

# Nikkei Indexes

## User's Guide

Index Business Office, Nikkei Inc.

## ■ About This Site

This site is managed by Index Business Office of Nikkei Inc. which manages the Nikkei's indexes such as Nikkei Stock Average (Nikkei 225). This site is prepared for in-depth understanding of the Nikkei's indexes, but is not for the purpose of soliciting any sale or purchase of financial instruments and like, which are based on, or otherwise refer to, the Nikkei's indexes. The contents of this site are subject to add, change or delete without notice. Please click "[contact](#)" at the bottom of the pages to contact the Index Business Office if you have any inquiries regarding this site.

## ■ Brief Description of the pages

### - Top Page

The value of the Nikkei Stock Average (Nikkei 225) at top of the page is updated automatically while Tokyo Stock Exchange opens. Intraday chart of Nikkei 225 on a day appears when a user clicks "Intraday Chart". Click "More Details" at upper right corner to go to the detailed index page of Nikkei 225 to refer to the open, high, low value of Nikkei 225 in the day and the divisor.

"Latest News" displays the latest news and releases published by Nikkei on the "Nikkei Indexes", and "Important Notice" displays the important news and releases from Nikkei such as component changes in Nikkei 225, launch of a new index etc.. To back to the Top Page from each page, please click the "Nikkei Indexes" Logo at the upper left corner of the page.

### - Index List

"Index List" provides the current value of the indexes calculated and published by Nikkei. Click the index name to go the each detailed index page. Each index page contains the overview of the index, index value, news, charts etc. and provides the index guidebook, factsheet in PDF format, and 3- year of daily and 10-year monthly index values in CSV format.

- **Download Center**

"Download Center" lists a summary of the PDF and CSV files that are provided on each index page for downloading at one place.

- **Daily Summary [Archives]**

"Daily Summary" is a summary page of Nikkei 225 related daily data and its components, to overview the equity market condition on a specific day in the past. It contains the open, high, low and closing values, divisor, intraday chart, the index based valuation measures, top 10 components by index weight, sector weights, and others. The data are updated one by one after the market closes.

Click "Next day" to go the next trading day page, and Click "Previous day" to go the previous trading day page. Designate a specific day by calendar icon on the top to go a specific day directly. Click a name of indicator with arrow symbol in a circle to refer to the historical data.

- **Historical Data [Archives]**

"Historical Data" displays daily, monthly and annual index values of Nikkei 225 since May 16th, 1949 (inception date of Nikkei 225) and daily index valuation measures provided in "Daily Summary" since September 30th, 2004.

Please note that the monthly index values and annual index values of Nikkei 225 are compiled from the daily closing value. For example, the monthly open is the closing value of the first trading day in the month and NOT the opening value of the first trading day in the month.

- **Records in Nikkei 225 [Archives]**

"Records in Nikkei 225" provides the top 20 days in terms of rise and fall records of the Nikkei 225 since its inception date of May 16th, 1949.

- **Winning rate of the day [Archives]**

"Winning rate of the day" shows the rate(%) of the Nikkei 225's rising on each day since its inception on a calendar format. In parentheses below the winning rate on each day are the number of "wins" (W) and "losses" (L) and "draws" (D) on the day. For example, "(27W23L1D)" means that the index was calculated 51(27+23+1) days and there were 27 rises, 23 declines and 1 draw on the date in the past. The dates with the highest and lowest winning rates in each month are highlighted in green and red respectively.

- **Chronology [Archives]**

"Chronology" displays the major events regarding the Nikkei index business in timeline of history.

- **News&Release**

"New&Release" summarizes the news and releases published by Nikkei on the "Nikkei Indexes" with screening function. Clicking the tags for indexes, events and year selects news and releases which meet selected conditions. For example, a user could select the news and releases regarding the component changes of Nikkei 225 in 2010 by clicking "Nikkei225" from index category, "ComponentChange" from event category and "2010" from year category.

- **License**

All intellectual property rights including copyrights to the Nikkei Stock Average (Nikkei 225) and other various indexes are owned by Nikkei Inc. In the case of using the Nikkei indexes for business purposes, please note the general matters in this page.

- **Subscription Service**

Nikkei Indexes "Premium Data Package" is an email & data service for financial

professionals to manage their assets using Nikkei indexes e.g. Nikkei 225 in an efficient way at a reasonable cost. Annual contract and advanced payment are required. For more detail regarding “Premium Data Package”, please refer to [this page](#).

■ **Definition of the indicators**

- **Realized Volatility (RV)** on Nikkei 225 is calculated based on one minute intra-day returns in a day. As there are no index prices in the evening and nighttime (after the closing) and the lunch break (after the morning session), the returns at 9:01am and 12:31pm are calculated by the rate of changes from the previous day’s closing and the closing in the morning session respectively.

$$RV = \sqrt{\sum_{t=1}^{300} (R_t)^2 \times 250} \times 100 \quad (\text{where } t = 1, 2, \dots, 300 \text{ when } t = 1 \text{ as } 9:01)$$

$$R_t = \ln \left( \frac{\text{Closing Value of Nikkei 225}_t}{\text{Closing Value of Nikkei 225}_{t-1}} \right)$$

- **Historical Volatility (HV)** on Nikkei 225 is calculated based on daily returns for the past 20days.

$$HV = \sqrt{\frac{1}{20} \sum_{i=1}^{20} (R_i)^2 \times 250} \times 100$$

$$R_i = \ln \left( \frac{\text{Closing Value of Nikkei 225}_i}{\text{Closing Value of Nikkei 225}_{i-1}} \right)$$

For the detail of the calculation methodology of the **Nikkei Stock Average Volatility Index (VI)**, please refer to [the index guidebook](#).

- **Dividend Yield** on Nikkei 225 are compiled with both simple average and index weight basis.

$$\text{Dividend Yield (Simple Average)} = \frac{\sum(\text{Estimated DPS} \times \text{Unit of shares}/1000)}{\sum(\text{Stock Price} \times \text{Unit of shares}/1000)}$$

Dividend Yield (Index Weight Basis)

$$= \frac{\text{Nikkei 225 DPS}}{\text{Closing Value of Nikkei 225}} \left[ = \frac{\sum(\text{Estimated DPS} \times 50/\text{Presumed Par Value})}{\sum(\text{Stock Price} \times 50/\text{Presumed Par Value})} \right]$$

$$\text{Nikkei 225 DPS} = \frac{\sum(\text{Estimated DPS} \times 50/\text{Presumed Par Value})}{\text{Nikkei 225 Divisor}}$$

In the calculation, estimated DPS for whole financial year by Nikkei is used. Estimated DPS shifts to the next financial year on the next business day of the publication of earnings announcement for the end of fiscal year.

- **P/E** on Nikkei 225 are compiled both market cap basis and index weight basis.

P/E (Market Cap Basis)

$$= \frac{\text{Sum of Market Capitalization}}{\text{Sum of Estimated Earnings}} \left[ = \frac{\sum(\text{Stock Price} \times \text{Number of shares})}{\sum(\text{Estimated EPS} \times \text{Number of shares})} \right]$$

P/E (Index Weight Basis)

$$= \frac{\text{Closing Value of Nikkei 225}}{\text{Nikkei 225 EPS}} \left[ = \frac{\sum(\text{Stock Price} \times 50/\text{Presumed Par Value})}{\sum(\text{Estimated EPS} \times 50/\text{Presumed Par Value})} \right]$$

$$\text{Nikkei 225 EPS} = \frac{\sum(\text{Estimated EPS} \times 50/\text{Presumed Par Value})}{\text{Nikkei 225 Divisor}}$$

In the calculation, estimated EPS by Nikkei is used. Estimated EPS shifts to the next financial year on the next business day of the publication of earnings announcement for the end of fiscal year. Market capitalization of a component stock is calculated with the number of issued common shares excluding treasury stocks (the number of issued common shares including treasury stocks had been used until Jan 23, 2015).

Estimated EPS is calculated by dividing estimated earnings by the number of issued common shares excluding treasury stocks (same as above).

- **P/B** on Nikkei 225 are compiled both market cap basis and index weight basis.

P/B (Market Cap Basis)

$$= \frac{\text{Sum of Market Capitalization}}{\text{Sum of Equity Capital}} \left[ = \frac{\sum(\text{Stock Price} \times \text{Number of shares})}{\sum(\text{BPS} \times \text{Number of shares})} \right]$$

P/B (Index Weight Basis)

$$= \frac{\text{Closing Value of Nikkei 225}}{\text{Nikkei 225 BPS}} \left[ = \frac{\sum(\text{Stock Price} \times 50 / \text{Presumed Par Value})}{\sum(\text{BPS} \times 50 / \text{Presumed Par Value})} \right]$$

$$\text{Nikkei 225 BPS} = \frac{\sum(\text{BPS} \times 50 / \text{Presumed Par Value})}{\text{Nikkei 225 Divisor}}$$

In the calculation, BPS reported on most recent quarterly financial result is used. It had used BPS on annual financial result at the end of fiscal year only until May 31, 2016. The book value used for BPS has been based on common stock (i.e. excluding capital payment through preferred stocks) since June 1, 2016. BPS shifts to the most recent financial result on the next business day of the publication of earnings announcement. Market capitalization of a stock is calculated with the number of issued common shares excluding treasury stocks (the number of issued common shares including treasury stocks had been used until Jan 23, 2015). BPS is calculated by dividing equity capital by the number of issued common shares excluding treasury stocks (same as above).

- **Total Market Cap** and **Total Trading Value** measure sum of the market capitalization values and sum of trading values of the Nikkei 225 components respectively. Figures with "**Share in TSE 1st Sec.**" represent the percentages of "Total Market Cap" and "Total Trading Value" of Nikkei 225 components to the total market cap and total trading value of domestic stocks in Tokyo Stock Exchange

(TSE) 1st section.

- **Nikkei 225 In Other Currencies** are denominated in both spot rate of US dollar and Euro which are used in the calculation of the Nikkei 225 Currency Hedged Index.

$$\text{Nikkei 225 (USD Denominated)} = \frac{\text{Closing Value of Nikkei 225}}{\text{Spot Rate of USD/JPY}}$$

$$\text{Nikkei 225 (EUR Denominated)} = \frac{\text{Closing Value of Nikkei 225}}{\text{Spot Rate of EUR/JPY}}$$

For the details of the calculation methodology for each index, please refer to the index guidebook on the each index page or "Download Center".

#### ■ Update Schedule on "Nikkei Indexes"

The Nikkei indexes and indicators in this site are updated as scheduled below. However, the site will not be updated on the following the Exchange Holidays.

Nikkei Stock Average (Nikkei 225)	Real time	9:00 am - 3:00 pm JST
Nikkei 225 Currency Hedged Index	Daily	Next Business Date (roughly 2:00 pm JST)
JPX-Nikkei 400 Currency Hedged Index	Daily	Next Business Date (roughly 9:30 am JST)
Other indexes	Daily	After the TSE market closes (roughly 4:00 pm JST)
Top 10 components by Weights etc.	Daily	After the TSE market closes (roughly 4:00 pm JST)
Valuation Measures (P/E, P/B etc.)	Daily	roughly 7:00 pm JST
Nikkei 225 Divisor	Daily	roughly 9:30 pm JST

#### Exchange Holidays

##### 2016

January 1	New Year's Day
January 2	Exchange Holiday
January 3	Exchange Holiday

##### 2017

January 1	New Year's Day
January 2	Exchange Holiday
January 3	Exchange Holiday



January 11	Coming of Age Day
February 11	National Foundation Day
March 20	Vernal Equinox
March 21	Holiday
April 29	Showa Day
May 3	Constitution Memorial Day
May 4	Greenery Day
May 5	Children's Day
July 18	Marine Day
August 11	Mountain Day
September 19	Respect for the Aged Day
September 22	Autumnal equinox
October 10	Health and Sports Day
November 3	Culture Day
November 23	Labor Thanksgiving Day
December 23	Emperor's Birthday
December 31	Exchange Holiday

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