

INDEX RULE BOOK

Euronext[®] France Germany Leaders Family

Euronext[®] France Germany Leaders 50

Euronext[®] France Germany Leaders 50 EW

Version 18-01

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indices.euronext.com

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Index Summary

Factsheet	Euronext® France Germany Leaders 50 Index Family
Index name	Euronext® France Germany Leaders 50 Euronext® France Germany Leaders 50 EW
Index type	Price, Net, Gross and Decrement 5%
Index governance structure	Euronext acts as Compiler and Supervisor of the index
Eligible stocks	The universe is composed of the CAC40 index as well as the 40 Largest stocks in term of free float market capitalization, admitted to listing on the main markets of Germany.
Selection	For each country, all eligible stocks are ranked by free float market capitalization. The top 25 ranked are selected for each country.
Number of constituents	50
Weighting	Free float market capitalization, equal weight
Review cut-off date	Penultimate Friday of the month of February, May, August and November
Review of composition	Quarterly after the close of the third Friday of March, June, September and December.
Review of number of shares	Quarterly
Base Currency	Euro

Note: the factsheet is a summary of the rule book for information purposes only. The text of the rule book is leading.

Reference Data

Index name	Isin code	Mnemo	Bloomber g code	Reuters code	Base date	Base value	Publication since
Euronext® France Germany Leaders 50	NL0012658769	EFGP	EFGP	.EFGP	30/12/2005	1 000	10/11/2017
Euronext® France Germany Leaders 50 NR	NL0012658777	EFGN	EFGN	.EFGN	30/12/2005	1 000	10/11/2017
Euronext® France Germany Leaders 50 GR	NL0012658785	EFGG	EFGG	.EFGG	30/12/2005	1 000	10/11/2017
Euronext® France Germany Leaders 50 EW	NL0012365035	EFGEW	EFGEW	.EFGEW	30/12/2005	1 000	23/06/2017
Euronext® France Germany Leaders 50 EW NR	NL0012365043	EFGEN	EFGEN	.EFGEN	30/12/2005	1 000	23/06/2017
Euronext® France Germany Leaders 50 EW GR	NL0012365050	EFGEG	EFGEG	.EFGEG	30/12/2005	1 000	23/06/2017
Euronext® France Germany Leaders 50 EW Decrement 5%	NL0012365068	EFGED	EFGED	.EFGED	30/12/2005	1 000	23/06/2017

Version notes:

18-01 Change of definition of Free Float Factor and move of Review Cut-Off date

1. GOVERNANCE AND DISCLAIMER

1.1 INDICES

This rule book applies to the following indices (hereinafter “index”) owned by Euronext N.V. or its subsidiaries (hereinafter jointly “Euronext”):

- Euronext® France Germany Leaders 50
- Euronext® France Germany Leaders 50 EW

1.2 SUPERVISOR AND COMPILER

Euronext is the supervisor (“Supervisor”) and compiler of the index (“Compiler”). The Supervisor is responsible for monitoring the selection of constituents for the index and ensuring that the index offers a reliable and representative view of the market. The Compiler is responsible for the day-to-day management of the index and is also responsible for decisions regarding the interpretation of these rules.

1.3 CASES NOT COVERED IN RULES

In cases which are not expressly covered in these rules, operational adjustments will take place along the lines of the aim of the index. Operational adjustments may also take place if, in the opinion of the Compiler, it is desirable to do so to maintain a fair and orderly market in derivatives on this index and/or this is in the best interests of the investors in products based on the index and/or the proper functioning of the markets. The Compiler will report to the Supervisor if it took a decision about a case which is not specifically covered in the rules for comments and review.

1.4 RULE BOOK CHANGES

These rules may be supplemented, amended in whole or in part, revised or withdrawn at any time. Supplements, amendments, revisions and withdrawals may also lead to changes in the way the index is compiled or calculated or affect the index in another way. The Compiler will submit all decisions regarding supplementing, amending, revising or withdrawing these rules to the Supervisor for recommendations or approval.

1.5 LIABILITY

Euronext, the Compiler and the Supervisor are not liable for any losses resulting from supplementing, amending, revising or withdrawing the rules for the index.

The Compiler will do everything within its power to ensure the accuracy of the composition, calculation, publication and adjustment of the index in accordance with relevant rules. However, neither Euronext, nor the Compiler, nor the Supervisor are liable for any inaccuracy in index composition, share prices, calculations and the publication of the index, the information used for making adjustments to the index and the actual adjustments. Furthermore, Euronext, the Compiler and the Supervisor do not guarantee the continuity of the composition of the index, the continuity of the method of calculation of the index, the continuity of the dissemination of the index levels, and the continuity of the calculation of the index.

1.6 OWNERSHIP AND TRADEMARKS

Euronext owns all intellectual and other property rights to the index, including the name, the composition and the calculation of the index. Euronext® is a registered trademark of Euronext.

2. PUBLICATION

2.1 DISSEMINATION OF INDEX VALUES

2.1.1 Opening

The opening level is calculated using the last known prices of traded constituents or in the case of constituents that have non-traded, halted or suspended status, the previous day reference prices or estimated prices (for IPOs, buyouts and swap offers).

The opening index level is disseminated at the same time as the first index level.

2.1.2 Calculation and dissemination

The index is calculated based on the most recent prices of transactions concluded on the main markets in each of the countries that are included in the index. The level of the index is in principle published every 15 seconds. The index is calculated from 09:00 hours until Euronext Markets stop regular daytime trading on the days when the specific main market as well as the Euronext Markets are open for trading.

2.1.3 Closing

The closing level is the last level disseminated on the trading day.

2.2 EXCEPTIONAL MARKET CONDITIONS AND CORRECTIONS

The Compiler retains the right to delay the publication of the opening level of the index. Furthermore, the Compiler retains the right to suspend the publication of the level of the index to mark the level of the index indicative if it believes that circumstances prevent the proper calculation of the index.

If prices are cancelled, the index will not be recalculated unless the Compiler decides otherwise.

If the index remains in pre-opening phase during the entire trading session, the last published pre-opening level of the index will be used as the official closing level of the index for that day. In such cases, the Compiler will not calculate an official opening level for the index.

2.3 ANNOUNCEMENT POLICY

The announcement policy is described in the Euronext Indices Announcement policy document that is available on indices.euronext.com/index-rules.

3. CALCULATION

3.1 CALCULATION OF THE PRICE INDEX

The index is calculated on a price return index basis. The calculation of the price return index is based on the current capitalization divided by the divisor. The divisor was determined on the initial capitalization base of the index and the base level. The divisor is adapted as a result of corporate actions and composition changes.

3.2 CURRENCY CONVERSION

The base currency of the index is the local currency of the country (“Base Currency”).

Share prices that are quoted in other currencies than the Base Currency will be converted to the Base Currency using the last known exchange rate observed on Reuters. Closing prices will be converted based on the most recent WM/Reuters spot rates, which are published each business day around 17:00 CET.

3.3 TOTAL RETURN INDEX CALCULATION

3.3.1 Return index

A gross total return index, is calculated and disseminated at the same frequency as the price index. The return index is obtained by reinvesting the gross dividends respectively.

4. INDEX REVIEWS

4.1 GENERAL AIM AND FREQUENCY OF REVIEWS

4.1.1 General aim of the periodical review

The general aim of the periodical review of the index is to ensure that the selection and weighting of the constituents continues to reflect the underlying market or market segment it represents.

4.1.2 Cut-off date of reviews

The Review Cut-off Date is the penultimate¹ Friday of February, May, August and November.

4.1.3 Effective date of reviews

Effective after the close on the third Friday of December, March, June and September (The Review Effective Date). The new composition is announced 2 trading days before the effective date, generally the Wednesday after close (The Review Composition Announcement Date).

4.2 INDEX UNIVERSE AND ANNUAL SELECTION PRINCIPLE

4.2.1 Index universe: requirements for inclusion

The universe is composed of the constituents that are expected to be included in the CAC 40 index as well as the 40 Largest German stocks in term of free float market capitalization, admitted to listing on the Prime Standard market of Germany.

The index universe is defined using the market information and publically available data as of the penultimate Friday of the month prior to the review.

4.2.2 Selection of constituents

Euronext France Germany Leaders 50

For each country, the eligible stocks are then ranked by free float market capitalisation. 50 stocks are selected: the top 25 ranked within each country. If a company is admitted to listing in more than one market within the Universe, it will be evaluated based on the country in which it has the highest turnover on that market.

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At each periodical review the companies that are expected to be included in the Euronext France Germany Leaders 50 on the Review Effective Date, are selected for the index.

4.2.3 Selected line

As only one listing – the most active one - is permitted per company, the listing representing the company's ordinary shares is generally used. Mono-holdings are excluded.

4.3 PERIODICAL UPDATE OF WEIGHTING

4.3.1 Euronext France Germany Leaders 50

At the reviews, the number of shares included in the index will be updated with the number of shares listed on the Review Cut-Off Date, taking into account adjustments due to Corporate Actions as described in Chapter 5.

All Free Float Factors are updated at the reviews.

¹ Penultimate means the one immediately before the last one, so the Friday before the last Friday.



4.3.2 Euronext France Germany Leaders 50 EW

The new weightings are calculated such that each constituent will have an equal weight in the index. The weightings will be rounded to the nearest whole number. The weightings are determined based on the closing prices observed on the Review Composition Announcement Date.

5. CORPORATE ACTIONS

5.1 EVENTS THAT CHANGE THE COMPOSITION

5.1.1 Mergers and acquisitions

Acquisitions in cash

In the event of a bid in cash, the target company will be removed from the index. The removal will take place with effect after the close of the first full business day following the acceptance of the bid. If a company is removed from the index, the divisor will be adapted to maintain the index level.

Mergers and takeovers in shares

In the event of a merger, acquisition or similar situation where the bid is made in the form of shares, the constituent will be replaced by the newly formed company, provided that this company complies with the requirements for inclusion in the index in line with the criteria defined in the index reviews section. The replacement will take place in line with the schedule of the transaction. The replacement of the shares of the relevant index constituent by the shares of the newly formed company will be executed on the basis of the bid ratio.

If the Compiler decides that the newly formed company does not comply with the requirements for inclusion, then the constituent will be removed with effect from the close of the first full business day following the acceptance of the bid.

Mixed transactions

In case of a mixed bid of cash and shares the Compiler will treat the bid as a share bid if the share part amounts to at least 75% of the offer price, on the day of the publication of the terms of the offer. The replacement of the shares of the relevant index constituent by the shares of the company that continues to be traded will be executed on the basis of the bid ratio. The divisor will be adapted only for the cash part of the offer price.

Continued inclusion or specific treatments

The Compiler reserves the right to apply a specific treatment in non-standard situations including but not limited to:

- Competing bids with differing closing dates or structures;
- Acceptance whereby the Free Float remains higher than the minimum required free float that is applicable for the index;
- Offers made without the intention to gain full control.

In case of a specific treatment a separate announcement detailing the specific treatment will be issued timely to the market.

Inclusion of new companies for periodical reviewed indices

As a rule newly listed companies are considered for inclusion in the index at the time of the periodical index review.

5.1.2 Suspensions, Company distress and Delistings

Suspension

If a constituent is suspended, the Compiler will consider whether the constituent should be removed or not within five trading days. If it is decided to maintain the constituent a further reassessment date will be set. The Compiler reserves the right to take action before that date if new developments give reason to do so. In case a constituent is removed following suspension, it will be removed from the index as soon as possible and on a day announced by the Compiler. The company will be removed from the index after the close of the markets assuming a price of zero unless the Compiler sets a different price, where possible supported by an objective source.

If it has been announced that a constituent will be delisted from the relevant market, it will be removed from the index as soon as possible and on a day announced by the Compiler. The company will be removed from the index based on either the last known price established during regular daytime trading or on a price determined by the Compiler, whereby the company may also be removed at a price of zero.

Removing assuming a price of zero implies no divisor change because of the removal. If another price is set, the divisor will change based on the removal of the value of that company from the index portfolio when applying that price.

In the event that the trading in shares is suspended, the last known price established during regular daytime trading will be used.

5.1.3 SPLIT UP / SPIN-OFF

In the event that a company included in the index is split up, the companies resulting from the split, including the original company where appropriate will continue to be included in the index providing they meet the requirements for inclusion of the index. This means, in line with section 4.2, that the resulting entity should remain listed on one of the markets on which the index is based.

The index may then temporarily consist of fewer than, or more than the standard number of constituents until the next periodical review takes place.

For the purposes of these rules a split up is taken to mean a legal demerger, a spin-off or another situation which the Compiler deems to be similar.

In case the shareholder of the company which was originally included in the index does not automatically receive shares in a company which is created as a result of the split up, this company is considered to be a newly listed company.

The removal of any non-qualifying company resulting from a split up will take place after the close of the first day of trading in the shares of that company. If all companies resulting from the split are to be removed, the removal will take place at the close of the last trading day before the split.

In case a company resulting from the split up will not be admitted to listing on a main market in one of the countries that are included in the index, the Compiler will select an appropriate price source for the calculation of the index and the removal of the spun off company on the first trading day after the spin off.

5.2 EVENTS THAT CHANGE THE WEIGHTING FACTORS

5.2.1 Dividends

Criteria for determining special dividends

The price index will be adjusted for dividends that are special.

The following criteria will be applied to decide whether a dividend should be considered a special dividend:

- a) The declaration of a company of a dividend additional to those dividends declared as part of the company's normal results and dividend reporting cycle; merely an adjustment to the timing of the declaration of a company's expected dividend would not be considered as a special dividend circumstance; or
- b) The identification of an element of a dividend paid in line with a company's normal results and dividend reporting cycle as an element that is unambiguously additional to the company's normal payment.

For the purpose of clarification, no adjustment will be made for the following situations:

1. Payment of ordinary dividends, irrespective of how they are financed;
2. Issue of redeemable shares or any other entitlement in lieu of an ordinary dividend; or
3. Unexpected increase or decrease, resumption or cessation, or change in frequency to an ordinary dividend.

Adjustment for special dividend

The adjustment of the index takes place by a reduction of the closing price of the share in question. Subsequently the divisor will be adapted in order to maintain the index level. The adjustments will be based on gross amounts.

Ordinary dividends in shares

If a dividend is distributed in the form of shares only and if this is regarded as ordinary dividend, the return index will be reinvesting a cash equivalent of the dividend. If shareholders may choose between cash or shares the amount which is reinvested will be based on the cash option.

Conversion of dividends declared in other currencies

If a dividend for a constituent is declared in another currency than the Base Currency of the index, then the Compiler will in first instance use the Base Currency amount if investors have the option to be paid in that currency. If the dividend amount is available only in currencies that deviate from the Base Currency, the Compiler will convert the dividend amount using the reference rate for the cum-day (the business day prior to the ex-date). In principle the reference rate will be based on the foreign exchange reference rates as published daily by the ECB.

5.2.2 Bonus issues, stock splits and reverse stock splits

For bonus issues, stock splits and reverse stock splits, the number of shares included in the index will be adjusted in accordance with the ratio given in the corporate action. The divisor will not be changed because of this. The Compiler may regard a bonus issue as the issue of an entitlement in lieu of an ordinary dividend and therefore treat this as a dividend.

5.2.3 Rights issues and other rights

In the event of a rights issue an adjusted closing price will be applied as calculated by the Compiler. For periodical rebalanced indices based on free float market capitalisation, the new shares will be included in the index on the ex-date of the rights issue if less than 0.4 share is issued for every share that is currently held and if the new shares are fungible with the existing line of shares (e.g. no dividend disadvantage). Otherwise the index is adjusted based on the value of the rights only. The divisor will be adapted in such a way that the level of the index remains the same.

The index is adjusted based on the value of the rights only.

The index will be adjusted only if the rights represent a positive value.

The index will also be adjusted if a value can be attributed to a subscription right for convertible bonds, bonds with warrants or warrants with preferential rights for shareholders or similar situations. If the value cannot be attributed straightforward, the Compiler may also decide to include the detached instrument for one day and adjust the index at the close based on the closing price for that subscription right on that day.

5.2.4 Partial tender offers on own shares

The Compiler will adjust the divisor of the index if the premium represents more than 5% of the share price of the close on the penultimate day before the ex-date (the day prior to the last day before the ex-day). The premium is calculated as the difference between the offered price and the closing price, multiplied by the percentage of the share capital targeted in the offer. If the divisor is adjusted, the number of shares in the index will be adjusted as well.

6. INDEX CALCULATION FORMULAS

The general formula for the **price index** is:

$$I_t = \frac{\sum_{i=1}^N Q_{i,t} F_{i,t} f_{i,t} C_{i,t} X_{i,t}}{d_t}$$

Where:

- t Time of calculation
- N Number of constituent equities in index
- $Q_{i,t}$ Number of shares of equity i included in the index on day t
- $F_{i,t}$ Free Float Factor of equity i ²
- $f_{i,t}$ Capping factor of equity i ¹
- $C_{i,t}$ Price of equity i on t
- $X_{i,t}$ Current exchange rate on t ¹
- d_t Divisor of the index on day t

The **total return index** 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 Number of constituent equities in index
- g_i The announced dividend per share of the i^{th} component stock (for net return index withholding tax is deducted from this dividend);
- w_i The weighting of the i^{th} 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). The dividend is assumed to be reinvested at the close of the ex-date.

$$TR_t = TR_{t-1} \left(\frac{IV_t + XD}{IV_{t-1}} \right)$$

Where:

- TR_{t-1} : Total return index value yesterday;
- TR_t : Total return index value on t;
- IV_{t-1} : Underlying price index yesterday;

² Factor is equal to 1 if not applied for the index

IV_t : Underlying price index on t;

The **Decrement index** uses the following formula:

$$DI_t = DI_{t-1} \left(\frac{NR_t}{NR_{t-1}} - D_{crt} \cdot \frac{day}{365} \right) \quad \text{Where:}$$

DI_{t-1} : Decrement index value previous calculation date;

DI_t : Decrement index value on t;

NR_{t-1} : Net return index value previous calculation date;

NR_t : Net return index value on t;

D_{crt} : 5%

day: number of calendar days between index business day t-1 and t

7. DEFINITIONS

7.1 COMPILER

Committee of Euronext officials appointed by Euronext.

7.2 REVIEW CUT-OFF DATE

The **Review Cut-Off Date** is the date on which, after the market close, relevant data are gathered that will serve as basis for the periodical review of the index.

7.3 REVIEW EFFECTIVE DATE

The **Review Announcement Date** is the date on which, after the market close, the changes relating to the periodical review are announced as well as the preliminary free float factors.

7.4 REVIEW COMPOSITION ANNOUNCEMENT DATE

The **Review Composition Announcement Date** is the date on which, after the close, the full details are announced regarding the index composition that will come into effect after the review effective date. This includes numbers of shares, free float factors and capping factors of all companies included in the new index portfolio.

7.5 FREE FLOAT FACTOR

The Free Float Factor is the percentage representing all listed securities of the selected line of the relevant company eligible for index inclusion (as described in section 5.2), minus any shareholdings that are considered non-free float. The Free Float Factor is based on public information available on the Review Cut-Off Date. The Free Float Factor will be rounded to the nearest 5%.

The following shareholdings are considered non-free float (based on public information available on the Review Cut-Off Date):

- Any single shareholder who holds 5% or more of the listed securities in the selected line eligible for index inclusion, with the exception of collective entities or pension funds.
Collective entities are those entities that fulfill all the following criteria:
 - i. are open for investment to investors or tradable on the market; and
 - ii. have a diversified portfolio; and
 - iii. have an open ended structure.Collective entities include mutual funds and other open end-funds.
- Collective entities or pension funds that hold 5% or more of the listed securities in the selected line eligible for index inclusion and are represented in any governing body of the company in question.
- Parties acting in concert that collectively hold 5% or more of the listed securities in the selected line eligible for index inclusion.
- Employee shareholding plans, employee pension plans, individual employees, management or members of the board of directors of the relevant company when their cumulative shareholding is 5% or more of the listed securities in the selected line eligible for index inclusion.
- Shares held by the relevant company that represent 5% or more of the listed securities in the selected line eligible for index inclusion (e.g. treasury shares).