,328	215	22,735	306	65,557	29,240	20,528
FY 23-24	9,81,181	2,266	2,25,985	3,333	11,05,792	4,59,482	3,33,289

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Month	GOLD OPTIONS	GOLD MINI OPTIONS	SILVER OPTIONS	SILVER MINI OPTIONS
Apr-23	36,082	9,940	50,304	6,275
May-23	1,61,006	10,806	19,805	5,617
Jun-23	61,303	10,907	72,512	9,822
Jul-23	1,81,806	11,491	26,046	6,414
Aug-23	44,611	9,221	95,207	14,002
Sep-23	1,17,148	8,659	26,914	6,469
Oct-23	85,922	16,961	35,844	8,071
Nov-23	1,32,701	12,782	95,323	14,186
Dec-23	69,640	25,620	24,625	5,517
Jan-24	1,72,761	15,806	38,337	6,873
Feb-24	66,910	15,559	1,31,183	14,279
Mar-24	2,58,805	20,493	43,228	6,711
FY 23-24	13,88,697	1,68,244	6,59,329	1,04,237

f. Monthly and Annual quantity of delivery (in appropriate units)

Monthly quantity of delivery (in kilograms):

Month	GOLD	GOLD GUINEA	GOLD MINI	GOLD PETAL	SILVER	SILVER MINI	SILVER MICRO
Apr-23	71	6.37	562.4	8.358		14,110	7,197
May-23		0.12	40.2	0.580	30,690		
Jun-23	260	1.71	522.7	3.470		15,755	4,841
Jul-23		1.26	557.6	1.010	81,930		
Aug-23	414	1.42	639.4	0.190		11,695	7,712
Sep-23		1.7	698.4	0.070	28,650		
Oct-23	1217	1.47	100.5	1.430		13,525	4,221
Nov-23		0.33	36.1	0.300	9,870		
Dec-23	157	0.02	35.00	0.02		20,095	14,337
Jan-24		0.09	408.50	0.33	2,08,140		
Feb-24	183	3.88	64.90	0.16		14,110	7,197
Mar-24		4.55	1072.90	0.85	30,690		
FY 23-24	2,302	22.92	4,738.6	16.768	3,59,280	75,180	38,308

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Annual quantity of delivery (in kilograms):

Variant	Delivery in kilograms
GOLD	2,302
GOLD GUINEA	22.92
GOLD MINI	4,738.6
GOLD PETAL	16.768
SILVER	3,59,280
SILVER MINI	75,180
SILVER MICRO	38,308

g. Monthly and Annual value of delivery (in Rs. Crores)

Monthly value of delivery (in Rs. Crores):

Month	GOLD	GOLD GUINEA	GOLD MINI	GOLD PETAL	SILVER	SILVER MINI	SILVER MICRO
Apr-23	42.54	3.82	61.93	5.03		104.54	53.52
May-23		0.07	24.21	0.35	229.53		
Jun-23	155.57	1.01	315.81	2.01		108.84	33.41
Jul-23		0.75	321.46	0.60	560.64		
Aug-23	246.30	0.85	380.54	0.12		86.13	56.50
Sep-23		0.98	407.57	0.04	212.98		
Oct-23	693.42	0.90	125.82	0.86			
Nov-23		0.21	49.81	0.18		99.94	31.63
Dec-23	98.38	0.01	21.91	0.01	508.43		

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Jan-24		0.06	257.21	0.21			
Feb-24	114.50	2.42	40.66	0.10		140.56	99.91
Mar-24		3.04	663.56	0.56	1435.91		
FY 23-24	1,350.70	14.12	2,670.49	10.08	2,947.49	540.00	274.97

Annual value of delivery (in Rs. Crores):

Variant	Delivery (in Crores)
GOLD	1,350.70
GOLD GUINEA	14.12
GOLD MINI	2,670.49
GOLD PETAL	10.08
SILVER	2,947.49
SILVER MINI	540.00
SILVER MICRO	274.97

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h. Monthly and Annual Average Open Interest (OI) (in appropriate units)

Month wise Average Open Interest of Futures Contracts (in Metric Tonnes):

Month	GOLD	GOLD GUINEA	GOLD MINI	GOLD PETAL	SILVER	SILVER MINI	SILVER MICRO
Apr-23	19.38	0.03	1.63	0.07	579.51	173.58	148.32
May-23	18.84	0.03	1.74	0.06	516.49	149.87	117.40
Jun-23	16.19	0.03	2.07	0.06	519.09	147.74	112.62
Jul-23	16.67	0.02	2.12	0.06	514.03	159.48	120.73
Aug-23	15.52	0.03	2.50	0.06	574.89	167.57	133.44
Sep-23	16.89	0.03	2.00	0.06	553.38	195.53	159.45
Oct-23	16.42	0.04	2.87	0.07	725.74	246.03	193.38
Nov-23	16.69	0.03	1.80	0.06	702.88	222.35	166.38
Dec-23	17.30	0.04	1.84	0.05	516.87	193.62	126.89
Jan-24	16.47	0.03	1.76	0.06	804.75	305.99	231.47
Feb-24	15.96	0.03	2.46	0.07	1,008.64	322.46	254.65
Mar-24	24.02	0.03	2.38	0.05	771.74	189.10	147.40

Month wise Average Open Interest of Options Contracts (in Metric Tonnes):

Month	GOLD OPTIONS	GOLD MINI OPTIONS	SILVER OPTIONS	SILVER MINI OPTIONS
Apr-23	5.26	0.58	210.97	31.38
May-23	7.78	0.40	122.84	29.07
Jun-23	5.57	0.51	224.69	37.63
Jul-23	7.24	0.45	155.16	41.47
Aug-23	3.74	0.60	269.65	55.59
Sep-23	5.27	0.38	182.98	49.08
Oct-23	5.75	0.90	356.49	81.99
Nov-23	7.44	0.63	389.82	71.16
Dec-23	4.41	1.04	156.85	43.48
Jan-24	6.76	0.73	308.21	78.81
Feb-24	4.42	0.72	434.70	78.93
Mar-24	11.34	0.96	243.53	48.55

Public

Annual average Open Interest of Futures Contracts (in Metric Tonnes):

Variant	AOI
GOLD	17.48
GOLD GUINEA	0.03
GOLD MINI	2.10
GOLD PETAL	0.06
SILVER	648.78
SILVER MINI	206.18
SILVER MICRO	159.33

Annual Average Open Interest of options (in Metric Tonnes):

Variant	AOI
GOLD	6.26
GOLD MINI	0.65
SILVER	255.60
SILVER MINI	54.15

i. Annual average volume to open interest ratio

Variant	Volume to Open Interest ratio
GOLD	0.4
GOLD GUINEA	0.5
GOLD MINI	0.7
GOLD PETAL	0.3
SILVER	0.9
SILVER MINI	1.2
SILVER MICRO	1.1

Public

j. Total number of unique members and clients who have traded during the financial year

Number of unique members traded in Gold & Silver during FY 2023-24

FUTURES + OPTIONS

FINANCIAL YEAR	BASE ASSET	
	GOLD (Includes all Variants)	SILVER (Includes all Variants)
2023-24	359	347

Number of unique clients traded in Gold & Silver during FY 2023-24

FUTURES + OPTIONS

FINANCIAL YEAR	BASE ASSET	
	GOLD (Includes all Variants)	SILVER (Includes all Variants)
2023-24	215684	343574

(client count does not include proprietary trades)

k. Ratio of open interest by FPOs/farmers/Hedge/VCP positions to total open interest.
(Annual average as well as maximum daily value)

Commodity	Instrument	UNIT	Average of Open Interest	Average of Long %	Average of Short %
GOLD	Futures	KGS	19,819	20.56	68.45
GOLD	Options	KGS	6,939	23.01	15.40
SILVER	Futures	KGS	10,21,982	9.78	28.05
SILVER	Options	KGS	3,11,870	16.10	24.34

Note: Details are provided based on daily disclosure on the Exchange website for the period April 2023 to March 2024 in line with SEBI circular no. SEBI/HO/CDMRD/DNPMP/CIR/P/2019/08 Dated January 04, 2019 Based on the data provided by the members from time to time pertaining to Farmers/ FPOs, VCPs/ Hedgers.

Public

l. Number of unique FPOs / farmers and VCPs/hedgers who traded in the financial year

Commodity	Value Chain Participants (VCPs)/ Hedgers
GOLD	1509
SILVER	2204

Note: Based on the classification provided by the members as on March 31, 2024, for clients traded during FY 2023-24. In case of classification of OWN (Prop Account) is uploaded as VCPs for any commodity, the same is included in "VCPs/ Hedger' category.

m. Algorithmic trading as percentage of total trading

% Algorithmic Turnover to Total Turnover (F.Y. 2023-24)

FUTURES + OPTIONS

Financial Year	Base Asset	
	GOLD (%) (Includes all Variants)	SILVER (%) (Includes all Variants)
FY 2023-24	46.27%	49.22%

Note : *1. Algorithmic Turnover against the Total Turnover of asset Gold and Silver (Includes all variants) is considered. (including Futures & Options)*

n. Delivery defaults:

Variant	Number of instances	Quantity involved (in kilograms)	Value involved (in Rs. Crores)
GOLD	2	4	2.42
GOLD GUINEA	4	0.536	0.31
GOLD MINI	4	0.5	0.31
GOLD PETAL	2	0.019	0.01
SILVER	2	60	0.43
SILVER MINI	3	40	0.29
SILVER MICRO	3	9	0.07

Public

3. PRICE MOVEMENTS

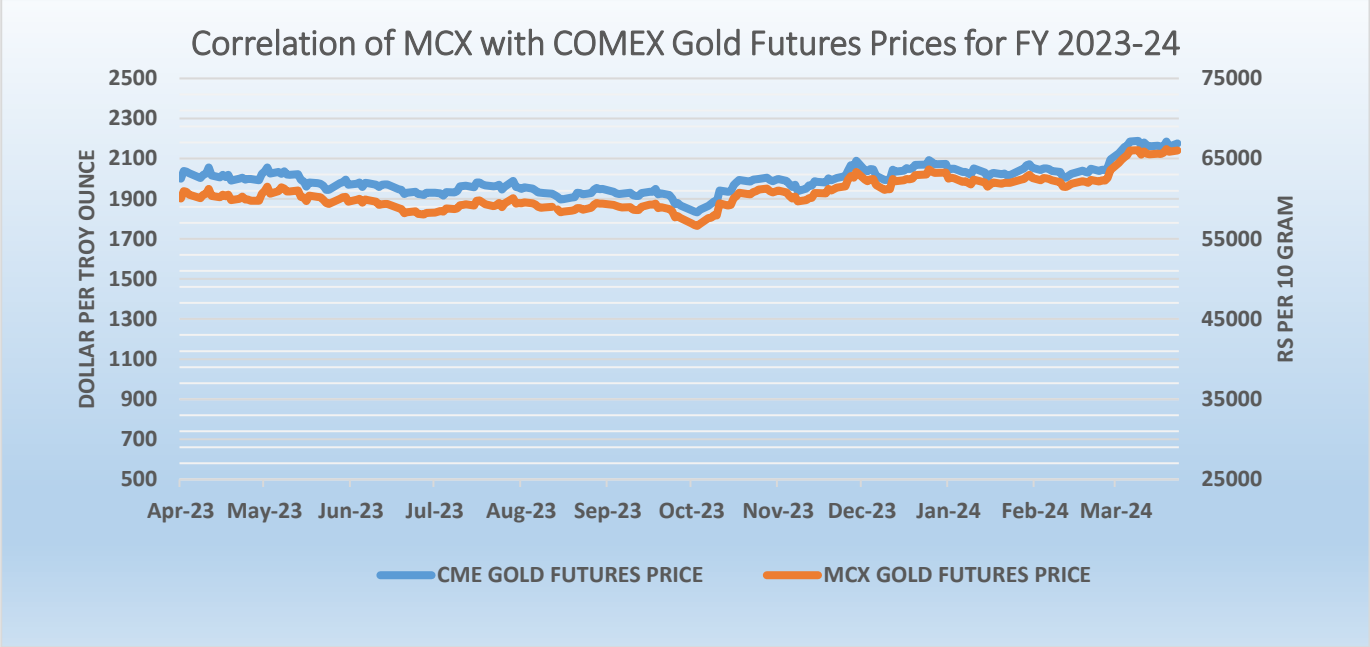
a. Comparison, correlation and ratio of standard deviation of Exchange futures price vis-à-vis international futures price (wherever relevant comparable are available).

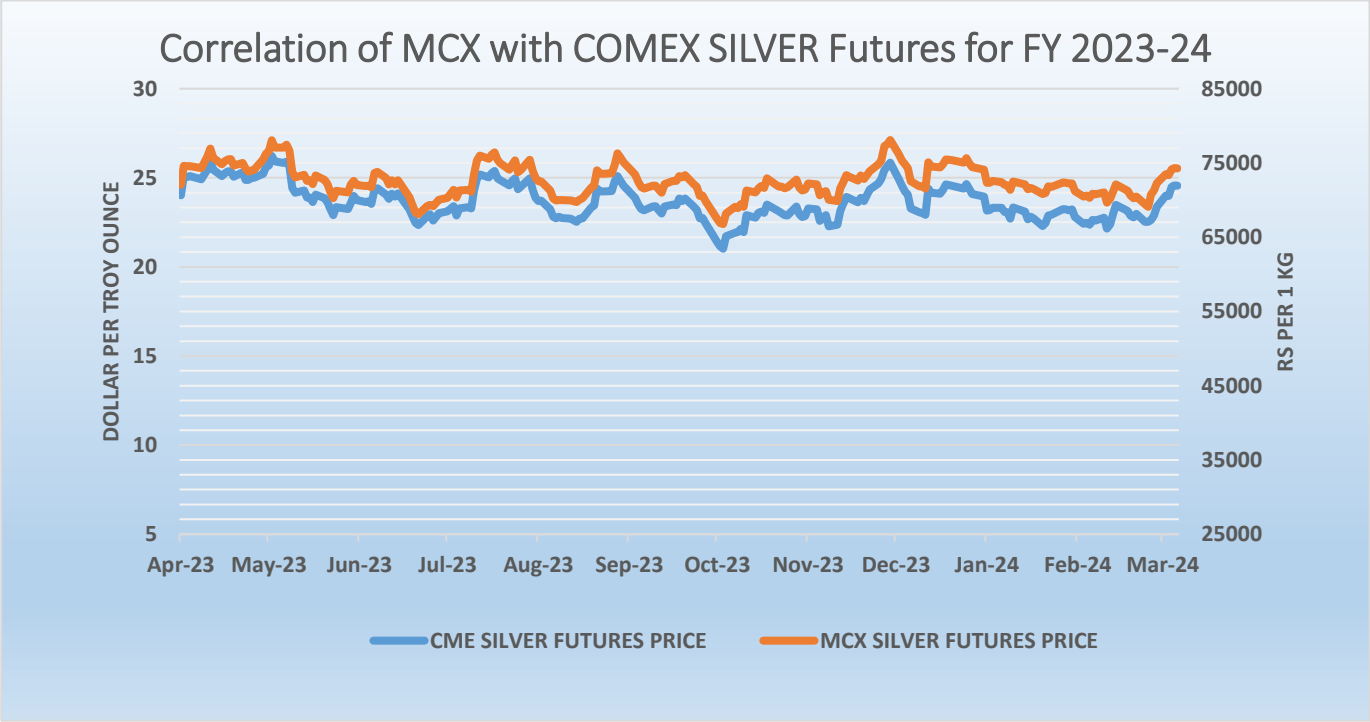
Correlation of Exchange futures price vis-à-vis international futures price:

Gold: 98 % | Silver: 96 %

Ratio of standard deviation of Exchange futures price vis-à-vis international futures price:
Gold: 0.79 | Silver: 0.77

Note: MCX Gold and Silver Futures Near Month Closing Price and CME Gold and Silver Futures Near Month Settled Price have taken from MCX website and CME website





Public

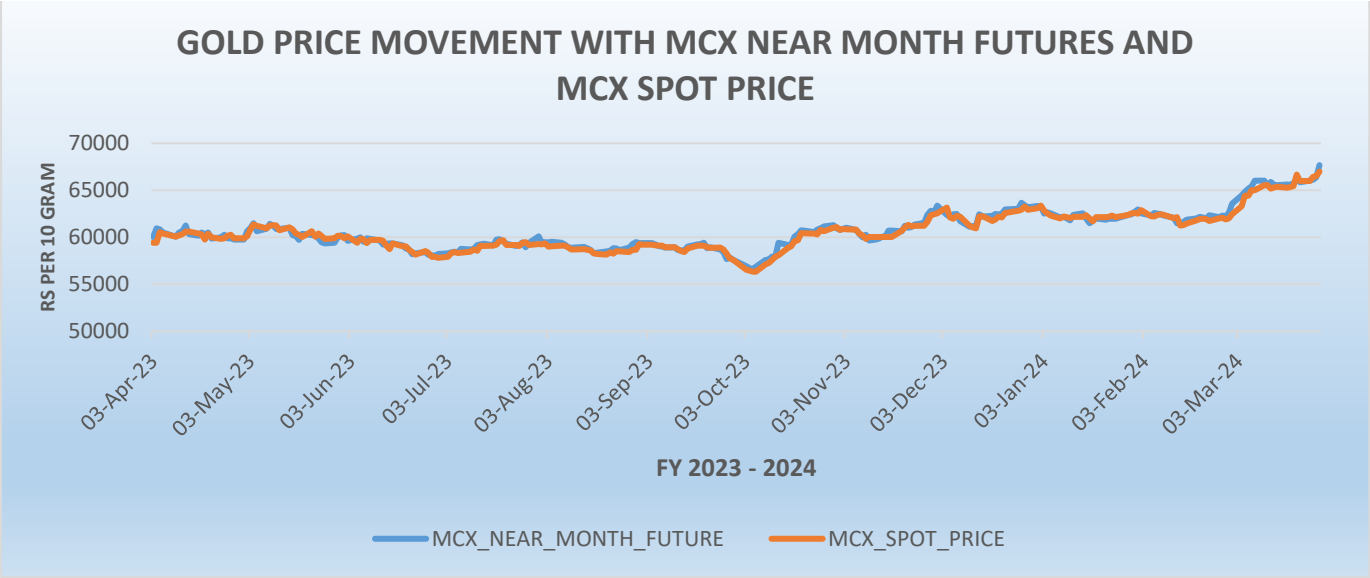
b. Comparison, correlation and ratio of standard deviation of Exchange futures price and domestic spot price (Exchange polled price). (wherever relevant comparable are available).

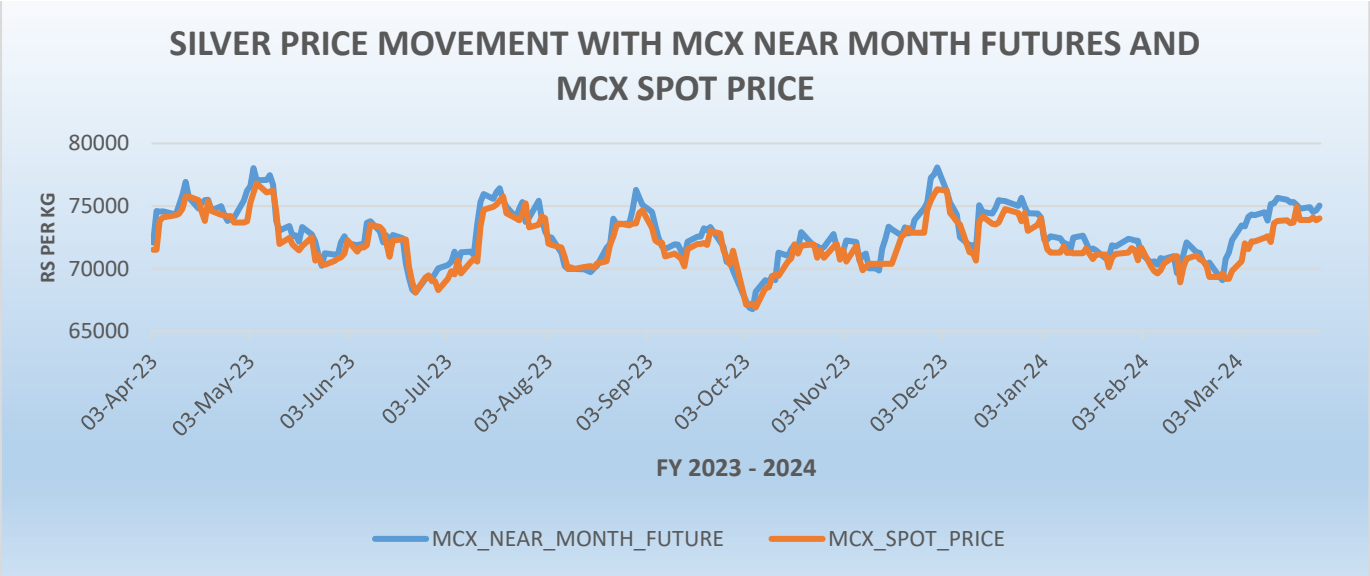
Correlation of Exchange futures price vis-à-vis domestic Spot price (Exchange polled price):

Gold: 99 % | Silver: 92 %

Ratio of standard deviation of Exchange futures price vis-à-vis domestic Spot price (Exchange polled price):

Gold: 1.08 | Silver: 0.97





Public

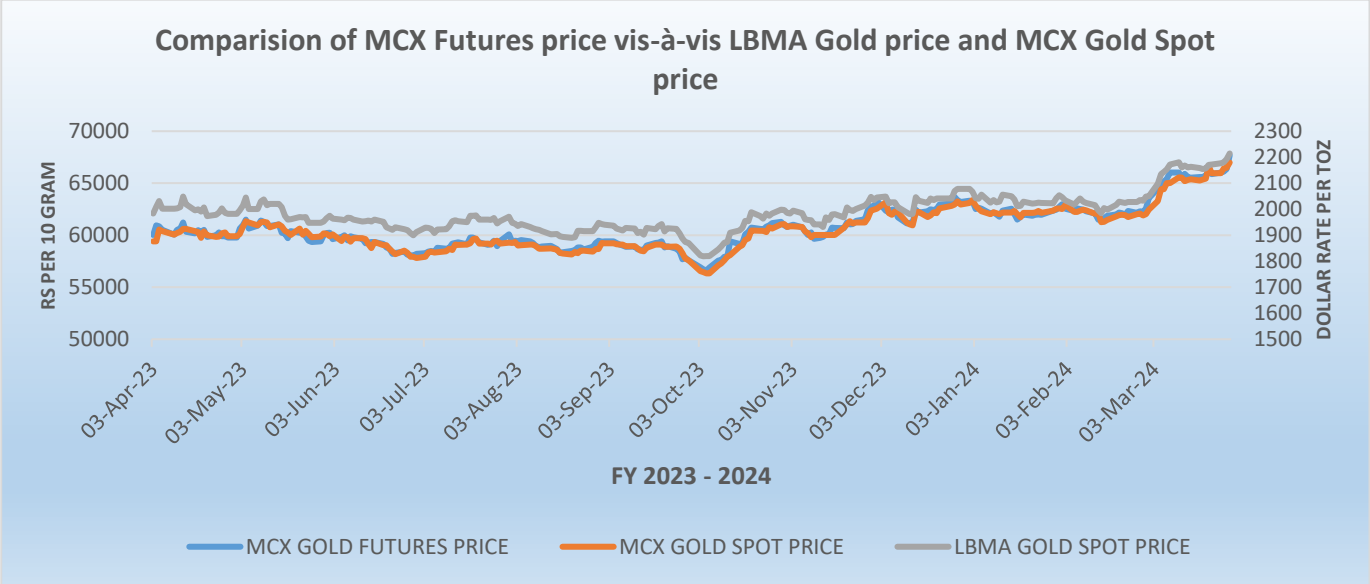
c. Comparison, correlation and ratio of standard deviation of Exchange futures price vis-à-vis international spot price and domestic spot price (Exchange polled price). (wherever relevant comparable are available).

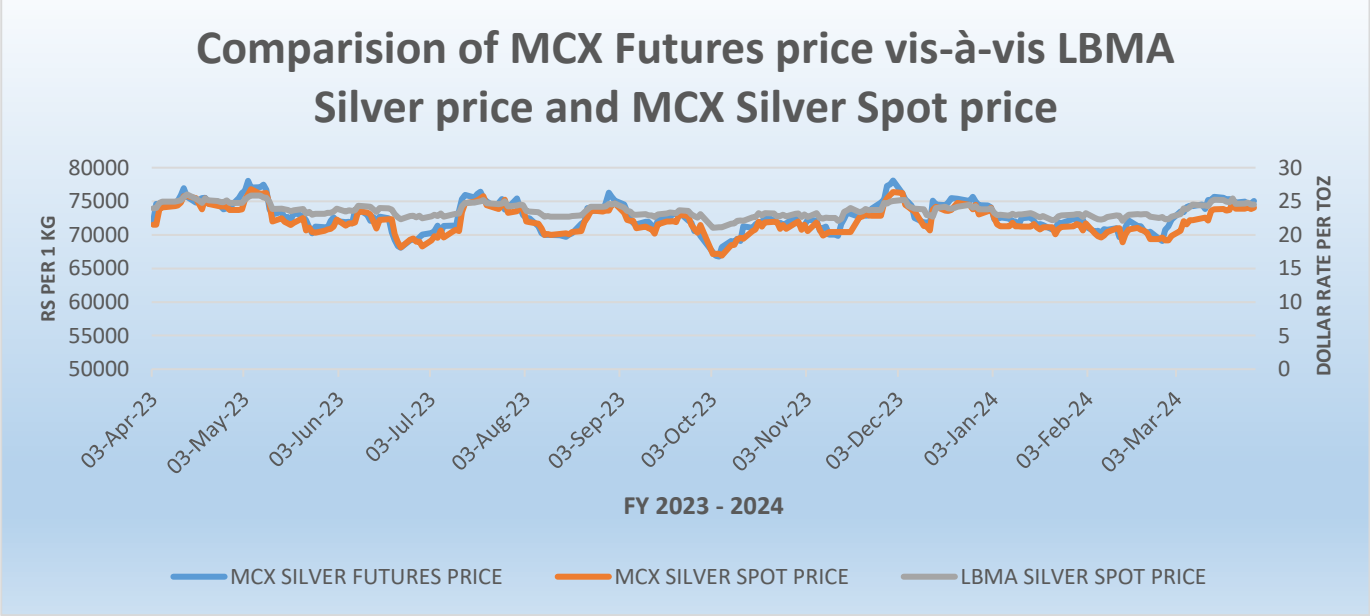
Correlation of Exchange futures price vis-à-vis international Spot price:

Gold: 97 % | Silver: 89 %

Ratio of standard deviation of Exchange futures price vis-à-vis international Spot price: Gold: 0.80 | Silver: 0.72

Note: MCX Gold and Silver Futures Near Month Closing Price, MCX Gold and Silver Second Session Spot Polling Price and LBMA Gold and Silver fixing have taken from MCX website and LBMA website





Public

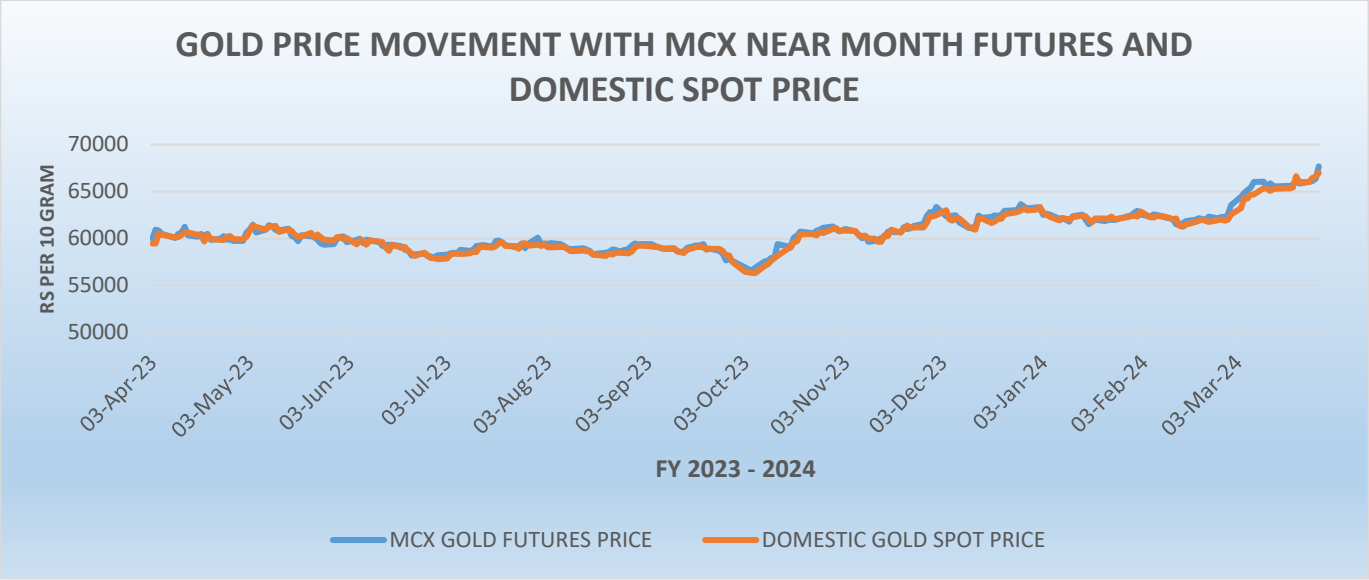
d. Correlation between Exchange futures & domestic spot prices along with ratio of standard deviation. (wherever relevant comparable are available).

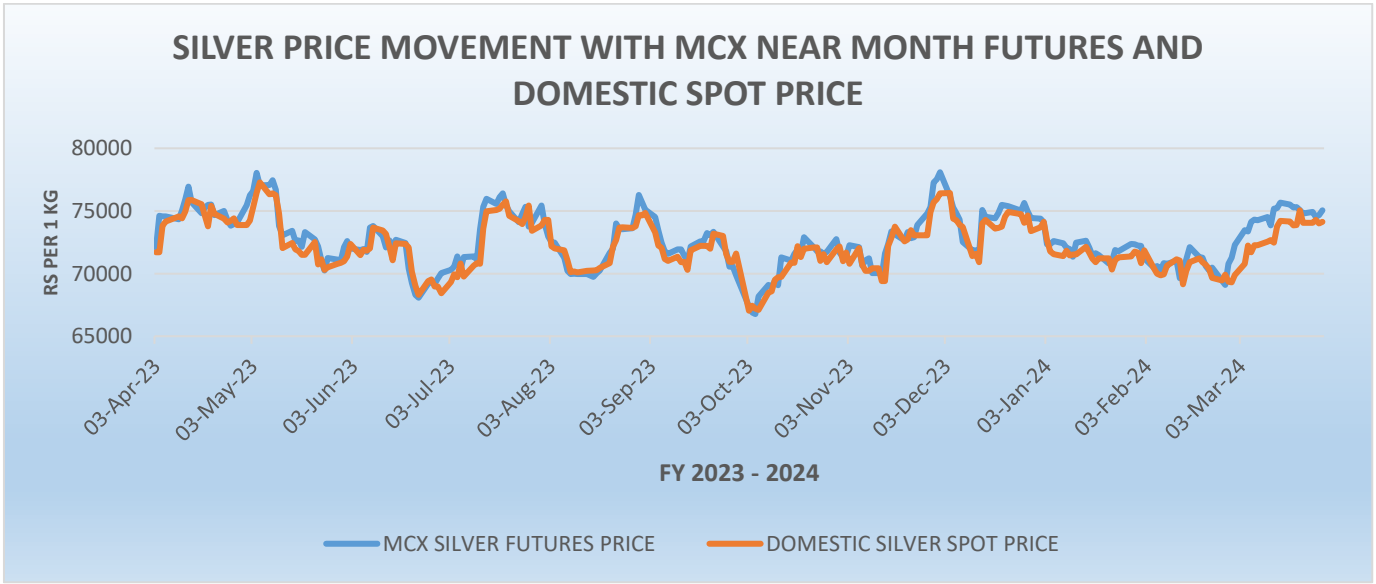
Correlation of Exchange futures price vis-à-vis domestic Spot price:

Gold: 99 % | Silver: 93 %

Ratio of standard deviation of Exchange futures price vis-à-vis domestic Spot price:
Gold: 1.07| Silver: 0.95

Note: MCX Gold and Silver Near Month Closing Price and Domestic Gold and Silver Spot Price have taken from MCX website and India Bullion and Jewellers Association Ltd. (IBJA)



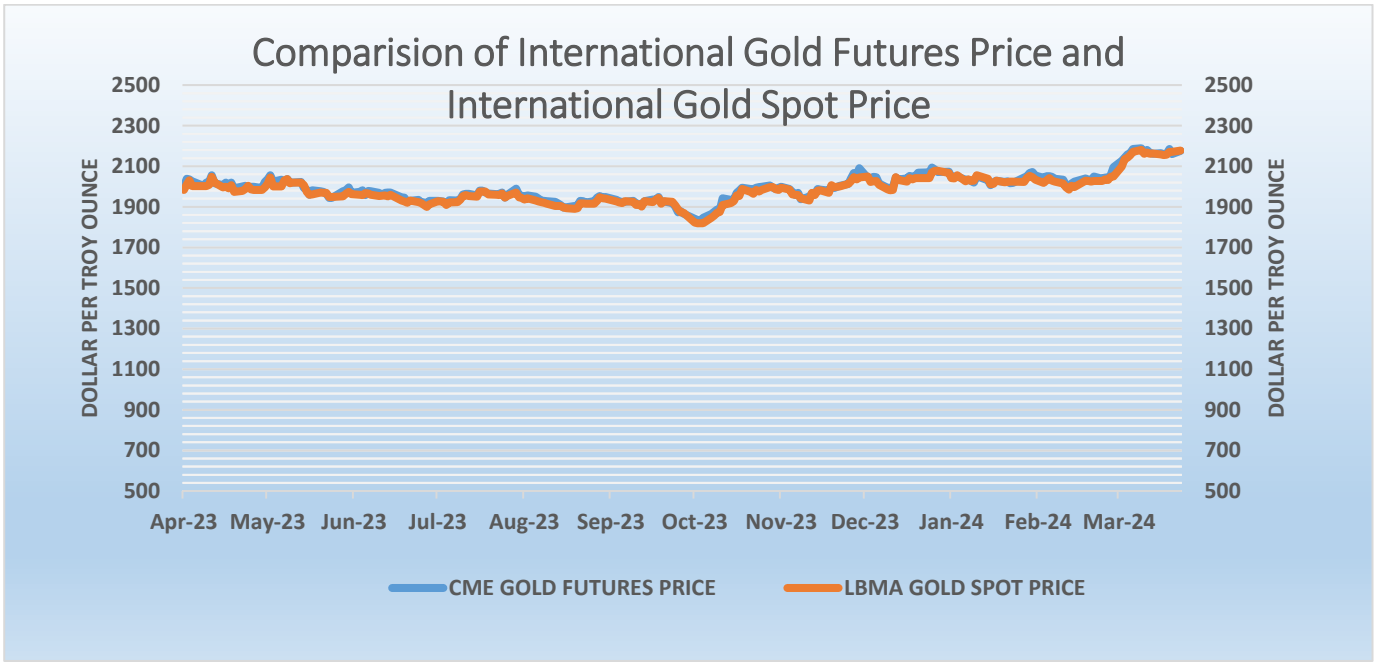


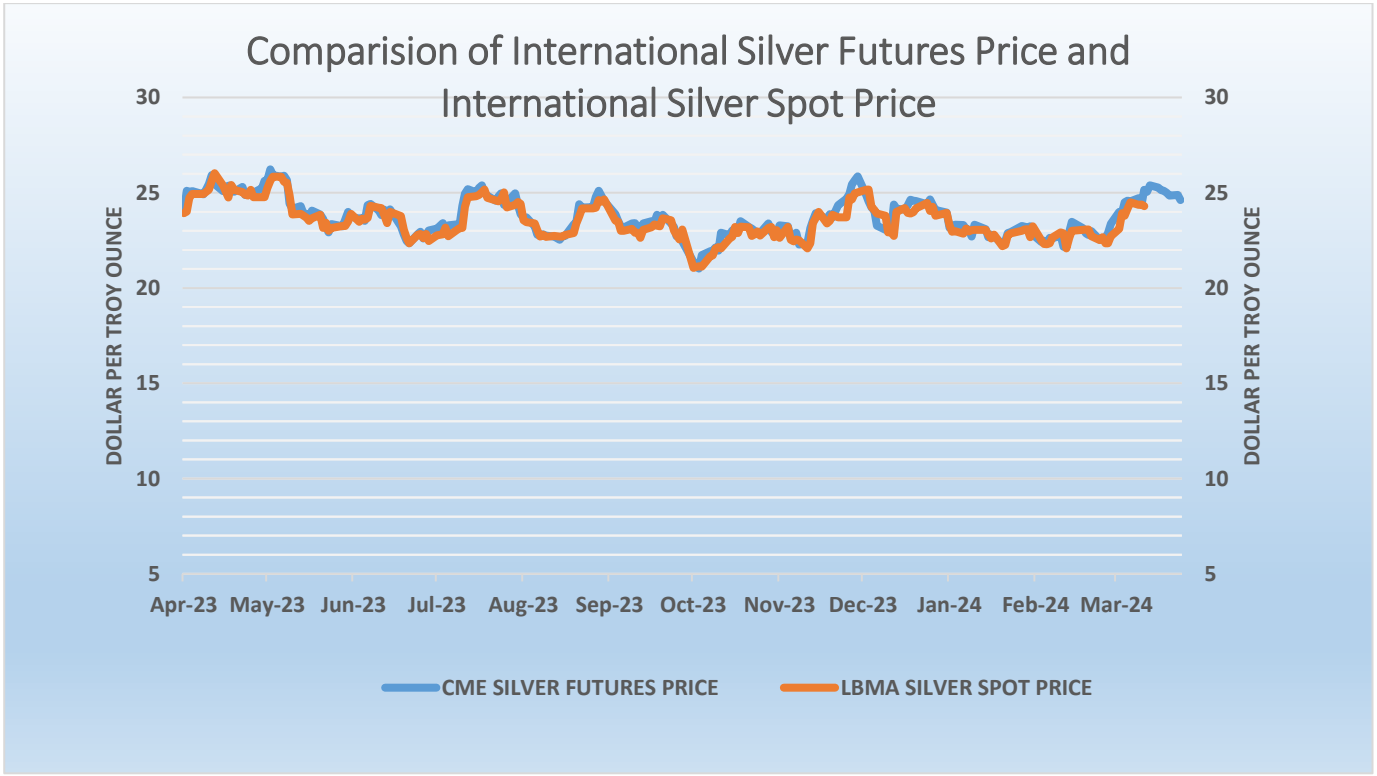
Public

e. Correlation between international futures & international spot prices along with ratio of standard deviation (wherever relevant comparable are available).

Correlation of international futures price vis-à-vis international spot prices:
Gold: 99 % | Silver: 95 %
Ratio of standard deviation of international futures price vis-à-vis international spot prices:
Gold: 1.00 | Silver: 0.94

Note: CME Gold and Silver Near Month Settled Price and LBMA Gold and Silver Price have taken from CME website and LBMA website

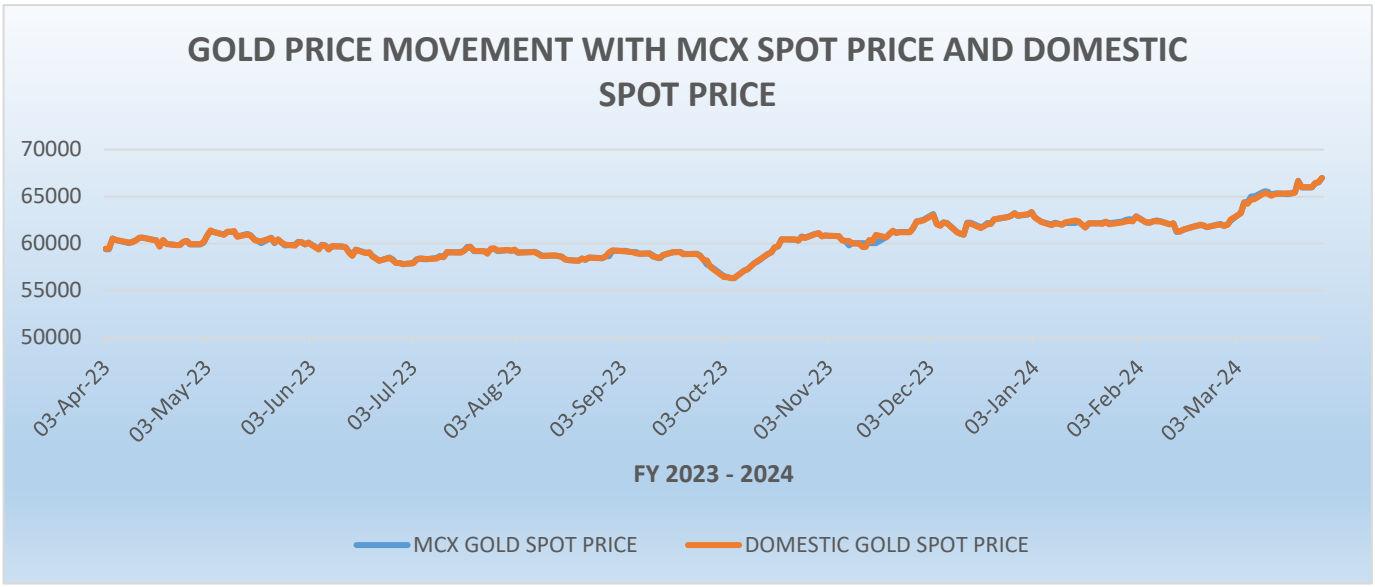


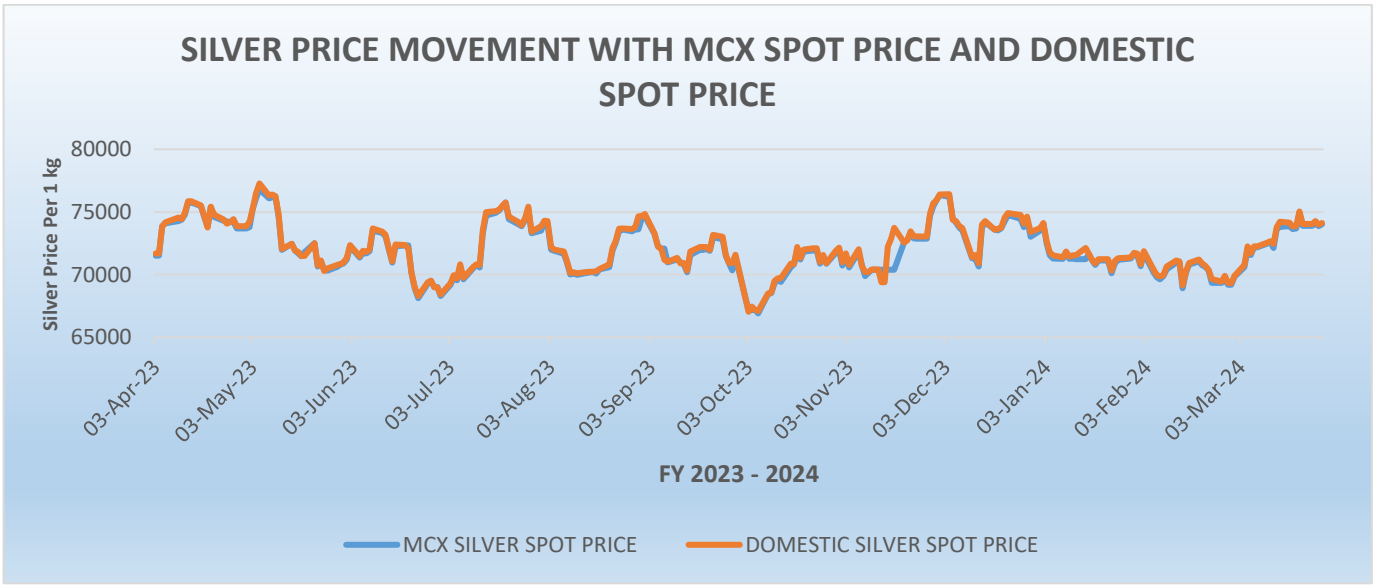


Public

f. Comparison of Exchange polled price and mandi price (in case of agricultural commodities) / other relevant price (in case non-agricultural commodities) at basis centre.

Note: MCX Gold and Silver Spot Price and Domestic Gold and Silver Spot Price have taken from MCX website and India Bullion and Jewellers Association Ltd. (IBJA), respectively.





Public

g. Maximum & Minimum value of daily futures price volatility and spot price volatility along with disclosure of methodology adopted for computing the volatility.

Commodity	Max Future Price Volatility %	Min Future Price Volatility %	Max Spot Price Volatility %	Min Spot Price Volatility %
GOLD	1.01	0.35	0.93	0.28
GOLDGUINEA	0.85	0.28	0.93	0.28
GOLDM	0.94	0.32	0.93	0.28
GOLDPETAL	0.89	0.28	0.93	0.28
SILVER	1.63	0.73	1.85	0.93
SILVERM	1.55	0.70	1.85	0.93
SILVERMIC	1.54	0.28	1.85	0.93

Methodology adopted for computing daily price volatility is Exponential Weighted Moving Average (EWMA)

Note: Only near month contracts have been considered for above working

h. Number of times the futures contract was in backwardation/contango by more than 4% for the near month contract in the period under review.

There is no backwardation/contango by more than 4% for the near month contract in the period under review.

Public

4. OTHER PARAMETERS

a. Qualitative and quantitative measure for Hedge effectiveness ratio and basis Risk (Volatility of Basis) along with disclosure of methodology adopted for such calculations.

Hedge Ratio for 2023-24	
Commodity	Hedge Ratio
Gold	0.7472
Silver	0.7340

Note: Hedging efficiency is the value of Coefficient of Determination (R2) obtained from regressing changes in five-day moving average of daily MCX Spot Prices on changes in five-day moving average of daily MCX Futures Prices during the period

Basis Risk for 2023-24			
Commodity	Unit of Basis	Avg. Return of Basis (unit)	Basis Risk
Gold	Rs/10 gram	-1.23	15.65
Silver	Rs/Kg	-0.37	9.49

Note:

Basis Risk is computed as the Standard Deviation of normal returns in Basis, which is excess of Spot over Futures price. In case Basis is zero for any day, next day's Basis return has been ignored for computing the Standard Deviation.

b. Details about major physical markets of the commodity vis-à-vis market reach in terms of availability of delivery centers (information to be provided state-wise and UT-wise).

Based on top Gold and Silver importing and consumption cities of India, MCX has established delivery and additional delivery centers in major cities.

India Top 10 major importing cities - Gold			
FY 2022-23	Quantity (Metric Tonnes)	FY 2023-24	Quantity (Metric Tonnes)
Ahmedabad	22		
Bangalore	2		
Mumbai	69		
Calcutta	6		
Delhi	245		
Hyderabad	8		
Chennai	47		
Others	36		
SEZ/EPZ	162		

Note: 2023-24 Data is not available publicly

Public

India Top 10 major importing cities – Silver			
2022	Quantity (Metric Tonnes)	2023	Quantity (Metric Tonnes)
-	-	-	-

Note: Data is not available publicly

c. Details about major physical markets of the commodity and average Open Interest for each month generated from those regions.

Data is not available.

d. Details, such as number and target audience, of stakeholders' awareness programs carried out by the Exchange.

MCX PMT – Bullion team has done 180 awareness programs in FY 2023-24 targeted 10868 members of Bullion fraternity including refiners, bullion traders and potential jewellers.

e. Steps taken / to be undertaken to improve hedging effectiveness of the contracts as well as to improve the performance of illiquid contracts.

Following steps has taken to improve hedging effectiveness of all Bullion contracts as well as to improve the performance of illiquid contracts.

To make the Exchange's bullion derivative contracts more relevant to the physical market players and in line with the broader national objective of 'Atmanirbhar Bharat', MCX empanelled 2 more domestic refiners as per "MCX Good Delivery Norms for BIS-Standard Gold/Silver" during FY 2023-24 and totalled to 5 refiners for delivery in the existing contract specifications of Gold Mini (100 grams) futures contract.

MCX has recorded the delivery of 3980 kg of Indian refined Gold valued at 2371 crores via MCX empanelled domestic refiners for delivery of Gold under the existing contract specifications of Gold Mini (100 grams) Futures contract during the FY 2023-24.

However, **8,952 kgs** of Indian refined Gold valued at **4,980 crores** has been delivered via MCX empanelled domestic refiners since inception.

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