

**DISCUSSION PAPER**  
**INCREASE IN MARKET HOURS OF TRADING IN EXCHANGES**

**1. Background**

With the increased integration of the global markets, information originating from different countries has a bearing on Indian securities market. While the Asian markets are ahead of Indian time zone, the European and American markets extend much beyond the Indian market timings. Some of the Exchanges in these countries have adopted longer trading hours, sometimes even extending up to 23 hours. This has facilitated market participants in these countries to hedge their risk that might arise due to global information flow.

Extending the trade timings of the domestic exchanges may, therefore, enable the domestic market participants to take advantage of such global information flows. Additionally, Indian markets have been in the pursuit of matching the best international standards and practices, and the extension of market hours would, perhaps, be a further step in this direction.

While the benefits of increasing market hours of trading in exchanges are evident, at the same time, issues with market wide implications such as those pertaining to risk management, collateral management, infrastructural constraints etc. as well as the perception of the market participants and stakeholders would also play an important role in determining optimum market timing.

This discussion paper aims to elicit the response / views of the various stakeholders on the different aspects related to extending market hours of trading on exchanges.

## 2. Market Timings

### 2.1 In India

Presently, the exchange-traded equity derivatives market is open from 9:55 am to 3:30 pm and the market timings are co-terminus with those of the underlying cash market.

While exchange-traded currency derivatives market operates from 9:00 am to 5:00 pm, exchange-traded commodity futures market operates from 8:00 am till 11:30 pm.

A comparison of market timings of various products / markets is given in Table 1.

**Table 1- Market timings of various products / markets in India**

Product / Market	Timing
Cash Market	9:55 am to 3:30 pm
Equity Derivatives	9:55 am to 3:30 pm
Currency Derivatives	9:00 am to 5:00 pm
Commodity Derivatives	8:00 am to 11:30 pm
Power Exchange	10:00 am to 12:00 noon

### 2.2 In Other Countries

The market timing followed by the exchanges for derivatives and corresponding underlying securities is given in Table 2.

**Table 2- Market timings of exchanges for derivatives and underlying**

Derivatives Market			Underlying Market	
Exchange	Products traded	Market hours	Exchange	Market Hours
<b>Asia-Pacific</b>				
Osaka Stock Exchange	Stock Index Options and Futures on NIKKEI 225	9:00 am-3:10 pm 4:30 pm-8:00 pm JST	Osaka Stock Exchange	9:00 am-3:10 pm JST
Tokyo Stock Exchange	Stock Index Options and Futures on TOPIX	9:00 am-11:00 am 2:30 pm-3:10 pm 4:30 pm-7:00 pm	Tokyo Stock Exchange	9:00 am-3:00pm JST

		JST		
Hong Kong Exchange	Hang Seng Index Futures	9:45 am - 12:30 pm 2:30 pm - 4:30 pm	Hong Kong Exchange	10:00 am to 4:00 pm
Singapore Stock Exchange	Stock Index Futures on Nifty	6:30 am – 1:30 pm IST	National Stock Exchange	9:55 am-3:30 pm IST
Australian Securities Exchange	Stock Index Options and Futures on ASX SPI 200	5:10 pm-7:00 am; 9:50 am-4:30 pm Sydney Local time	Australian Securities Exchange	7:00 am-9:30 pm Sydney Local time
<b>US</b>				
Chicago Mercantile Exchange	Stock Index Options and Futures on S&P 500	8:30 am-3:15 pm 3:30 pm-8:15am UST	New York Stock Exchange	4:00 am-8:00 pm UST
<b>Europe</b>				
Eurex	DAX futures	7:50 am-10:00 pm (CET)	Frankfurt Stock Exchange	9:00 am–5:30 pm (CET)

### 3. Need for Increased Market Hours

The need for extension of market hours includes the following:

- a. With the increased integration of the global markets, information originating from one country / market has a bearing on the markets in other country / market and India is no exception to this phenomenon. It is important to align Indian markets, as far as possible, with those of the international markets to facilitate the assimilation of any economic information that may flow in from other global markets. One such alignment could be in the area of market timing.
- b. Quick and effective assimilation of information makes markets more efficient in terms of better price discovery, reduction in volatility and impact cost. The extension of market hours may help in effectively assimilating information and thereby make Indian markets efficient, benefiting Indian investors.

- c. In a world where different exchanges are competing with each other to increase participation, it is imperative that the Indian markets align themselves to global markets to attract such trading interest. Extension of market hours would enable market participants to execute trading strategies in Indian markets based on information flowing in, which otherwise would have been executed outside India.
- d. The extension in market hours enables participants to take positions over a longer time window. This enables them to take advantage of market movements overseas.

#### **4. Issues for Consideration**

The salient issues that need to be considered may include the following:

##### **4.1 Risk Management**

In case the market hours are increased, appropriate risk management systems need to be put in place. One of the aspects of the risk management framework relates to updation of volatility for VaR margin calculation. With the longer market hours, the volatility needs to be updated more times.

Presently, volatility is updated five times during the period of trading with the first updation taking place at the beginning of trading hours, i.e., 9:55 am and subsequently at 11:00 am, 12:30 pm, 2:00 pm and 3:30 pm. However, with the extension of market hours, it may be required to update volatility at appropriate times during the period of trading.

##### **4.2 Posting of Margins**

Early opening of the market would require the trading members/clients wanting to take exposure to bring in additional capital for margining/collateral purposes. Further, as margins for VaR purposes get adjusted out of the liquid net worth deposited with the Exchange, any adverse movement in the market caused by increase in volatility may result in erosion of the liquid net worth /

collateral kept with the Exchange leading to temporary shutting down of terminals of the trading members.

The members may, therefore, be required to put up higher margins, since the timing of the opening of clearing banks/custodians will not coincide with the proposed opening time of the market so as to enable fund transfer and mobilization of additional margin/collateral requirement.

#### **4.3 Infrastructural Constraints**

Extension of trading hours may put pressure on infrastructure for the Exchanges as well as market intermediaries. Especially, broking firms may have to incur additional operating costs besides causing inconvenience to their employees. Moreover, in order to obligate the margin / collateral requirement of the investors, the banks / Financial Institutions may also need to keep their offices open for the extended duration. As regards investors, they would also have to put in extra effort to keep a track of the market movements for extended market hours. The existing technology may also need to be upgraded to handle the resultant rise in volumes, if any.

#### **4.4 Other Segments / Products**

On most of the international exchanges, the trade timing of the derivatives market is independent of the trade timing of the cash market. In other words, the derivative segment is open even during those time periods in a day when the underlying cash market is closed. Given the above, extending the trade timing either in the derivatives segment or the cash segment or both the segments could be thought of.

Extending the market timing of the derivative segment without the underlying cash market being open may limit arbitrage opportunities. While this aspect may be particularly true in the case of individual stock-based derivative products, this may not be much relevant for index-based derivative products.

Alternatively, therefore, within a segment there could be different trade timings for different products. For instance, to begin with, extending the trade

timings for index products in the derivatives segment may be considered while the other products in the derivatives segment and the cash segment continue to trade as per the existing time schedule.

#### **4.5 Total Trading Hours / Number of Sessions**

On some of the international exchanges trading in the derivatives is conducted for approximately 10-15 hours in a day, while in a few cases market timings go up to 24 hours, through multiple trading sessions. In India, however, trading takes place for 5<sup>1</sup>/<sub>2</sub> hours in a single trading session. With extension of trade timing, there may be a case for dividing the total trade time into different trading sessions.

#### **5. Comments/Feedback**

Given the above, comment(s)/feedback is requested on the following questions:

- a. Should the market hours be increased? If so, by how much?
- b. Should the increase be in early opening session or late closing session or both?
- c. Should the market hours be increased for all segments or only for one segment?
- d. Should the market hours be increased for one product or for all products in a segment?
- e. Should the market hours be increased through more than one session or by having a longer duration of a session?

#### **Timeline**

Comments/feedback may be sent before April 10, 2009 to Derivatives and New Products Department, SEBI at the following address -

Derivatives and New Products Department

SEBI Bhavan, 3<sup>rd</sup> Floor, A-Wing

Plot No. C4-A, "G" Block

Bandra Kurla Complex

Mumbai-400 051

The comments / feedback may also be e-mailed to

[feedback-dnps@sebi.gov.in](mailto:feedback-dnps@sebi.gov.in)