

Description of Nikkei 225 VI Futures Index

§Basic concept of the Index

The Nikkei 225 VI Futures Index is designed to reflect the daily price fluctuation of a position that combines the near term and the next term Nikkei Stock Average Volatility Index Future (Nikkei 225 VI Future) prices at specified weights. The weights are adjusted daily to keep the maturity of the combined future contracts constant as the term exact one month.

The Nikkei 225 VI Futures are the future contracts based on the Nikkei Stock Average Volatility Index (Nikkei 225 VI), which indicates how market participants expect fluctuation of the Nikkei 225. The eight contracts with consecutive delivery months are traded on the Osaka Securities Exchange.

The Nikkei 225 VI Futures Index is calculated using prices of the near-term (first -term) and next-term (second-term) contracts of the Nikkei 225 VI Futures. The combined future contract with exact one month maturity is composed by changing the weights for the two future contracts on a daily basis.

§Index calculation method

The index value is calculated on a daily basis in accordance with the following formula. Unit of the index value is “points”. The index was calculated retroactively back to February 27, 2012, base date of the index (=100,000 points). The base date is its inception date when the Nikkei 225 VI Futures were firstly traded on the OSE.

$$\text{Index Value}(t) = \text{Index Value}(t-1) \times \frac{W1(t-1) \times F1(t) + W2(t-1) \times F2(t)}{W1(t-1) \times F1(t-1) + W2(t-1) \times F2(t-1)}$$

Where

t=current day, t-1=the precious day

W1=Weight for near-term future, W2= Weight for next-term future

F1=Future price of near-term future, F2=Future price of next-term future

The sum of W1, the weight for the near-term future and W2, weight for the next-term future is always equal to 1. Just after the rolled date (usually the final settlement date, i.e. SQ date for the previous-term future), the days to maturity for the near-term future contract is almost one month, then W1 is equal to 1 and W2 is equal to 0 roughly.

Afterward, approaching the next rolled date (usually the SQ date for the near-term future), W1 is decreasing and W2 is increasing gradually day by day. On the final trading date for the near-term future contract, W1 and W2 become 0 and 1 respectively.

§Features of the index

Just like the Nikkei 225 VI, the greater the prices of the Nikkei 225 VI Futures are, the larger fluctuation investors expect in the future. Therefore, the Nikkei 225 VI Futures Index also tends to be inversely correlated with the Nikkei 225.

In the situation that the stock market is stable and not significantly fluctuated, prices of the next-term Nikkei 225 VI future contract are usually greater than those of the near-term contract. Because the index is calculated by rolling the near-term contract to the next-term contract whose prices are greater on a daily basis, the index level tends to be decreasing gradually under such situation.

Figure 1: Movement of Nikkei 225 VI Futures Index (Unit:Left=Points, Right=Yen)

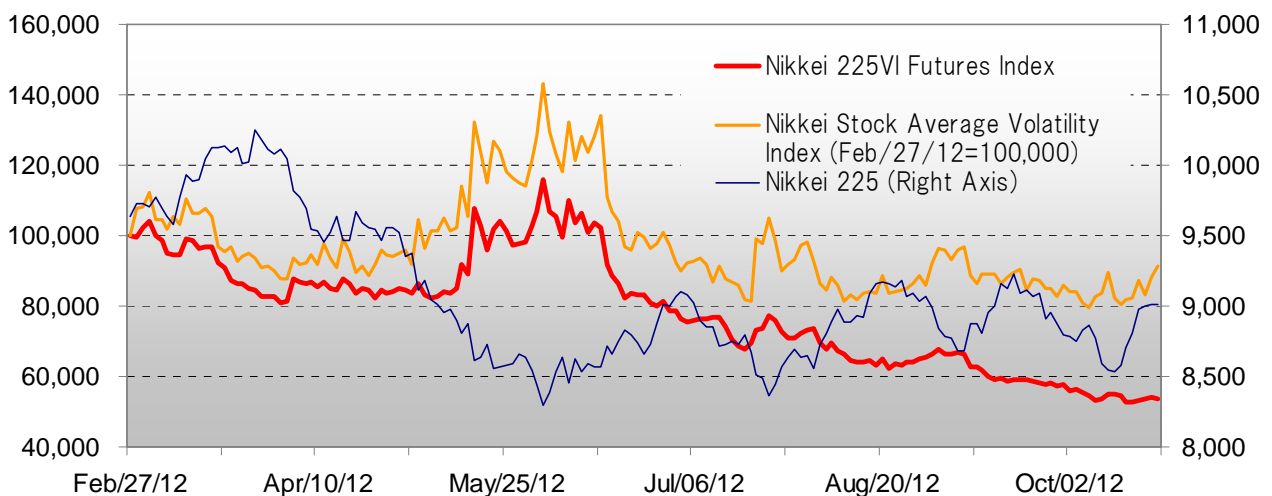
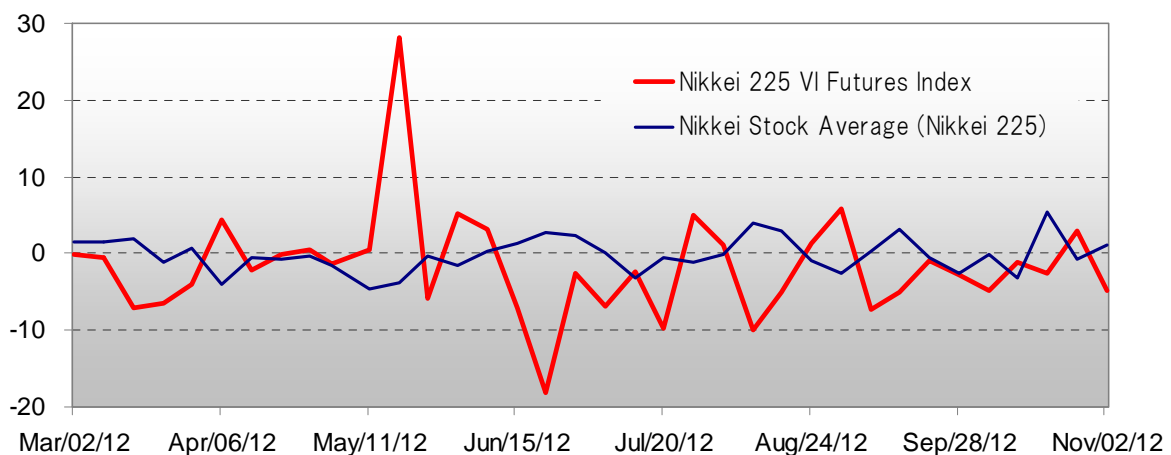


Figure 2: Comparison of weekly return between Nikkei 225 VI Futures Index and Nikkei 225 (Unit:%)



- Please read the [Index Guidebook](#) of the Nikkei 225 VI Futures Index to obtain more detailed information such as the index calculation method.
- This English document is a sample translation from the original document in Japanese.

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