MCX
METAL & ENERGY
Trade with Trust

INDEX FUTURES
PERFORMANCE REVIEW



(FY 2020-21)

FOREWORD

The Index Futures Performance Report (PR) is the outcome of the SEBI circular SEBI/HO/CDMRD/DNPMP/CIR/P/2020/21 dated February 04, 2020, directing all recognised Stock Exchanges offering Commodity Derivatives Segment to create a 'Performance Review of the Commodity Derivatives Contracts'. The PR, based on SEBI directive, has to be uploaded on the Exchange website by June 30, 2021 after the consent of the respective Product Advisory Committee (PAC).

Following the above directive, the Index - Product Management Team (PMT) at the Exchange has created PRs for the Index Futures that are traded on the Exchange. These PRs have since been approved by the PAC of the respective Commodity.

The Index Futures Performance Report highlights information on the Volume, Turnover, Open Interest of Index Futures on MCX iCOMDEX BULLDEX and METLDEX on the Exchange, along with the Price Correlations with underlying instrument.

Acknowledgement:
We have been ably guided by the MCX PAC members in improving the content of the report and we are extremely thankful to them. We hope to keep improvising the report going forward.

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INDEX FUTURES PERFORMANCE REPORT

1. BACKGROUND

a. Brief about the Commodity Index.

MCX India Commodity Indices (iCOMDEX™) are excess return indices which consist of Single Commodity Indices, Sectoral Indices and Composite Index. MCX iCOMDEX™ indices derive values from prices of futures contracts traded on Multi Commodity Exchange of India (MCX). An excess return index is considered to be ideal for benchmarking and trading as, along with price returns, it also shows the return attributed to rolling constituent contracts to a new expiry.

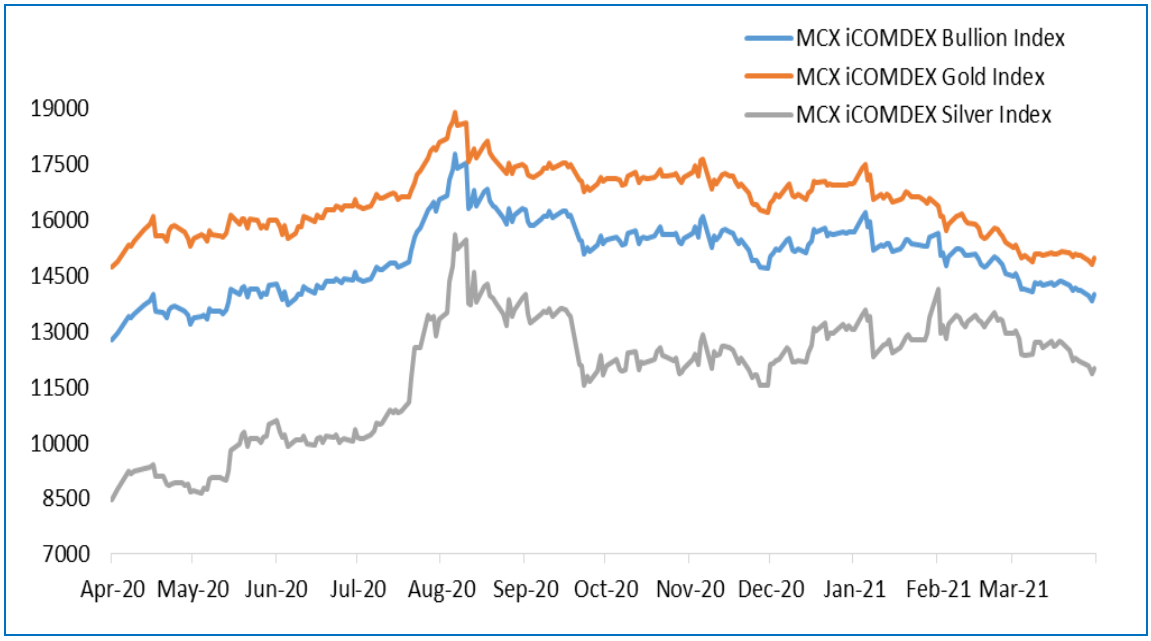
I. BULLDEX



MCX iCOMDEX™ Bullion Index is one of the sectoral indices in the MCX iCOMDEX™ family that reflects real-time performance of bullion sector as a whole. It provides an efficient tool to investors looking to manage their portfolio that includes bullion. The index includes gold and silver futures listed on MCX. Each commodity within the index is weighted three-fourths by its liquidity and one-fourth by its physical market size in India, determined by local production and imports.

Long-term investors can use the MCX iCOMDEX™ Bullion Index for gaining from exposure to the bullion sector as an asset class. Market participants including individual investors, professional traders and financial institutions such as hedge funds and mutual funds, can use the MCX iCOMDEX™ Bullion Index either as a reference benchmark for their investments in bullion or related asset classes or as the basis of investment products which provide direct exposure to bullion.

The price movements in the MCX iCOMDEX Bullion, Gold and Silver indices are provided below.



II. METLDEX



MCX iCOMDEX™ Base Metal Index is one of the sectoral indices in the MCX iCOMDEX™ family that reflects real-time performance of base metal sector. It provides an efficient tool to investors looking to manage their investments in base metals. The index includes 5 base metals futures listed on MCX: Aluminium, Copper, Lead, Nickel and Zinc. This index can therefore serve as an indicator of the performance of the Indian industrial sector. Every commodity within the base metal index is weighted three-fourths by its liquidity and one-fourth by its physical market size in India, determined by local production and imports. Additionally, the

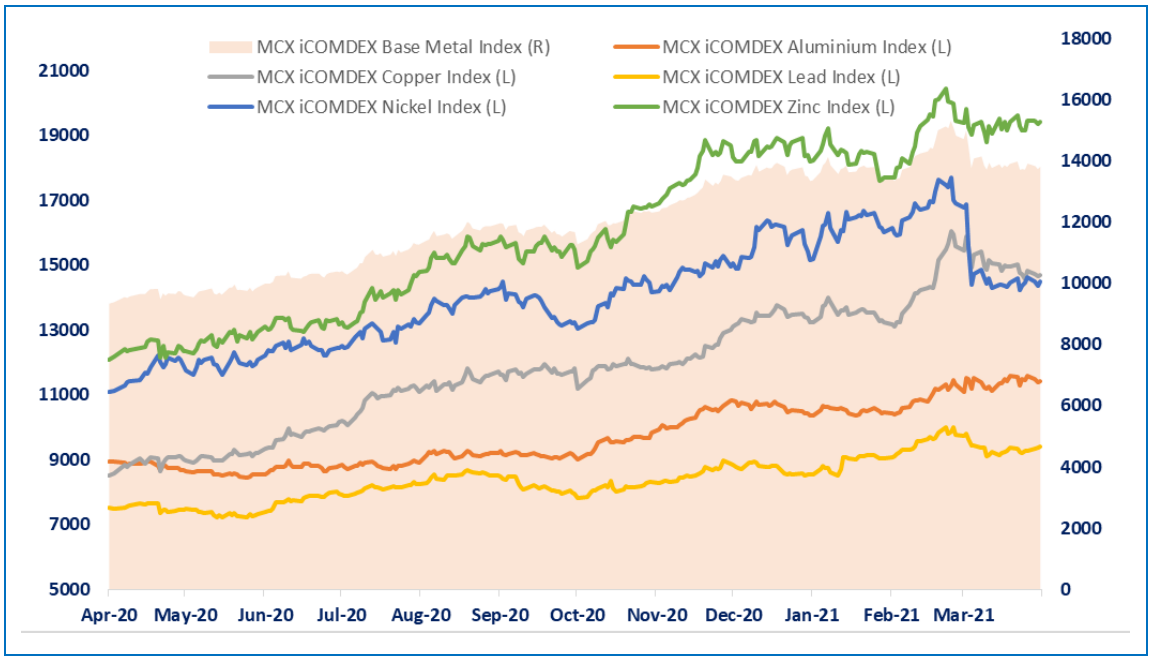
commodity selection process is also subject to further conditions and needs to meet the threshold set forth in the methodology.

Market participants including individual investors, professional traders and financial institutions such as hedge funds and mutual funds, can use the MCX iCOMDEX™ Base Metal Index, either as a reference benchmark for their investments in base metals or related asset classes or as the basis of investment products, provides direct exposure to Indian base/industrial metals.

The MCX iCOMDEX™ Indices conform to the standards of the International Organisation of Securities Commissions (IOSCO) Principles for Financial Benchmarks (July, 2013) in its computation and governance.

On receipt of SEBI approval, Exchange launched Futures on MCX iCOMDEX™ Bullion Index and MCX iCOMDEX™ Base Metal Index on August 24, 2020 and October 19, 2020 respectively.

The price movements in the MCX iCOMDEX Base Metal Index and other single commodity indices are provided below.



b. Commodity fundamentals and balance sheet

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

d. Geo political issues in the commodity and its impact on Indian scenario.

Please find details in respect to points 1 (b), (c) and (d) below.

The brief fundamentals of underlying commodities are elucidated as under.

MCX iCOMDEX Bullion Index futures eased by about 13% during FY2020-21 since its launch on August 24, 2020, after touching all-time high of 16,447 on September 1, 2020. Until the first half of FY21, bullion prices had rallied over speculations of extended lockdown in major economies amidst rising coronavirus cases in the second wave of COVID-19, which pushed investors to seek a safe-haven like gold. Later, rollouts of vaccines and strong optimism over economic recovery led to some liquidation in the yellow metal with lowering of risk perceptions among global investors. Since the beginning of the year 2021, a host of other factors have pushed bullion prices further down like import duty cut in Union Budget 2021 leading to fall in Indian gold prices, higher treasury yields, lower inflation expectation, record-high equity markets, outflows in Gold ETFs, absence of any major geopolitical tension, etc.

MCX iCOMDEX Base Metal Index futures ended the year 2020-21 higher by 15% since its launch on October 19, 2020, after touching all-time high of 15,457 on February 25, 2021. Base metals were one of the best-performing commodities sectors in the second half of 2020, with China-led global economic recovery, weakness in U.S. dollar, and supply disruptions amidst COVID restrictions. The base metals complex witnessed strong buying during the period, with most of them including copper, zinc, aluminium and nickel touching a new high on the back of buoyant demand. Global political and economic factors such as booming industrial output in China, expectations of demand recovery from the rest of the world, and government and central bank stimulus continued to drive the metal price up until March 2021 as dollar began to recover. On the other hand, firmness in the dollar made greenback-priced metals more expensive to holders of other currencies, which led to some liquidation in base metals during some period of 2020-21.

For further details, please refer to Performance Review report of respective individual commodity.

2. TRADING RELATED PARAMETER

a. Monthly and Annual traded volume (quantity in appropriate units)

Volume (in lots)

Month/ Year	BULLDEX	METLDEX
Aug-20	26,304	-
Sep-20	65,662	-
Oct-20	63,268	10,742
Nov-20	72,876	15,832
Dec-20	89,737	18,996
Jan-21	73,087	17,246
Feb-21	84,474	17,246
Mar-21	56,069	85,715
FY 20-21	**531,477**	**112,289**

Note: Contract size is 50 times of Index.

b. Annual traded volume as proportion of total deliverable supply (quantity in appropriate units)

c. Annual traded volume as proportion of total annual production (quantity in appropriate units)

d. Annual average Open interest as proportion of total production

e. Annual average Open interest as proportion of total deliverable supply

- Points 2 (b) to 2 (e) are Not Applicable

For product specific details of underlying commodities, please refer to Performance Review report of respective individual commodity.

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

Turnover (Rs. in Crores)

Month/ Year	BULLDEX	METLDEX
Aug-20	2,120	-
Sep-20	5,183	-
Oct-20	4,909	659
Nov-20	5,643	1,016
Dec-20	6,916	1,294
Jan-21	5,679	1,182
Feb-21	6,349	2,005
Mar-21	3,986	1,522
FY 20-21	**40,786**	**7,677**

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

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

Points 2 (g) and 2 (h) are Not Applicable

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

Average Daily Open Interest (in lots)

Month/ Year	BULLDEX	METLDEX
Aug-20	332	-
Sep-20	468	-
Oct-20	498	227
Nov-20	756	306
Dec-20	1,219	346
Jan-21	922	346
Feb-21	1,310	486
Mar-21	1,831	392
FY 20-21	**916**	**362**

j. Annual average volume to open interest ratio

Index Futures	Average Daily Volume (in lots)	Average Daily Open Interest (in lots)	Volume to Open Interest ratio
BULLDEX	3407	916	3.72
METLDEX	960	362	2.65

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

Index Futures	Total number of unique members	Total number of unique clients
BULLDEX	313	17,857
METLDEX	253	6,514

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

Average based on Daily data				
Commodity	Instrument	Average of Open interest based on Daily data (in lots)	% FPOs/ Farmers/ VCPs/ Hedgers	
			% of Short OI	% of Long OI
MCXBULLDEX	Futures	916	3.31	7.31
MCXMETLDEX	Futures	362	19.31	4.91

Note:

- *Details are provided*
  - *Based on daily disclosure on the Exchange website 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.*

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

Index Futures	VCPs/Hedgers
BULLDEX	21
METLDEX	6

Note:

- *Data compiled based on the classification provided by the members as on March 31, 2021 for clients traded during FY 2020-21.*

n. Algorithmic trading as percentage of total trading

Index Futures	Percentage
BULLDEX	41.04
METLDEX	33.41

o. Delivery defaults

- **Number of instances**
- **Quantity involved**
- **Value involved**

- Not Applicable

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).

No representative Index futures are traded globally.

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

Not Applicable

c. Correlation between exchange futures & domestic spot prices along with ratio of standard deviation.

Correlation with MCX iCOMDEX Bullion Index Futures:

	MCX iCOMDEX Bullion Index	Gold Index	Silver Index
Correlation (%)	99.91	95.75	93.82
Ratio of standard deviation	0.98	1.23	0.54

Correlation with MCX iCOMDEX Base Metal Index Futures:

	MCX iCOMDEX Base Metal Index	Aluminum Index	Copper Index	Lead Index	Nickel Index	Zinc Index
Correlation (%)	99.37	61.24	86.92	54.68	85.80	80.06
Ratio of standard deviation	0.96	1.14	0.92	1.11	0.62	0.84

Note: Correlation computed based on daily returns using: LN(Pt/ Pt-1)

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

- No representative Index futures are traded globally.

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

- Not Applicable

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

The volatility details for MCXBULLDEX and MCXMETLDEX for F.Y. 2020-21 is provided as under:

Commodity	Max Future Price Volatility %	Min Future Price Volatility %	Max Spot Price Volatility %	Min Spot Price Volatility %
MCXBULLDEX	2.04	0.58	2.09	0.88
MCXMETLDEX	1.79	0.49	1.93	0.72

Note: Above details are based on Near Month contract volatility and for the period 1-Apr-20 to 31-Mar-21.

Methodology adopted for computing the volatility is Exponential Weighted Moving Average (EWMA).

g. 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 were no instances of futures contract being in backwardation/contango by more than 4% for the near month contract in the period under review.

4. OTHERS 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 and Basis risk for BULLDEX and METLDEX futures:

The methodology adopted is also indicated below.

Hedge Ratio for 2020-21	
Commodity	Hedge Ratio
MCXBULLDEX	1.02
MCXMETLDEX	1.03

- Hedge ratio is the value of slope between returns of near-month index futures and returns of MCX iCOMDEX index during the financial year.

Basis Risk for 2020-21			
Commodity	Unit of Basis	Avg Return of Basis	Basis Risk
MCXBULLDEX	Rs/unit	-9.58	64.86
MCXMETLDEX	Rs/Unit	-0.94	8.86

Note:

- *Basis Risk is computed as the Standard deviation of daily normal return in Basis, which is excess of MCX iCOMDEX index over index futures price.*
- *In case Basis is zero for any day, next day's Basis return has been ignored for computing the standard deviation.*
- *'Hedge Ratio' is defined as the number of units of futures contracts which minimises the risk of the hedged asset position. When futures prices are perfect estimators of spot prices, Hedge Ratio is expected to be 1. That is, one unit of the asset position can be fully hedged by one unit of the futures contract. But, with imperfect link between spot and futures prices, as well as unequal volatility, the hedge ratio usually diverges from 1.*

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).

- Not Applicable

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

- Not Applicable

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

Particulars	No. of awareness programs	No. of Target audience
Index Futures	823	22886

Target audience includes value chain participants, financial institutions and investors.

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

- Conducting more than 800 (no.s) awareness programs during the FY 2020-21.
- Carried out Mock-Trading sessions for the benefit of market participants.
- Transaction charges were waived off during FY 20-21 on index futures contract.

Disclaimer: *The information contained in this report is provided for information purpose only, and are provided on as available basis. Along with MCX information, this report also contains the information obtained from third party sources/ market sources on best effort basis. The user of the information assumes the entire risk of any use of such information provided herein at its sole discretion. MCX ensures accuracy and reliability of information, to the best of its endeavors, however, makes no warranty or representation as to the accuracy, completeness or reliability of any of the information along with the third party information contained herein. MCX expressly disclaims any and all liability whatsoever to any person for any damage or loss of any nature arising out of use or as a result of reliance, any error, misrepresentations or omissions of any of the information provided herein. The information contained in this document is not intended to provide any professional council or investment advice. No information contained herein may be reproduced, stored in a retrieval system or transmitted in any form, or by any means - electronic, mechanical, photocopying, recording, scanning, or otherwise without explicit prior permission of MCX.*