

NYSE Euronext changes the review frequency and return calculation method of the PSI 20 index

The Global Index Group standardises its Main Indices. The main features of the new standard are:

- *A transparent calculation method*
- *A quarterly review scheme that is both stable and representative*
- *Index changes in between reviews only for corporate actions*
- *Leaving only a limited number of differences between the main indices regarding selection*

What's new for the PSI 20

- Review schedule to an annual full review with **a quarterly update** for clear new entrants or replacement for removed constituents
- No entries in between reviews and no replacement in case of removals other than the acquiring company.
- Return index calculated without own divisor
- Reviews to be effective after the close of the **third Friday of March**, June, September and December (March being the annual review). Changes in the composition will be announced at least two weeks beforehand.
- The implementation of the changes is planned for September 2010.

What will stay the same

- Changes to the PSI 20 in between the annual reviews will be kept to a minimum.
- The selection method will not be changed: the turnover on the exchange. Companies will only be included where there is solid evidence of liquidity.
- Corporate action treatment will remain the same.
- No updates for changes in listed shares, free floats or capping factors apart from the annual review.

Changes at the annual review

In view of the move of the review date to the third Friday of March, the basis for the review will move to the end of January. This concerns the cut-off date of the turnover as well as the assessment date of the free float.

The listed numbers of shares and capping factors of the constituents of the index after the review will be based on the situation and the closing prices of the Wednesday prior to the annual review.

Change of effective date to the Third Friday

The Global index Group intends to move the effective date of the reviews of all its main indices to after the close of the Third Fridays of March/June/September and December. These dates are chosen to align the indices with the expiration of major derivative contracts. Years ago it was decided not to do the review on an expiration date to reduce pressure on administrative systems.

Today, the market has the capability to cope with huge volumes and it has become an advantage to rebalance the index at a time where there is a lot of activity in the market. That is why the change to such standard date is pursued.

Additional quarterly reviews

Quarterly reviews will be introduced in June, September and December. As these date will not trigger an update of numbers of shares, free float percentages or capping factors, the stability of the index will be maintained. Companies are only included or excluded at quarterly reviews if they exceed higher ranking requirements.

The current possibility to include companies in between reviews and the immediate inclusion of a reserve candidate in case of a removal will be abolished.

This change will make the moment of the inclusion of new constituents predictable. Moreover the basis of inclusion will now always be the end of the second month prior to the review, so for instance for June: the end of April.

As no companies will be included in between reviews, the reservelist will cease to exist.

Change of return calculation

The return calculation will be based on the following procedure:

The total return index (TR) calculation takes two steps: the first step is to transpose the announced dividend payment into index points. This is called the XD adjustment. This uses the following formula:

$$\text{XD adjustment} = \sum_{i=1}^n \frac{g_i * w_i}{d}$$

Where:

- n: The number of securities in the index;
- g_i: The announced dividend per share of the ith component stock (for net return index withholding tax is deducted from this dividend);
- w_i: The weighting of the ith component stock in the index, based on number of shares included in the index, free float factor, capping factor and exchange rate;
- d: Divisor of the index.

The second step of the calculation uses the figures calculated in step one (XD adjustment). These figures are now included in the formula below which actually calculates the index value including dividend re-investment (total returns) and the underlying price index (IV).

$$\text{TR}_t = \text{TR}_{t-1} \left(\frac{\text{IV}_t + \text{XD}}{\text{IV}_{t-1}} \right)$$

In comparison to the current procedure which uses a separate divisor, the timing of the reinvestment of the dividend will change.

In the new return calculation the assumption is that the reinvestment takes place at the close of the ex-date. During the ex-day, the dividend amount will be included in the level of the return index, but will not move with the performance of the underlying price index. So, for the duration of the ex-day, the dividend component is included as if it is held in cash.

The current method would change the divisor of the return index immediately after the close of the cum-day. This

assumes that the dividend amount is reinvested immediately in the index portfolio.

The change in calculation method will enhance the possibility to replicate the index as the new method resembles better the practice of the investor. It also means that in order to replicate the index, the investor doesn't have to invest the dividend that he will receive in shares that will pay the dividend.

Impacts of the changes for users of the index

- There will be three quarterly moments on which rebalancing *may* occur. More often than not these moments will pass without any changes to the index. Inclusions will not occur apart from the periodical reviews
- The practice around reviews will change marginally. In stead of mid January, the new portfolio will be published two days in advance. Besides that, the date on which the rebalancing occurs will move from the first business day of March to the third Friday of March, with additional quarterly reviews after the third Friday of Jun/Sep/Dec.
- The calculation of the Total Return index will change whereby the assumption that reinvestment of the dividend will now take place at the close of the ex-date rather than the close of the cum-date.
- The basis for the annual review in March will change from the end of December to end of January and likewise for the other reviews.

NYSE Euronext Global Index Group manages over 300 indices in Europe as well as the US. Our aim is to provide indices that represent the underlying markets in a stable, transparent, objective and replicable way.

Within the set of European main indices, the aim is to align all indices as much as possible. However, two elements of index management will remain structurally different: the selection mechanism and the treatment of mergers & acquisitions.

Contact us for more information

This document is not intended as a formal consultation. However, users of the index and other parties that feel they have an interest are kindly invited to give their reactions to the Global Index Group of NYSE Euronext.

The changes will be implemented in September 2010 barring unforeseen circumstances.

NYSE Euronext
Global Index Group

email: indexeurope@nyx.com
contact: Boudewijn van der Kaaij
phone: +31 (0)20 550 4200