Note on 'New Products in F&O Segment'

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1. Mini Contracts in Equity Indices

Trading in Index futures enables participation in broader market moves with one trading decision, in an efficient and cost-effective way, without having to select individual stocks. It also helps individual investors to hedge an underlying portfolio. Index futures and options contracts closely follow the price movement of their respective underlying indexes. These products are widely used by financial professionals as well as individual investors for portfolio protection as well as to gain from market movements.

Mini contract will be a fraction of normal derivative contract. Smaller contract size means greater affordability for individual investors. Smaller contract size, apart from helping the individual investor to hedge risks of a smaller portfolio, offers lower levels of risk in terms of smaller level of possible downside compared to a big size contract.

Popularity of mini contracts has been increasing due to the higher liquidity and the ability to get in and out of a trade quickly with low impact cost.

Chicago Mercantile Exchange, one of the leading derivatives exchanges in the world, provides wide range of E-mini future contracts on broad based and liquid indices such as the Nasdaq 100, S&P 500, S&P MidCap 400 and Russell 2000. For example, the E-mini S&P 500 futures contract, which is one of the broad-based and most liquid contracts, is one-fifth the size of the standard S&P 500 futures contract.

Global Experience has been encouraging in the mini contracts. It is noted that overall market liquidity and participation generally increases with introduction of mini contracts. It is proposed to introduce initially mini contracts in both Index futures and Index Options with Sensex/Nifty as the underlying.

2. Options Contracts with Longer Life/Tenure

Currently, in India, exchange-traded equity options have a maximum life of three months. Many of the investors who have a long term view on the market do not find a direct options product with which this could be achieved.

Structurally, long-term options are no different from short-term options, but the later expiration dates offer the opportunity for long-term investors to take a view on prolonged price changes without needing to use a combination of shorter-term option contracts. The premiums for long-term options tend be higher than that of short-term options because the increased expiration period means increased possibility of larger movement in the price of the underlying.

Long-term options are proposed to be made available with expiration dates up to five years. These long-term options could be purchased not only for individual stocks, but also for equity indexes.

Longer term options offer a good alternative to a longer-term trader to gain exposure to a prolonged period in a given security without having to roll several short-term contracts.

Investors also use long-term calls to diversify their portfolios. Long-term puts provide investors with a means to hedge current stock holdings.

Many of the features of long-term options are the same for short-term options. However, they differ from short-term options in several ways including availability, pricing, time erosion vs. delta effect, and strategies.

During the interactions with various market participants it was brought out that existing options contracts traded on Indian stock exchanges have a maximum life/tenure of 3 months and, there is a need to have options contracts with longer life/tenure. It is expected that these longer term options contracts will provide liquidity across the tenures in the market.

3. Volatility Index and F&O Contracts

World over, rapid changes in volatility are witnessed in securities markets from time to time. It is increasingly felt that an openly available and quoted measure of market volatility in the form of an index will help market participants. There are few exchanges that compute and disseminate volatility index.

Volatility Index is a measure of market expectations of near term volatility conveyed by the prices of stock index options or a basket of options on stocks. The Volatility Index is considered to be some kind of indicator of investor sentiment, with high values implying pessimism and low values implying optimism. A negative correlation in often noticed between Volatility Index and market movement.

Volatility Index provides a series of snapshots of expected stock market volatility over a specified time period. The Volatility Index is calculated in real-time is continuously disseminated throughout each trading day.

Investors also use the implied volatility information given by the index, in identifying mis-priced options.

In 1993, the Chicago Board Options Exchange (CBOE) introduced the CBOE Volatility Index (VIX) and it quickly became the benchmark for stock market volatility. CBOE has a family of derivative products based on this index as well.

It is proposed to create and suitably disseminated volatility index. Futures and options on volatility index will be considered for introduction with progress of time and experience gained with regard to this index.

4. Options on Futures

Options on futures are derivative products where on exercise the options position is converted into a futures position instead of delivery of the underlying. A put is the option to sell a futures contract, and a call is the option to buy a futures contract. For both, the option strike price is the specified futures price at which the futures contract is acquired if the option is exercised.

Options on futures are generally of American style. In other markets Options on futures are available on various underlying such as energy, interest rate, commodities, currency, etc. Options on futures contracts offer a wide and diverse range of investment opportunities. This will also provide one additional tool for risk management for the investors.

Options on futures are the derivative instrument that will be added to the existing set of products. Introduction of options of futures on underlying such as interest rates which are currently not active in the derivative segment is expected to provide liquidity in the interest rate futures segment also.

Mostly options on futures are available for trading in US Exchanges. For example, Eurex has options on futures on money market instruments. Options on futures have been observed to have significant volumes on underlying as energy and interest rate. Options on futures with interest rate as underlying contributed 12% of the total options on futures volume for 2006 in US. Some of the prominent options on interest rate futures in US are: Euro dollar, 10 Year Treasury Note, 30 Year Treasury Bond, 5 Year Treasury Note.

Although futures contracts have been traded on U.S. exchanges since 1865, options on futures contracts were not introduced until 1982. Initially offered as part of a government pilot program, their success eventually led to widespread use of options on agricultural as well as financial futures contracts. The options on futures are traded in CBOT, CME, NYMEX, EUREX, EURONEXT

Options on Fixed Income Futures are traded in Eurex. The exercise of an option on Fixed Income Futures results in the creation of a corresponding position in the Fixed Income Futures for the option buyer as well as the seller to whom the exercise is assigned. The position is established after the Post-Trading Full Period of the exercise day, and is based on the agreed exercise price.

It is increasingly felt in the Indian market that there is a need to broaden the range of risk management products. Therefore, it is proposed to introduce Options on Futures on the existing interest rate products traded on exchanges.

5. Bond Index and F&O Contracts

A bond index is used to measure the performance of bond markets. The index can be used as a benchmark against which investment managers measure their performance.

World wide, the two popular indexes for bonds are:

- Sovereign bond index
- Corporate bond index

A sovereign bond index is an index that tracks the performance of the bond issued by a national government.Corporate bonds Index reflects the market performance, on a total-return basis, of investment-grade bonds issued by companies in the Corporate Bond market. Some of the popular corporate bond indexes are issued by Dow Jones, Lehman, Morgan Stanley, Etc.

An index is regarded as a general indicator for market performance. Most financial and real asset markets usually monitor the performance of the market using indexes designed to monitor the general health. They also form a crucial input to the design of security portfolio of investors. Economists and statisticians use these indexes to study trends of growth pattern in economies.

Further, futures and options of wide variety can be launched on the bond indexes. These products are quite popular in many of the prominent exchanges abroad. Presently, Bond indexes and derivatives on them are traded in the following international exchanges:

- Eurex
- Chicago Mercantile Exchange
- Euronext
- Hong Kong exchange
- Tokyo stock exchange
- Chicago Board of trade
- Singapore exchange

At present, there is little activity in corporate bond market segment and in interest rate derivatives. It is proposed that bond indexes (both corporate and GoI) to be created and F&O on the same could be introduced on the lines of what has been permitted in equity. Further, possibility of introduction of exchange traded single bond futures and exchange traded credit derivatives could also be explored.

6. Exchange-traded Currency (Foreign Exchange) F&O Contracts

The foreign exchange or Forex market is the largest market in the world, with trades amounting to more than USD 3.5 trillion every day (mainly OTC). The high risk due to exchange rate fluctuations is dealt with effectively by undertaking hedging transactions using derivatives on a currency.

A currency future is a contract in which the parties agree to exchange cash flows in two different currencies at an agreed upon date in the future. A currency option is a contract that gives the buyer the right, but not the obligation, to exchange one currency for another at a predetermined exchange rate on or until the maturity date.

These contracts when traded on the exchange floors becomes exchange traded currency F&O contracts.

It is expected that trading of F&O products on organized exchanges, will help in concentrating order flow and provide a transparent venue for price discovery. The role of clearing corporation/house means minimal margin requirements and the low transactions costs, further mitigation of credit risks by daily marking to market of all futures positions, general lowering of transaction costs for participants are relatively low. A smaller contract size will also help Small and Medium Enterprises in hedging their exposure directly on an exchange.

There are many prominent exchanges that are involved in exchange traded currency derivatives products. On CBOT and CME Banks often use exchange traded currency futures contracts to hedge the positions acquired in OTC forward market. NYSE Euro next is also an prominent exchange that deals with the cross currency futures and options.

There is a growing need to help small and medium enterprises in hedging their foreign currency exposure through exchange traded small denomination currency (foreign exchange) F&O contracts. This will also help banks to improve their risk management in relation to positions taken in the over-the-counter (OTC) forward Forex market.

With the possibility of capital account convertibility at some time in future, it is felt that an enabling framework in this segment could also be put in place. Further, supervision of Forex F&O trading activities, prescription of risk containment and market integrity measures could be managed by appropriate authority. It is also felt that these contracts could possibly be traded on existing exchanges.

7. Exchange-traded Products Involving Different Strategies

An individual investor may want to create a strategy using options on a broad based index. However, it may not be very convenient for an individual investor. This may be due to the fact that the cost of buying all components of the stock and margin requirement on individual options may turn out to be fairly large. Further, buying of all stocks in the index may have a tracking error and would require re-shuffling of portfolio for changes in the Index. In addition to this, selling of near the money option on expiry of existing option in the portfolio may also be time consuming and costly for the investor. The following two illustrations are for ready reference.

(A) Buy-write Index

For example, an individual investor wants to write covered call options on a broad based index but does not have all the resources required to track the performance of this strategy. In this situation, a 'buy-write index' works like a benchmark for the performance of hypothetical covered call i.e. buying of the underlying index portfolio and selling of the call option on the same portfolio in same notional amounts.

It is proposed that a buy-write index tracking a hypothetical portfolio of long stocks and short call options on a broad based index may be created. Initially the Index values to be disseminated to the market, and as a further step, derivative contracts to be introduced on this index.

(B) Put-Write Index

Now, say, another individual investor wants to create a strategy through buying short-term treasury bills and selling put options on a broad based index. But this individual investor may not be able to do this, due to the fact the money-market in India is mostly Institutional in nature and an individual investor may not be able to have a small portfolio of investment in the treasury bills. Further, selling of near the money option on expiry of existing option in the portfolio may also be time consuming and costly for the investor. In effect, it may not be feasible for the investor to track this portfolio in a cost-effective and efficient manner.

It is proposed that an index tracking a hypothetical portfolio of investment in short term T-Bills and short put options on a broad based index to be created. Initially the Index values to be disseminated to the market, and as a further step, derivative contracts to be introduced on the index.

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