ASPECTS

COMMODITIES MARKETS

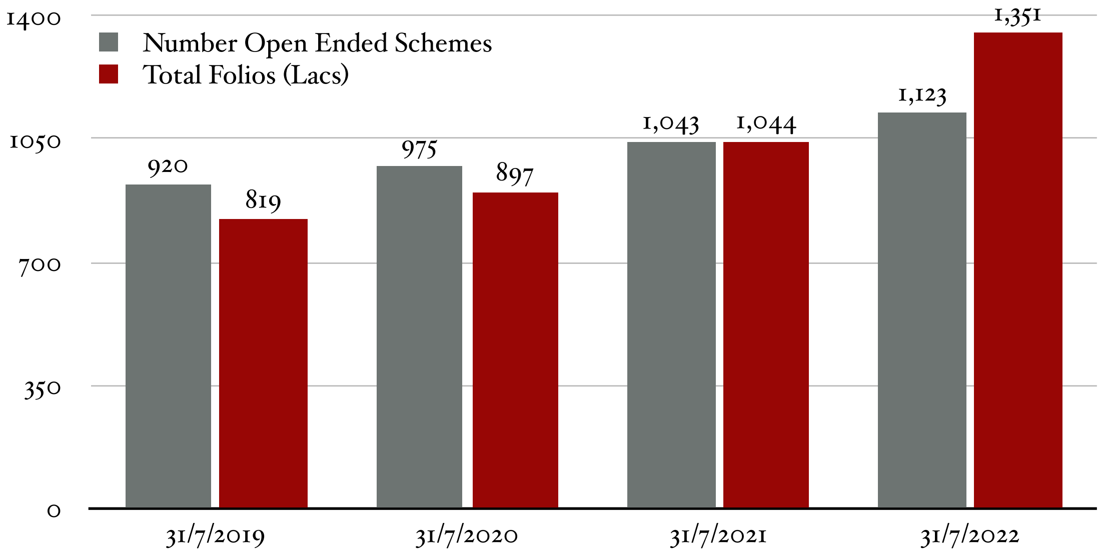
NORTHPLAINS CAPITAL PARTNERS LLP

ASPECTS is a periodic newsletter to clients and prospects discussing investments, finance, the economy and other topics of interest.

9 September, 2022

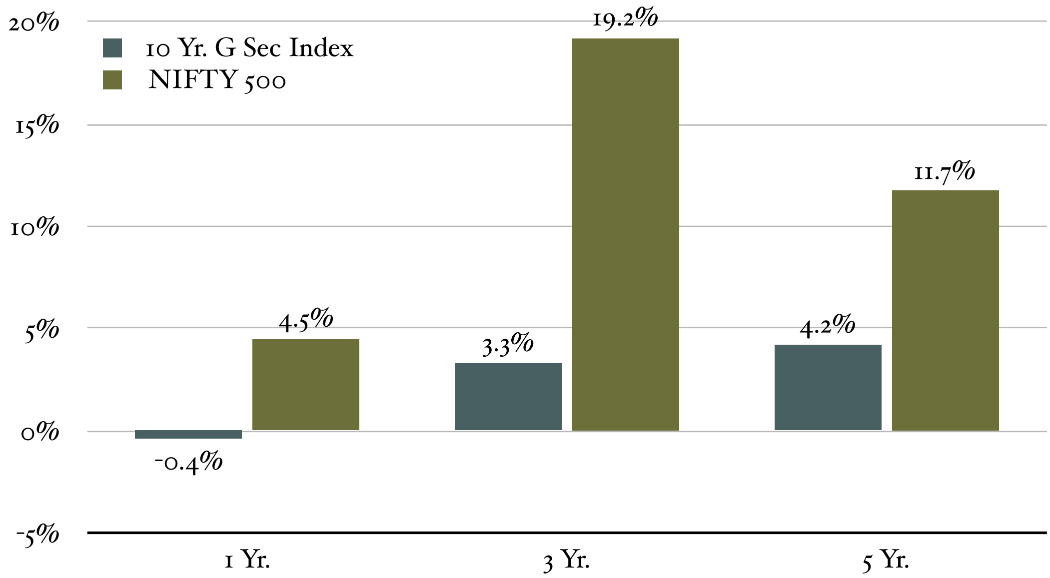
Financial Investments in Indian stocks, bonds and other products, via mutual funds and ETF's have found increasing acceptance in India as is seen from trends in number of schemes and account folios[1].

Exhibit 1: Mutual Fund Schemes & Folios



While returns from individual funds would vary depending on fund strategy and performance, broad equity market returns recovered from the fall during Mid Jan '22 - Mid June '22. 10 Yr. G Sec. returns were pressured due to rising interest rates.

Exhibit 2: NIFTY 500 & 10 Yr. G Sec. Index returns %



[1] Exhibit includes all open ended schemes across products. A majority of schemes are equity or debt based (676 of 1123 in July 2022), and then there are balanced funds (including both equity & debt), Gold funds, foreign funds and other sector or thematic funds.
1 Lac = 0.1 Million
1 Crore = 10 Million

As savers and investors build their understanding of financial investments, they may also want to learn about another sizeable part of financial markets: **Commodities**.

As per common taxonomy, the "Commodities Complex" can be sub grouped into:

A. Precious Metals e.g Gold, Silver, Platinum
B. Base Metals e.g. Copper, Aluminum, Zinc
C. Agri Products e.g. Rice,Wheat, Edible Oils
D. Energy Products e.g. Crude Oil, Natural Gas

Unlike stocks, which represent ownership stake in a company and provide periodic dividends and capital appreciation, basic commodities are primarily key ingredients in our consumption and materials basket.

Participants in commodities markets could be producers (farmers, miners), processors (FMCG, Oil companies) or consumers (individuals, companies or other units), in which case they can be classified as participants in the "Processor" value chain . Alternatively, they could be financial participants in the nature of traders e.g. arbitrageurs, speculators or investors with a relatively longer holding horizon e.g. investors in Gold and precious metals.

Commodities: Markets

The sheer breadth of commodities as an asset class and its importance in our consumption and lifestyle is evident in the "market types" that enable transactions in commodities. First are numerous unorganised or semi organised retail and whole sale markets or "Mandis[2]" where buyers and sellers primarily from the "processor" value chain interact and trade at the local or regional level per locally determined terms and prices aided by context specific demand & supply trends, geographic proximity, relationships and other participant preferences. Then, there are larger "Bulk markets" for commodities such as Oil and Gold which may be characterised by more standardised terms and prices and wherein the participants are more likely to be from the wholesale end of "processor" value chains.

[2] "Mandis": Hindi colloquial usage for markets.

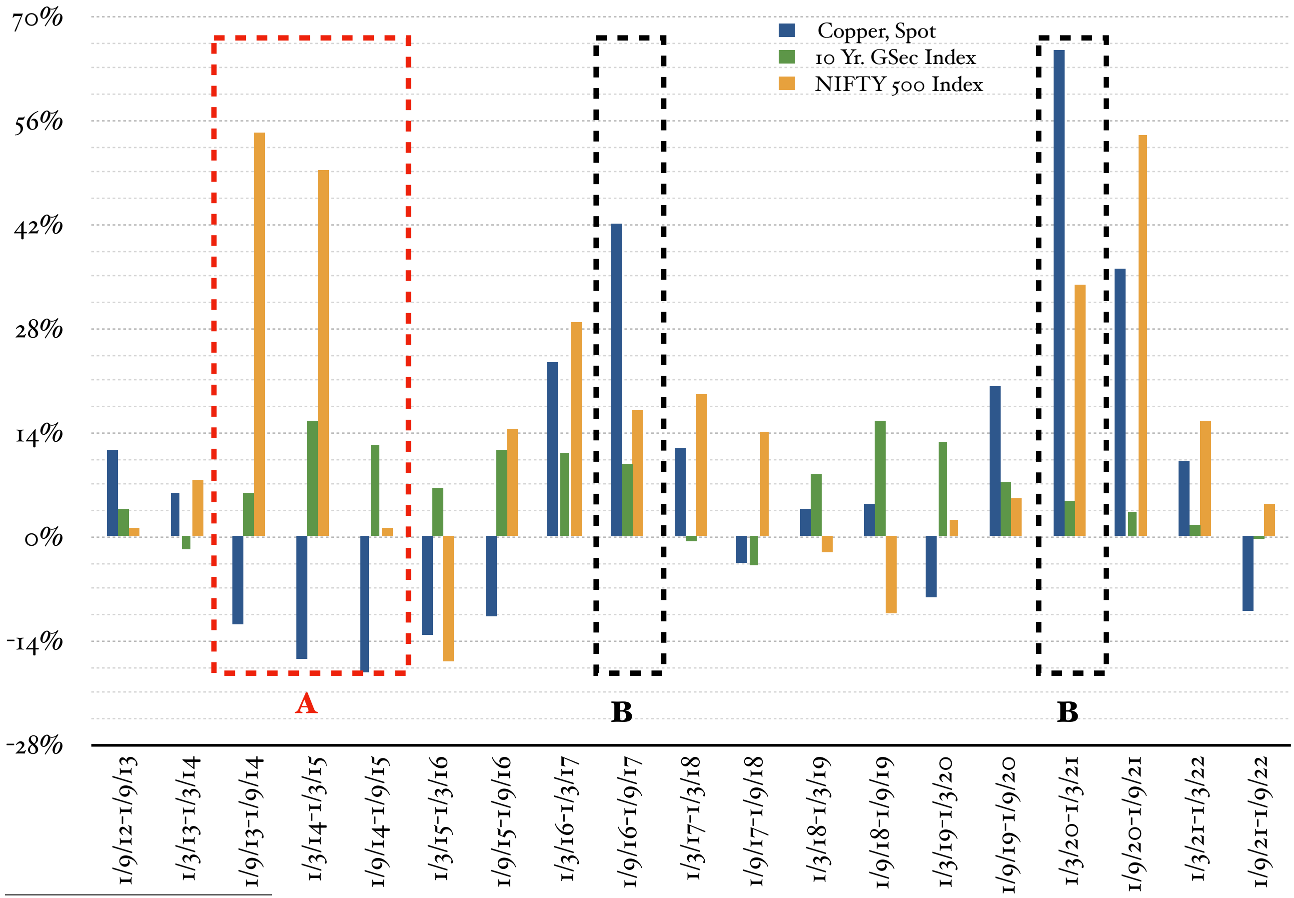
The third and most relevant markets to our discussion are organised markets or exchanges that facilitate diverse transactions in terms of market participants, size, delivery and financial payoffs with standardised prices, terms, regulatory oversight and risk management. A brief discussion on commodities exchanges in India follows in a later section.

Commodities : Return Characteristics

From an investments standpoint, understanding the base return and risk profiles of commodities could be crucial to developing investment or trading strategies for the asset class.

For illustrative purposes, let's consider returns from Copper metal at advertised spot prices[3]. Exhibit 3A, provides 10 year annual returns from Copper alongside price only returns from equities (NIFTY 500 Index) and bonds (10 Yr. G Sec. Index)[4] calculated at 6 month intervals.

Exhibit 3A: Copper, 10 Yr. G Sec. & NIFTY 500 Index annual returns %



[3] Data Source: www.mcxindia.com. Costs of investing, holding, taxes and any other incidental expenses are ignored.

[4] NIFTY 500: Includes the largest 500 companies by market cap listed on the National Stock Exchange.
10 Yr. G Sec. Index: Benchmark index investing in 10 Yr. GOI securities. Costs of investing are excluded.

Exhibit 3B: Copper Metal, 10 Yr. G Sec. Index & NIFTY 500 Index return characteristics			
	Arithmetic Average, Annual Return %	Standard Deviation, Annual Return %	Correlation, R
Copper	7.6%	22.2%	
10 Yr. G Sec Index	6.5%	5.9%	-22.2%
NIFTY 500 Index	15.5%	20.5%	26.6%

A preliminary review shows that Copper metal provided an arithmetic average return of 7.6% with a std. dev of 22.2%. This compares to average returns of 15.5% for equities and 6.5% for bonds, with std. dev for equities being 20.5% and for bonds 5.9%. In addition, there are periods in which Copper returns are negative and lag both equities and bonds (e.g. those with label A in Exhibit 3A) and years in which Copper returns exceed both equities and bonds (e.g. those with label B)[5].

From a financial investor's standpoint, well timed opportunistic investments in Copper could provide strong returns. The variability in returns points towards benefits from short to medium term trading strategies supported by strong risk management. Finally, the weak correlation with equities and negative correlation with bonds suggests that a deeper evaluation of inclusion of Copper in longer term portfolios could be beneficial.

As another illustration, consider investments in Cardamom, which is a part of Agri products subgroup in the commodities complex. Annual price only returns based on Cardamom spot prices[6], 10 Yr. G Sec. Index and NIFTY 500 Index are plotted from 1/9/2012 to 1/9/2022 at 6 month intervals, similar to Copper base metal returns in Exhibit 3.

[5] Relative return characteristics are partially characterised by the Correlation R between any 2 given asset classes. A deeper analyses to understand returns and portfolio design possibilities is beyond the scope of our newsletter. Additional readings: References 1.1 and 2.1 in Appendix.

[6] Cardamom spot prices are available from 1/9/2012 to 13/8/2021. Hence, Cardamom return from 1/9/2020-1/9/2021 is annualised and all return measures for Cardamom are calculated based on 17 annual returns relative to 19 annual returns for the other asset classes.

Exhibit 4A: Cardamom Spot, 10 Yr. G Sec. Index, NIFTY 500 Index annual returns %

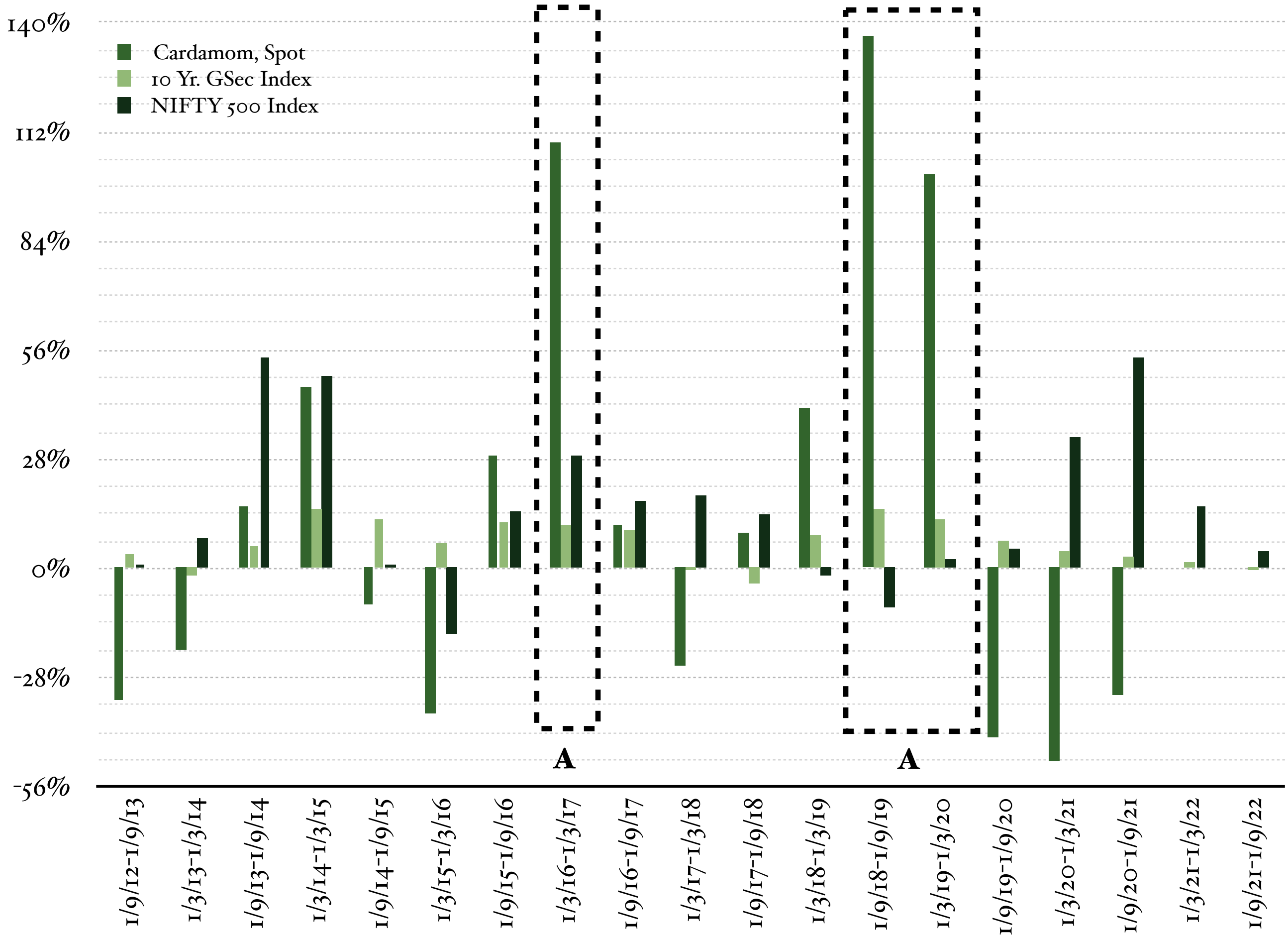


Exhibit 4B: Cardamom spot, 10 Yr. G Sec. Index, NIFTY 500 Index annual returns %			
	Arithmetic Average, Annual Return %	Standard Deviation, Annual Return %	Correlation, R
Cardamom Spot	14.7%	56.6%	
10 Yr. G Sec Index	6.5%	5.9%	63.0%
NIFTY 500 Index	15.5%	20.5%	-9.7%

It is noticeable that for the timeframe analysed, Cardamom average annual returns at 14.7% are higher than G Sec. Index returns and closer to NIFTY 500 price returns with distinctly higher variability than NIFTY 500 returns. Infact, there are 3 periods (labeled A in Exhibit 4A) when Cardamom spot price has doubled over a 1 year period, and this has happened when the end of sample timeframe prices (13/8/2021, price: 1222.5) are barely 2% higher than the beginning of timeframe prices (1/9/2012, price: 1200.5). Furthermore, in contrast to Copper returns, Cardamom returns for the sample bear a small negative correlation with equity returns and a positive correlation with G Sec. returns.

Taken together, both these illustrations highlight how commodity returns may vary by commodity type at an absolute level and relative to other asset classes like equities and bonds. They also allude, for those so inclined, towards considering opportunistic investments and trading based strategies in the broad commodities space to benefit from returns showing significant period to period variation, and then depending on commodity level return and risk profiles including correlations with prominent asset classes (equity and bonds), evaluating inclusion in longer term portfolio design and asset allocation.

Commodities : Financial Products

In order to meet the needs of diverse market participants, financial intermediaries e.g. banks, trading houses and asset managers have come up with numerous innovative products and strategies which are traded and executed on commodities exchange platforms. Evidently, the simplest strategy is for a seller to sell and for a buyer to buy a product at a known price and with well understood contractual terms. An example is a farmer selling rice at the advertised spot price to a buyer.

In commodities exchanges however, derivative transactions[7] involving futures and options are more popular with market participants whether they are from the "processor" value chain or traders from the financial investors group. Consider a miner who produces Copper and wants to protect his revenue from changes in Copper prices 6 months into the future. In a basic futures transaction, he could "hedge" this price risk and enter into a "futures contract" to deliver Copper to an interested buyer 6 months out at a price determined today. Furthermore, he could also decide to settle the contract in purely financial terms without the need for physical delivery of Copper to the buyer[8].

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[7] Derivatives are products whose return and risk depend on, or are "derived" from the underlying core product. For example, Copper Futures payoffs are derived from price trends in the Copper Spot market.

[8] The seller and buyer could mutually decide, or the seller choses whether to opt to deliver the commodity, or settle it financially and close the contract. Specific terms of delivery and settlement are mentioned upfront in the contract. Futures contract are standardised contracts, and are usually marked to market everyday. A larger discussion is beyond the scope of our newsletter. Additional readings: References 1.2 & 1.1 in Appendix.

Likewise, in a simple options transaction, a trader who assesses that oil prices are likely to increase could buy "call options" to purchase oil at the call option strike price known upfront, irrespective of what the price ends up being over the term of the "call option" contract. If his assessment proves right and the price of oil is more than the strike price of the option, he has the right to exercise the option and make a profit of the amount by which the market price of oil exceeds the strike price[9]. Conversely, if the market price stays below the "strike price", he could let the option expire.

These are are illustrative examples on futures and options, and there are numerous derivative products and strategies that are available to market participants. While underwriters and exchanges continually make efforts to expand and optimise coverage of derivative and other products, not all strategies are available across all underlying commodities e.g. one may not be able to buy options on Cardamom as of the date of writing our newsletter. As a note of caution, it can be said that derivatives strategies can be complex, involving contract specific terms, variable payoffs and should be entered into only after understanding the risks and returns involved.

Commodities: Investments for Mainstream investors

As discussed above, commodities have return and risk profiles that vary from one commodity to the other, and may be different from equities and bonds. In addition, there is a large array of investment strategies that are available from straightforward "buy and hold" to more involved derivatives transactions.

Here legendary investor Warren Buffett's advice "Don't invest in something you don't understand", may be relevant and hence, if commodities investments suit their individual financial plans, investors may want to consider a subset of investment products closer to stocks and mutual funds as a first step. They could invest in companies operating in the metals, mining, energy and agri sectors via Mutual funds (MF's), Exchange traded funds (ETF's) or as individual stocks. They also have the option of investing in the commodities themselves via

[9] Options could be European or American. European options can be exercised only at expiration while American options can be exercised anytime during the contract timeframe. Reference: Appendix 1.2.

funds that invest in those commodities e.g. Gold ETF's, through other products that enable such investments e.g. Sovereign Gold bonds, or by direct purchases in the market e.g. buying and holding Gold bullion.

Just like funds investing in equities, funds investing in commodities have well-defined objectives, a team of professionals that manages investments and operations, and are governed and regulated by market regulators. Likewise, commodities MF's expose investors to risks inherent in the asset class(es), fund specific strategy and execution and investor buying and selling decisions. Investors employing other trading and investment strategies should also understand key risks of commodities markets including, amongst others, volatility, transaction costs, taxes, holding costs, product complexity, liquidity and mature demand and supply profiles.

Exhibit 6 below summarises prominent investment alternatives available to mainstream investors[10].

Exhibit 6: Mainstream Commodities Investments

Investment Type	Name	AUM, Cr.	1 yr. %	3 yr. %	5 yr. %	
A. Direct Commodity Funds	SBI Gold Fund	1184	6.01%	8.47%	9.38%	
	HDFC Gold Fund	1359	5.75%	8.45%	9.33%	
	ICICI Pru. Silver ETF	488	Not Available			
B. Direct Commodity Investments	Sovereign Gold Bonds	SGB's are launched by GOI, with maturity of 8 years Coupon of 2.5% / year Traded on exchanges				
	Buy and Hold Gold, Silver, Platinum	Transactions can be made at registered dealers, jewellers.				
C. Sector Funds or Stocks	SBI Magnum Comm. Fund	444.39	-1.49%	27.67%	13.04%	

[10] Returns as of 7/9/2022. SBI, HDFC, Nippon ICICI, AB Sunlife, amongst others, also offer Gold ETF's. Not all products within a given asset class are included. Source: www.moneycontrol.com.

Exhibit 6: Mainstream Commodities Investments

	DSP Natural Res. Fund	726.17	-1.4%	22.14%	8.48%	
	ICICI Pru. Comm. Fund	741.63	4.16%	Not Available		
D. Commodity Derivatives	Futures, Options, Options on Futures and others.	Commodity derivative transactions via brokerages providing this facility				

Commodities: Exchanges and Regulation

Organised, well governed exchanges can enable efficient markets by increasing product breadth and depth, standardising terms, attracting a more diverse group of market participants and through transparent transactions.

In India, there are now 4 main exchanges that deal in commodities, in addition to regional exchanges.

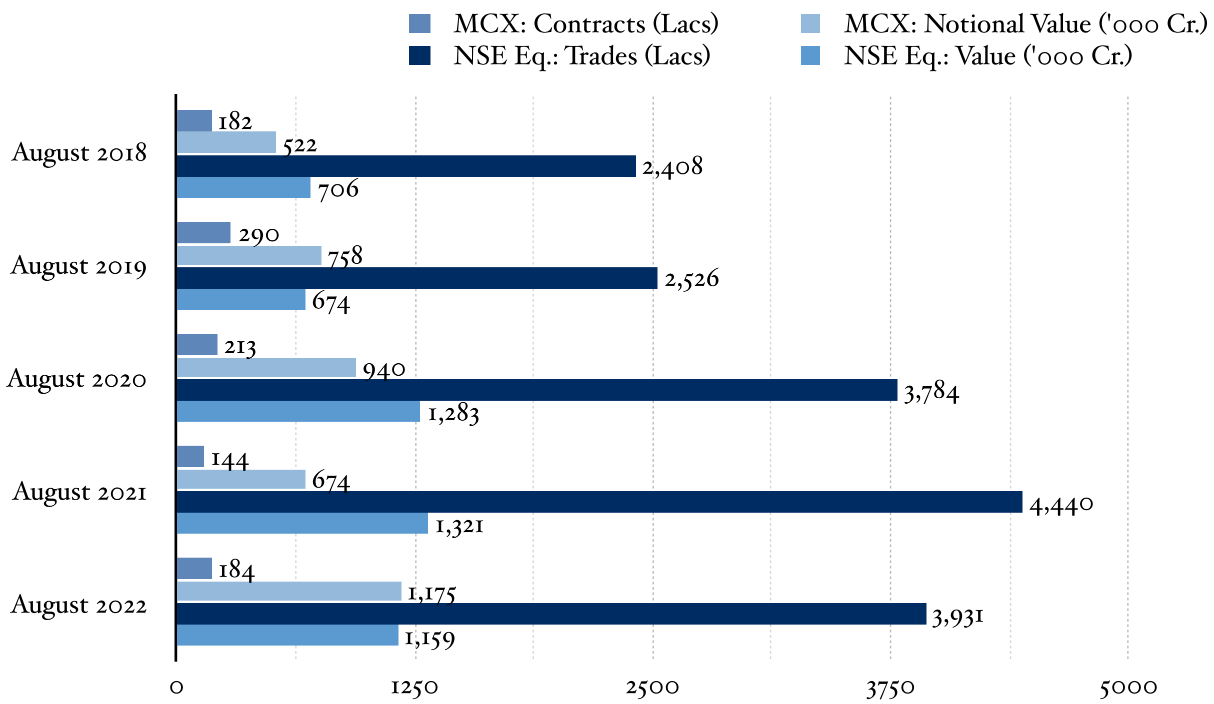
Multi Commodity Exchange of India (MCX) started operations in November 2003 and is the largest commodities exchange. MCX offers trading in commodity derivative contracts in futures, options and options on futures across bullion, base metals, energy, agri products and commodity indices, has a subsidiary MCXCCL which is India's first clearing corporation for commodities derivatives, and MCX traded more than 95% by value of all commodity futures contracts in Q1 FY 2023.

National Commodities and Derivatives Exchange (NCDEX) commended operations in 2003 and deals primarily in agri products and metals derivatives. It is the largest exchange for agri product derivatives in India.

The National Stock Exchange (NSE), initiated commodity derivative operations in October 2018 offering Futures trading in bullion and energy. The Bombay Stock Exchange (BSE) also offers trading in Futures and Options across bullion, select base metals, energy and agri products. Finally, The India International Bullion Exchange (IIBX) was launched by the Prime Minister on July 29, 2022 to enable trading in Gold and Silver[11].

To provide a sense of trading in commodities relative to equities, volume trends over the previous 5 years for all products at the MCX v/s equities at NSE are included in Exhibit 7.

Exhibit 7: Trading Volumes MCX Der. v/s NSE Eq.



Securities and Exchange Board of India (SEBI) regulates the commodity derivatives market in India since September 28, 2015. Before September 28, 2015, the Commodity derivatives market was regulated by erstwhile Forward Markets Commission (FMC).

[11] Over the last decade several commodities exchanges have been restricted, consolidated or closed for different reasons. Among the prominent consolidations and closures: Universal Commodity Exchange UCX was closed in 2014.
SEBI in December 2018 passed an "Exit Order" providing exit to the ACE Derivatives and Commodities Exchange Limited.
The National Multi Commodity Exchange (NMCE) was merged with Indian Commodity Exchange (ICE) in 2018 following charges of irregularities. More recently in 2022, the Securities & Exchange Board of India withdrew permanent recognition granted to ICE, citing amongst others, net worth and infrastructural requirements. This order was then quashed by the Securities Appellate Tribunal, SAT, giving ICE 1 year to bring in additional capital and till then restrict its operations.

Conclusion

Commodities as a group have a large presence in our consumption and materials world. Commodity return characteristics also point towards diversification benefits and reasonable returns from well timed opportunistic investments. Consequently, investors seeking to diversify their core equity and fixed income investments can evaluate investments in regulated mainstream products like mutual funds and ETF's provided such investments are consistent with their financial profiles and return and risk expectations. In addition, those comfortable with trading strategies and derivatives markets could consider this market segment with interest.

APPENDIX

References

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