

## Index Option Settlement Value Used for Cash Derivatives

**NOTE: The Index Option Settlement Value (“Settlement Value”) calculation is based on the timing of when each component security in an Index is officially opened by the listing market and is not the same as the first calculated index value which is disseminated at 09:30:15 a.m. ET. It is possible and likely that the Settlement Value will differ substantially from the first disseminated index value and/or the previous day’s closing index value.**

### Summary

Beginning in June 2005, NASDAQ OMX began calculating index settlement values based on the NASDAQ Official Opening Price (NOOP) of the component securities rather than on a volume weighted opening price (VWOP). NASDAQ OMX calculates and provides the Settlement Value for the NASDAQ-100 Index, the NASDAQ Composite Index and the NASDAQ Biotechnology Index. Derivative markets that trade index options and futures began using this calculation as the settlement price for index options and futures on June 17, 2005.

### Calculation of Settlement Value

#### Open Price for Component Securities

When an Opening Cross exists for a NASDAQ-listed stock, the cross creates the NASDAQ Official Opening Price (NOOP). When a cross does not occur at the open for a stock, the NASDAQ system designates the NOOP from the first eligible trade execution. If a stock does not trade on a given day, the NOOP is zero and the security’s T1 adjusted closing price for the previous day will be used in the calculation.

#### Calculation of Settlement Value

The Opening Market Value of a component security is calculated by multiplying the Open Price of the component security, as described above, by the Index Shares. Once all securities in an index have an Open Market Value, the Settlement Value is calculated for the Index using the following formula:

$$\text{Settlement Value} = (\text{Index Open Market Value} / \text{Index Divisor})$$

The Index Open Market Value is calculated using the following formula:

$$\text{Index Open Market Value} = \Sigma \text{Open Market Value of each component security}$$

#### Corrections for a Security’s NOOP

MarketWatch will observe activity prior to market open or close; however, MarketWatch will not adjust any NASDAQ Official Opening or Closing Price. Therefore, the NASDAQ Official Opening and Closing prices published by NASDAQ OMX will be considered final, unless the trade on which the price is based is cancelled or corrected by the firm entering the price, or a set of highly unusual system factors has interfered with the setting of the NOOP or the NOCP (See [Head Trader Alert #2003-134](#)). If a change to the NOOP is deemed necessary after 9:45 a.m., Eastern Time (ET), it must have the approval of NASDAQ OMX senior management.

If a security NOOP is adjusted after the Settlement Value is calculated, the Settlement Value for any Index in which the security participates will be recalculated using the new NOOP value for that security. The new Settlement Value will be redisseminated to NASDAQ’s data feed and an additional email will be distributed.

### Dissemination of the Settlement Value

The Settlement Value is calculated and disseminated each trading day after the market open. Once the Settlement Value has been calculated, it will be disseminated over the NASDAQ Index Dissemination Service (NIDS) as well as through a selected email distribution.

#### Timing of the Dissemination

The timing of the dissemination will vary by index. The calculation cannot commence until all index component securities are open for trading. For the NASDAQ-100 Index and the NASDAQ Biotechnology Index, the calculation and dissemination are likely to occur soon after market open

(normally at 9:40 a.m., ET). For the NASDAQ Composite Index, the calculation and dissemination will usually occur just after market close (normally 4:00 p.m., ET) because it is likely that there will be some component securities in the NASDAQ Composite Index that do not trade on a given day.

Format of the Email Distribution

The email will be pushed out to a select distribution list each time a new Settlement Value is first calculated or when the value changes. The email will include the index symbol (NIDS dissemination symbol), the index name, the settlement value, the value's calculation time, the number of component securities and the number of times the value is calculated (or recalculated).