

# Guide to the Equity Indices of Deutsche Börse

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## General Information

In order to ensure the highest quality of each of its indices, Deutsche Börse AG exercises the greatest care when compiling and calculating equity indices on the basis of the rules set out in this Guideline.

However, Deutsche Börse AG cannot guarantee that the various indices, or the various ratios that are required for index compilation and computation purposes, as set out in this Guideline, are always calculated free of errors. Deutsche Börse AG accepts no liability for any direct or indirect losses arising from any incorrect calculation of such indices or ratios.

Decisions concerning the way its equity indices are calculated, as well as regarding their compilation, are always taken by Deutsche Börse AG in close agreement with the Working Committee for Equity Indices, to the best of its knowledge and belief. Deutsche Börse AG shall not be liable for any losses arising from such decisions.

The equity indices of Deutsche Börse AG do not represent a recommendation for investment of whatever nature. In particular, the compilation and calculation of the various indices shall not be construed as a recommendation of Deutsche Börse AG to buy or sell individual securities, or the basket of securities underlying a given index.

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## History of Amendments to the Rules and Regulations

25 Aug. 2009	<ul style="list-style-type: none"> <li>- Change in publication calendar of business forecasts</li> <li>- Concretion treatment of stock dividends</li> </ul>
6 Apr. 2009	<ul style="list-style-type: none"> <li>- Clarification of treatment of alternative share classes for index changes</li> </ul>
20 Mar. 2009	<ul style="list-style-type: none"> <li>- Calculation of X-DAX<sup>®</sup> based on Eurepo rates</li> </ul>
23 Jan. 2009	<ul style="list-style-type: none"> <li>- Amended fast exit rule</li> </ul>
22 Dec. 2008	<ul style="list-style-type: none"> <li>- Free float minimum threshold changed to 10%</li> <li>- Extraordinary free float adjustment in connection with corporate events</li> <li>- Consideration of notifiable options in ongoing acquisitions</li> <li>- Detailing of free float rules in respect of fund holdings</li> <li>- Concretion exception handling in acquisitions</li> </ul>
3 Nov. 2008	<ul style="list-style-type: none"> <li>- Detailing of exclusion criterion for volatile shares</li> </ul>
25 Mar. 2008	<ul style="list-style-type: none"> <li>- Extension and renaming of the sector indices</li> <li>- Launch of DAXsupersector indices</li> <li>- Launch of DAX<sup>®</sup> International 100, DAX<sup>®</sup> International Mid 100</li> <li>- Launch of General All Share index</li> </ul>
31 Jan. 2008	<ul style="list-style-type: none"> <li>- Further concretion of admission criteria for selection indices</li> </ul>
3 Dec. 2007	<ul style="list-style-type: none"> <li>- Launch of X-MDAX<sup>®</sup> and X-TecDAX<sup>®</sup></li> </ul>
1 Nov. 2007	<ul style="list-style-type: none"> <li>- Coming into effect of "FRUG" (Markets in Financial Instruments Directive Implementation Law)</li> </ul>
19 Mar. 2007	<ul style="list-style-type: none"> <li>- Launch new Prime Industry Group indices</li> </ul>
18 Dec. 2006	<ul style="list-style-type: none"> <li>- Amended adjustment of distributions</li> <li>- Concretion of admission criteria for selection indices</li> </ul>
1 Oct. 2006	<ul style="list-style-type: none"> <li>- Changes in the admission criteria for DAX<sup>®</sup>, MDAX<sup>®</sup>, SDAX<sup>®</sup> and TecDAX<sup>®</sup></li> </ul>
1 Jul. 2006	<ul style="list-style-type: none"> <li>- New Cap Limit for DAX<sup>®</sup> (10%)</li> </ul>
2 May 2006	<ul style="list-style-type: none"> <li>- Launch of General Standard Index</li> </ul>
10 Apr. 2006	<ul style="list-style-type: none"> <li>- Launch of Entry All Share Index on 5 Apr. 2006, X-DAX<sup>®</sup> on 10 Apr. 2006</li> </ul>
1 Jan. 2006	<ul style="list-style-type: none"> <li>- Calculation frequency of DAX<sup>®</sup>, MDAX<sup>®</sup> and TecDAX<sup>®</sup> once a second</li> </ul>
25 Oct. 2005	<ul style="list-style-type: none"> <li>- Launch of Entry Standard Index</li> </ul>
15 Jun. 2005	<ul style="list-style-type: none"> <li>- Amended free float rules</li> </ul>
31 Dec. 2004	<ul style="list-style-type: none"> <li>- End of calculation of NEMAX50<sup>®</sup></li> </ul>

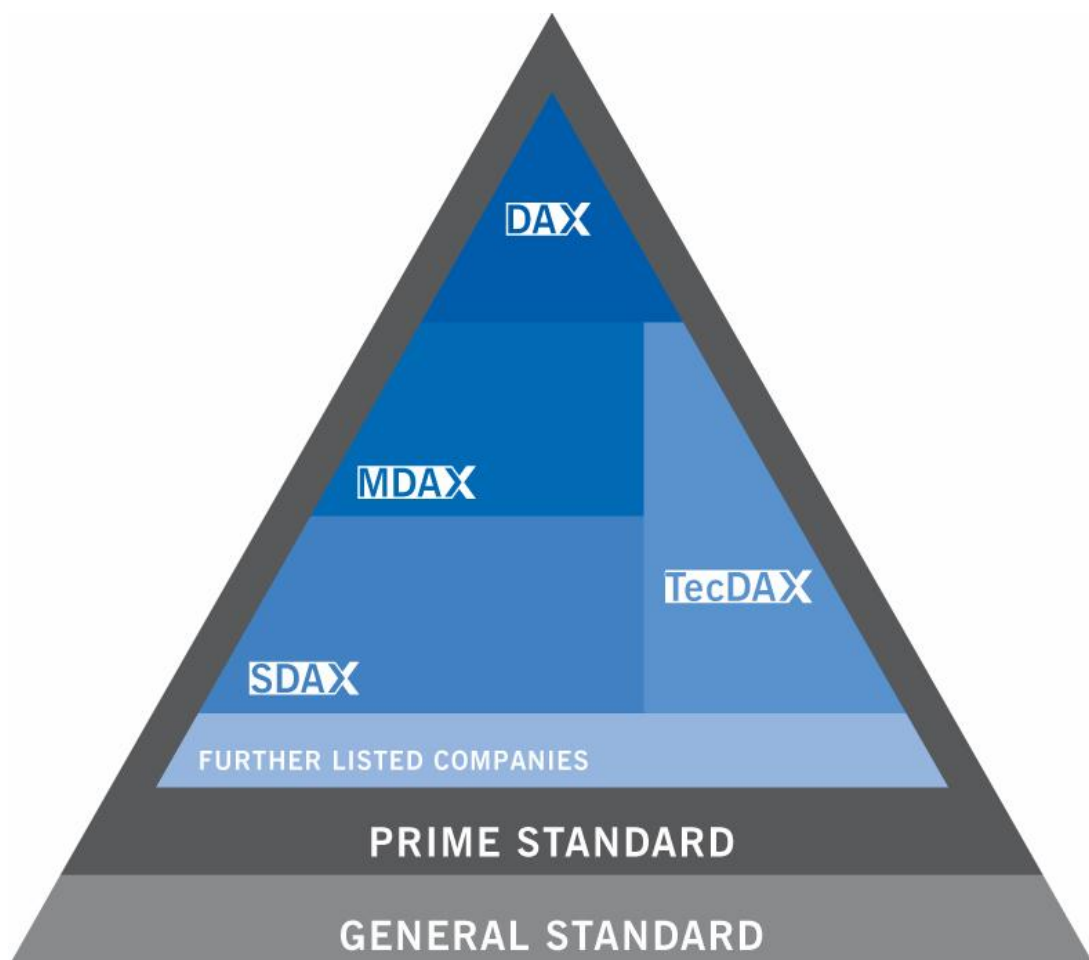
18 Oct. 2004	- Introduction of opening criteria for the start of index calculation
1 Aug. 2004	- Changes in the DAX <sup>®</sup> Index composition purely rules based
24 Mar. 2003	- New set of indices based on the Prime Standard segment - Launch of TecDAX <sup>®</sup> Index - Downsizing of MDAX <sup>®</sup> Index - Revised sector systematic
13 Aug. 2002	- Introduction of fast exit rules for DAX <sup>®</sup> and MDAX <sup>®</sup>
24 Jun. 2002	- Index weighting on a free float basis - Free-float minimum threshold set to 5% - Separation of ordinary and preferred shares in the selection indices - Downsizing of SDAX <sup>®</sup> Index to 50 companies
4 Mar. 2002	- Takeover code no longer requirement for index inclusion
1 Jan. 2001	- Mandatory quarterly reports and analysts' conferences (DAX <sup>®</sup> and MDAX <sup>®</sup> )
17 Jun. 2000	- Adjustment of NEMAX50 <sup>®</sup> Index on a quarterly basis - Introduction of a cap limit for the DAX <sup>®</sup> 100 Index
15 May 2000	- Introduction of sector indices for the Neuer Markt
21 Jul. 1999	- Introduction of a cap limit for the DAX <sup>®</sup>
1 Jul. 1999	- Launch of NEMAX50 <sup>®</sup> Index
21 Jun. 1999	- Launch of SDAX <sup>®</sup> Index - Equity indices exclusively calculated on the basis of Xetra <sup>®</sup> prices
30 Apr. 1999	- Reorganization of CDAX <sup>®</sup> sectors
26 Apr. 1999	- Launch of SMAX <sup>®</sup> All Share Index

CDAX<sup>®</sup>, Classic All Share<sup>®</sup>, DAX<sup>®</sup>, Eurex<sup>®</sup>, FDAX<sup>®</sup>, FWB<sup>®</sup> Frankfurter Wertpapierbörse, HDAX<sup>®</sup>, L-DAX<sup>®</sup>, L-MDAX<sup>®</sup>, L-TecDAX<sup>®</sup>, L-SDAX<sup>®</sup>, MDAX<sup>®</sup>, NEMAX50<sup>®</sup>, ODAX<sup>®</sup>, SDAX<sup>®</sup>, SMAX<sup>®</sup>, TecDAX<sup>®</sup>, Xetra<sup>®</sup>, X-DAX<sup>®</sup>, X-MDAX<sup>®</sup>, X-TecDAX<sup>®</sup> and XTF<sup>®</sup> Exchange Traded Funds are registered trademarks of Deutsche Börse AG.

## 1 General Index Information

### 1.1 Selection Indices

The graph below provides an overview of the most important selection indices:



#### 1.1.1 DAX

The DAX<sup>®</sup> reflects the segment of blue chips admitted to the Prime Standard Segment and comprises the 30 largest and most actively traded companies that are listed at the FWB<sup>®</sup> Frankfurter Wertpapierbörse (the Frankfurt Stock Exchange). The index is open to companies with juristic headquarters in Germany or to companies with operating headquarters in Germany with a major share of their stock exchange turnover at the Frankfurt Stock Exchange and juristic headquarters in the European Union or in an EFTA state.

The DAX was conceived as the successor to the "Börsen-Zeitung Index", with a historical time series dating back until 1959.

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### 1.1.2 TecDAX

The TecDAX<sup>®</sup> tracks the 30 largest and most liquid issues from the various technology sectors of the Prime Standard Segment beneath the DAX<sup>®</sup>. The index is open to companies with juristic headquarters in Germany or to companies with operating headquarters in Germany with a major share of their stock exchange turnover at the Frankfurt Stock Exchange and juristic headquarters in the European Union or in an EFTA state.

The TecDAX is based on the historical index data of the NEMAX50<sup>®</sup>, which is continued seamlessly as of March 2003.

### 1.1.3 MDAX

The index portfolio of the MDAX<sup>®</sup> comprises 50 mid-cap issues from traditional sectors ("Classic") which, in terms of size and turnover, rank below the DAX<sup>®</sup>. These companies are also selected from the continuously traded companies in the Prime Standard Segment. The index is open to companies with juristic headquarters in Germany or to companies with operating headquarters in Germany with a major share of their stock exchange turnover at the Frankfurt Stock Exchange and juristic headquarters in the European Union or in an EFTA state.

### 1.1.4 SDAX

The SDAX<sup>®</sup> comprises the next 50 issues from the traditional ("Classic") sectors within the Prime Standard Segment that are ranked below the MDAX<sup>®</sup>. The index is open to companies with juristic headquarters in Germany or to companies with operating headquarters in Germany with a major share of their stock exchange turnover at the Frankfurt Stock Exchange and juristic headquarters in the European Union or in an EFTA state.

### 1.1.5 HDAX

The 30 DAX<sup>®</sup> issues, the 50 MDAX<sup>®</sup> issues, as well as the 30 TecDAX<sup>®</sup> issues are aggregated to form the index portfolio of the HDAX<sup>®</sup>. This index consequently represents a broader blue chip index compared to the DAX, covering all sectors listed in the Prime Standard Segment.

### 1.1.6 Midcap Market Index

The Midcap Market Index is composed of all companies in MDAX<sup>®</sup> and TecDAX<sup>®</sup>, accordingly reflecting the performance of mid-caps across all sectors of the Prime Standard Segment. This index has considerable benchmark qualities.

### 1.1.7 Entry Standard Index

Since the introduction of the Entry Standard market segment on 25 October 2005, Deutsche Börse calculates the Entry Standard Index. It reflects the performance of the 30 companies, which are selected for inclusion to the index based on their exchange turnover.

### 1.1.8 General Standard Index

On 2 May 2006 Deutsche Börse AG introduced the General Standard Index. The index includes the 200 most liquid issues of the General Standard segment. Blue chip issues, which are listed in General Standard segment, are not considered in the index in order to avoid a too dominant position.

## 1.2 X-Indices

The X-indices X-DAX<sup>®</sup>, X-MDAX<sup>®</sup> and X-TecDAX<sup>®</sup> are calculated event-driven and distributed from 8.00 a.m. till 9.00 a.m. and from 5.45 p.m. till 10.00 p.m. The indices are respectively based on "cost of carry" adjusted DAX<sup>®</sup> futures, MDAX<sup>®</sup> futures and TecDAX<sup>®</sup> futures prices (FDAX<sup>®</sup>, F2MX and FTDX)<sup>1</sup>. The X-indices act as indicators for the market development beyond Xetra<sup>®</sup> trading hours.

The longer computation time of X-indices covers the entire trading time of US-American stock exchanges.

## 1.3 Late Indices

For the period between the Xetra<sup>®</sup> closing auction and the close of floor trading at 8.00 p.m., Deutsche Börse calculates the indices L-DAX<sup>®</sup>, L-MDAX<sup>®</sup>, L-SDAX<sup>®</sup> and L-TecDAX<sup>®</sup> every 60 seconds from prices traded on the floor of the Frankfurt Stock Exchange. These indices (L=late indices) correspond in composition to the respective DAX<sup>®</sup>, MDAX<sup>®</sup>, SDAX<sup>®</sup> and TecDAX<sup>®</sup> indices. They aim to give investors an indicator of the market development after the Xetra<sup>®</sup> closing auction. All late indices are calculated as performance indices only.

## 1.4 International Indices

In addition to the indices for the German market, Deutsche Börse calculates two liquidity based indices that contain the most liquidly traded instruments listed on Deutsche Börse's trading platform Xetra. Each index contains 100 companies listed in either Prime Standard, General Standard or Entry Standard. The selection is based entirely on the liquidity of the components: The DAX International 100 comprises the first 100 companies based on the previous three months turnover and the subsequent 100 companies by the same criterion from the portfolio of DAX International Mid 100.

## 1.5 All Share Indices

### 1.5.1 Prime All Share

Each company listed at the Frankfurt Stock Exchange may apply for a listing either in the General Standard or in the Prime Standard Segment. In order to be listed in the latter, issuers will have to maintain higher transparency standards subsequent to admission. With the Prime All Share, an index has been conceived to measure the overall performance of all Prime Standard issues.

<sup>1</sup> Cp. chapter 1.12. For the calculation of X-indices cp. chapter 3.3.

### 1.5.2 Technology All Share

All Prime Standard companies, which are not included in the DAX<sup>®</sup> index and belong to one of the technology sectors, are aggregated within the Technology All Share Index. The Technology All Share Index is based on the historical index values of the NEMAX<sup>®</sup> All Share index, which is no longer calculated.

### 1.5.3 Classic All Share

All Prime Standard companies, which are not included in the DAX<sup>®</sup> index and belong to one of the traditional ("Classic") sectors, are aggregated within the Classic All Share<sup>®</sup> Index.

### 1.5.4 CDAX

The CDAX<sup>®</sup> index covers all German shares admitted to the Prime Standard and General Standard segments. Therefore, the index reflects the performance of the overall German equity market, and is consequently well suited for analytic purposes.

### 1.5.5 General All Share

Analogue to Prime All Share index General All Share index includes all companies listed in General Standard segment and represents the performance of this segment.

### 1.5.6 Entry All Share

Entry All Share Index comprises all companies listed in Entry Standard. Therefore, the index measures the overall performance of the Entry Standard segment. Entry Standard is primarily designed for investors capable of assessing opportunities and risks within a less regulated market segment.

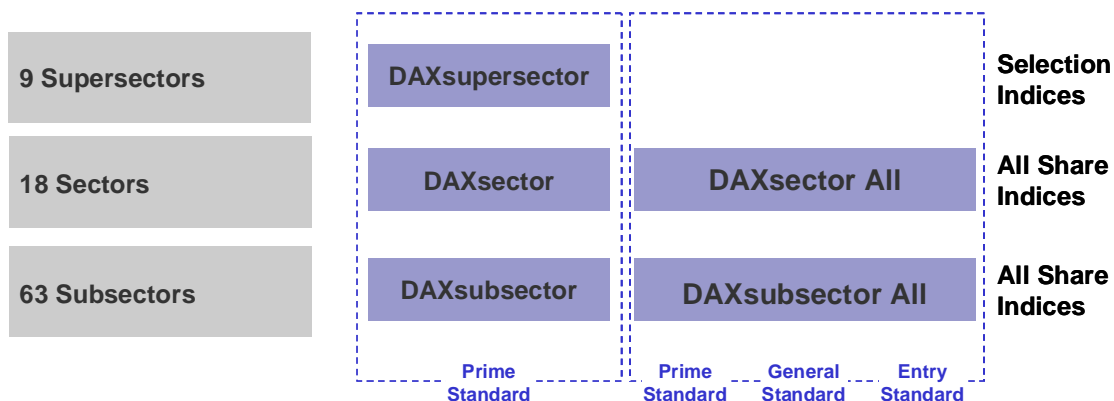
## 1.6 Sector Indices

Deutsche Börse calculates sector indices for the Prime Standard segment as well as for a larger representative portfolio comprising all companies listed in Prime Standard, General Standard and Entry Standard.

For each, the Prime segment as well as the larger portfolio, 18 sector indices and 63 subsector indices are provided. In addition nine supersector indices are calculated for the Prime segment. Sector and subsector indices are designed as All Share indices, whereas only companies with an ADTV<sup>2</sup> of at least €1 million qualify for the supersector indices. The various Prime sectors are consistent with the historical index data of the CDAX<sup>®</sup> sectors. In the appendix a table shows the different supersectors, sectors and subsectors (cf. chapter 4.1). The classification of companies into the respective classic or technology sectors is done on the basis of the defined industry groups (cf. chapter 4.2). The graph below provides an overview of the sector indices:

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<sup>2</sup> ADTV = average daily trading volume



Sector assignment is dependent upon a company's primary sales focus. Where, in individual cases, a shift in such sales focus has occurred, the respective company can be removed from its present sector and included in another one on the next chaining date.

## 1.7 Calculation Basis

All indices of Deutsche Börse are based on the same reference date (30 December 1987) to the extent possible, thus facilitating direct comparison between the various indices.

With the creation of Neuer Markt 1997, the Prime Standard Segment at the beginning of 2003 and Entry Standard Segment October 2005 various indices aroused. Those indices are based on the date of the introduction of the respective segment.

The TecDAX® inherits the base dates as well as the historical index data from the NEMAX50®. The same applies to the Technology All Share Index, the HDAX®, as well as the various Prime sectors, which inherit the corresponding data from the NEMAX® All Share, the DAX® 100, and the CDAX® sectors, respectively.

The individual base values and dates are listed in the table in chapter 1.8.

## 1.8 Weighting and Cap Limit

The indices of the DAX® family are capital-weighted<sup>3</sup>, whereby the weight of any individual issue is proportionate to its respective share in the overall capitalization of all index component issues.

Weighting in the individual indices is based exclusively on the free float portion of the issued share capital of any class of shares involved (cf. chapter 1.9)<sup>4</sup>. Both the number of shares included in the

<sup>3</sup> With exception of Entry Standard Index and Entry All-Share Index, which are equally weighted. For X-DAX® calculation cf. chapter 3.3. For General Standard Index calculation cf. chapter 3.1.5.

<sup>4</sup> For the weighting in General Standard Index the entire number of shares is considered.

issued share capital and the free float factor are updated during each quarterly chaining process (cf. chapter 3.7.1).

For Entry Standard Index the determination of free float factors and share capital is not required as the index is equally weighted. The new issues are included on the second exchange trading day. Subsequently, the index will be equally weighted again. Otherwise the equal weighting of the issues will be updated at the usual chaining days.

During the chaining process, the number of shares of individual companies might be capped for the DAX, MDAX<sup>®</sup>, SDAX<sup>®</sup> or TecDAX<sup>®</sup> selection indices to achieve a limited weight of such companies within the respective index (cf. chapter 3.5).

The cap limits for issues in the selection indices are indicated in the table below. There are no cap limits for the various all share and sector indices (except for the DAXsupersector indices).

	Index	No. shares	Calc. Basis	Base date	Sector	Segment	Trading form	Cap limit <sup>5</sup>	Calc. <sup>6</sup> interval
Blue chip Indices	DAX <sup>®</sup>	30	1000	30 Dec. 1987	Tech & Classic	Prime	Continuous	10%	1 sec.
	TecDAX <sup>®</sup>	30	1000	30 Dec. 1997	Tech	Prime	Continuous	10%	1 sec.
	MDAX <sup>®</sup>	50	1000	30 Dec. 1987	Classic	Prime	Continuous	10%	1 sec.
	SDAX <sup>®</sup>	50	1000	30 Dec. 1987	Classic	Prime	Continuous	10%	60 sec.
	HDAX <sup>®</sup>	110	500	30 Dec. 1987	Tech & Classic	Prime	Continuous	10%	60 sec.
	Midcap Market Index	80	500	30 Dec. 1997	Tech & Classic	Prime	Continuous	10%	60 sec.
	Entry Standard Index	30	1000	24 Oct. 2005	-	Entry	Continuous & One-auction	-	60 sec.
	General Standard Index	200	1000	21 Mar. 2003	-	General	Continuous & One-auction	-	60 sec.
Late Indices	L-DAX <sup>®</sup>	30	1000	30 Dec. 1987	Tech & Classic	Prime	Continuous	10%	60 sec.
	L-TecDAX <sup>®</sup>	30	1000	30 Dec. 1997	Tech	Prime	Continuous	10%	60 sec.
	L-MDAX <sup>®</sup>	50	1000	30 Dec. 1987	Classic	Prime	Continuous	10%	60 sec.
	L-SDAX <sup>®</sup>	50	1000	30 Dec. 1987	Classic	Prime	Continuous	10%	60 sec.

<sup>5</sup> As of the chaining day in September 2006 the cap limit was lowered to 10 percent.

<sup>6</sup> DAX, MDAX and TecDAX are calculated once a second since 1 January 2006.

International	DAX® International 100	100	1000	20 Mar. 2008	Tech & Classic	Prime, General & Entry	Continuous & One-auction	15%	60 sec.
	DAX® International Mid 100	100	1000	20 Mar. 2008	Tech & Classic	Prime, General & Entry	Continuous & One-auction	15%	60 sec.

	Index	Calc. Basis	Base date	Sector	Segment	Trading form	Cap limit	Calc. interval
X-Indices	X-DAX®	1000	30 Dec. 1987	-	-	-	-	event driven
	X-TecDAX®	1000	30 Dec. 1997	-	-	-	-	event driven
	X-MDAX®	1000	30 Dec. 1987	-	-	-	-	event driven
All Share Indices	Prime AS	1000	21 Mar. 2003	Tech & Classic	Prime	Continuous & One-auction	-	60 sec.
	CDAX®	100	30 Dec. 1987	Tech & Classic	Prime & General	Continuous & One-auction	-	60 sec.
	Tech AS	1000	30 Dec. 1997	Tech	Prime	Continuous & One-auction	-	60 sec.
	Classic AS	1000	21 Mar. 2003	Classic	Prime	Continuous & One-auction	-	60 sec.
	General AS	1000	21 Mar. 2003	-	General	Continuous & One-auction	-	60 sec.
	Entry AS	1000	24 Oct. 2005	-	Entry	Continuous & One-auction	-	60 sec.
Sector Indices	DAXsupersector	100	21 Mar. 2003	Tech & Classic	Prime	Continuous & One-auction	10%	60 sec.
	DAXsector	100	30 Dec. 1987	Tech & Classic	Prime	Continuous & One-auction	-	60 sec.
	DAXsubsector	100	21 Mar. 2003	Tech & Classic	Prime	Continuous & One-auction	-	end of day
	DAXsector All	100	21 Mar. 2003	-	Prime, General & Entry	Continuous & One-auction	-	60 sec.
	DAXsubsector All	100	21 Mar. 2003	-	Prime, General & Entry	Continuous & One-auction	-	end of day

## 1.9 Free Float

For the determination of the free float portion, used to weight a companies class of shares in the respective index and for the ranking lists, the following definition applies accordingly:

1. All shareholdings of an owner which, on an accumulated basis, account for at least 5 percent of a company's share capital attributed to a class of shares are considered to be non-free float.

Shareholdings of an owner also include shareholdings

- § held by the family of the owner as defined by section §15a of the German Securities Trading Act (WpHG)
- § for which a pooling has been arranged in which the owner has an interest
- § managed or kept in safe custody by a third party for account of the owner
- § held by a company which the owner controls as defined by section 22 (3) of the German Securities Trading Act (WpHG)

2. The definition of "non-free float" – irrespective of the size of a shareholding – covers any shareholding of an owner that is subject to a statutory or contractual qualifying period of at least six months with regard to its disposal by the owner. This does only apply during the qualifying period. Shareholdings as defined by sentence no. 1 above are counted as shareholdings for the calculation according to No. 1. Shares held by the issuing company (treasury shares) are always considered as block holdings and are not part of the free float of the share class.

3. As long as the size of such a shareholding does not exceed 25 percent of a company's share capital, the definition of free float includes all shareholdings held by

- § asset managers and trust companies
- § investment funds and pension funds
- § capital investment companies or foreign investment companies in their respective special fund assets (Sondervermögen)

with the purpose of pursuing short-term investment strategies. Such shares, for which the acquirer has at the time of purchase clearly and publicly stated that strategic goals are being pursued and that the intention is to actively influence the company policies and ongoing business of the company, are not considered as such a short-term investment. In addition, shares having been acquired through a public purchase offer will not be considered as short-term investment.

This does not apply to shareholdings managed or held in safe custody according to No. 1, or to venture capital companies, or other assets serving similar purposes. The shareholdings as defined by sentence no. 1 above are not counted as shareholdings for the calculation according to No. 1.

4. Shares that are under the control of a shareholder via derivatives will only be considered for the calculation of the free float if these positions have to be reported according to legislation in WpHG or WPÜG and the company is in a takeover situation.

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The various criteria laid down in Nos. 1 to 4 are also fully applied to classes of shares that are subject to restrictions of ownership. For the purpose of the determination of the free float as described above each ISIN under which shares are traded is considered a separate share class.

## 1.10 Equity Index Rankings

The so-called "equity index ranking" is published monthly by Deutsche Börse, containing all relevant data in respect of the key criteria order book turnover and market capitalization. This publication also serves the Working Committee for Equity Indices (Arbeitskreis Aktienindizes) as a basis for decision-making at its quarterly meetings. It is produced at the beginning of each month and published via the Internet.

Order book turnover is defined as the total of volumes traded at the Frankfurt Stock Exchange (Xetra<sup>®</sup> included) for a company's respective classes of shares. The review period for this criterion is the preceding twelve months. The rankings as per the end of August are, for instance, used for the adjustment in September (in this case, the turnover from the beginning of September of the previous year until the end of August is subject to examination).

If the turnover of a share is not available for the whole twelve-month period due to the time of its initial listing, the turnover of the first 20 trading days (approx. first trading month) is cut off, and the remainder of the relevant data is linearly projected for twelve months. This procedure, however, is only applicable to shares which have been traded for at least 30 days as per the reporting date, taking volumes of at least ten days into account for projection purposes. In case of changing the market segment and/or the transparency standard (e.g. changing from Open Market in Regulated Market Prime Standard or changing from Regulated Market General Standard in Regulated Market Prime Standard) the turnover volumes from the original market segment/transparency standard are taken into account.

In the case of a merger of companies, the volumes of both companies are aggregated – provided that both companies had been listed at the Frankfurt Stock Exchange prior to the merger.

The market capitalization of a class of shares is determined by multiplying the number of freely available shares on the last trading day of a month by the respective market price of that class. The market price is defined as the average of the respective VWAP prices (based on Xetra<sup>®</sup> prices) of the last 20 trading days of a class.

Due to the different prerequisites (cf. chapter 2.2.1.1), the rankings are divided into the following three different parts:

- § DAX<sup>®</sup>
- § MDAX<sup>®</sup> and SDAX<sup>®</sup>
- § TecDAX<sup>®</sup>

The rankings include all classes of shares already represented in the respective index, as well as those which meet the requirements with regard to segment affiliation. A ranking is assigned only to companies which satisfy all prerequisites and can therefore be considered for index inclusion, and to companies which are already represented in an index, even though they may no longer satisfy all prerequisites. Share classes not represented in an index, and perhaps with an excessive non-free float portion, or which cannot be included since another class of the same company is already represented in the respective index, are listed, but without a ranking. In the case that a share class is excluded from the index and a second share class exists, the determination of the replacement in the index will be performed based on a new ranking list, that ranks the alternative share class instead of the original share class. For this purpose each ISIN under which shares may be traded is considered a unique share class. The Management Board of Deutsche Börse AG in agreement with the Working Committee for Equity Indices may decide not to rank a company in special cases like consecutive takeovers or mergers.

If a company had been removed from the indices due to violation of the volatility criterion (cf. chapter 2.2.2.1.2/2.2.2.2.2) it will be considered for ranking only if its 30-day volatility (annualized volatility of the share price over the past 30 trading days) at the time of ranking and at any of the 14 trading days prior to this date falls short of 150 percent. Only the class of shares that was excluded due to this rule is eligible for re-entry into the index under this rule.

Foreign companies already listed in the Selection indices DAX, MDAX, TecDAX and SDAX are ranked in spite of non-compliance with the new admission criteria in the previous quarter. Companies are not ranked if they do not meet the criteria in two successive quarters.

### 1.11 Historical Data

Historical index data exists for all indices, dating back at least to the respective base date (cf. chapter 1.7 and 1.8). Additionally the time series for the DAX<sup>®</sup>, which was conceived as the successor to the "Börsen-Zeitung Index", dates back as far as October 1959. However, as a performance index, the DAX has been calculated only since 1987. The historical index data of the CDAX<sup>®</sup> dates back until the beginning of 1970.

Until 18 June 1999, inclusive, data had been generated on the basis of prices sourced from floor trading at the Frankfurt Stock Exchange. Since 21 June 1999, time series have been based on Xetra<sup>®</sup> price data, with the exception of late indices (cf. chapter 1.8), which have been calculated since 3 November 2003. Time series for the various indices are available from Info Operations – Customer Service (cf. chapter 4.4) at Deutsche Börse AG.

### 1.12 Derivative Instruments

All continuous calculated indices published by Deutsche Börse meet the requirements of an underlying instrument for derivative financial instruments. The transparency of index calculations permits a reproduction of the respective index portfolio.

A variety of derivative instruments has been created to facilitate efficient hedging of index-based portfolios. In addition to the great variety of index warrants, certificates and ETFs (Exchange Traded Funds) available on the cash market, the following instruments are traded at Eurex:

- § DAX® Future (FDAX®), TecDAX® - Futures (FTDX), MDAX® Future (F2MX)
- § Option on the DAX (ODAX®), Option on the TecDAX (OTDX)

### 1.13 Licensing

The indices of Deutsche Börse are registered trademarks of Deutsche Börse AG and therefore protected against unlawful usage inside and outside Germany. Exchanges, banks and investment companies may, however, apply to Deutsche Börse for licenses to use these indices as underlying instruments for derivative instruments. The standardised licensing agreement grants the licensee the right to use the indices for any number of instruments, with the license fee set according to the actual usage. For enquiries regarding the licensing of indices, please contact Deutsche Börse, Market Data & Analytics (cf. chapter 4.4).

### 1.14 Decision-Making Bodies

The Working Committee for Equity Indices (Arbeitskreis Aktienindizes) advises Deutsche Börse on all issues related to such indices, recommending measures which are necessary in order to ensure the relevance of the index range and the correctness and transparency of the index calculation process. In accordance with the various rules set out in this guideline, the Committee pronounces recommendations in respect of the composition of Deutsche Börse's indices.

However, any decisions on the composition of and possible modifications to these indices are exclusively taken by the Management Board of Deutsche Börse AG. Such decisions are published in a press release and on [www.deutsche-boerse.com](http://www.deutsche-boerse.com) in the evening after the Committee has concluded its meeting.

The Working Committee's meetings usually take place on the respective third trading day in March, June, September and December. The date for the respective next meeting is announced via a press release on the website of Deutsche Börse at [www.deutsche-boerse.com](http://www.deutsche-boerse.com) on the evening of the current meeting.

Working Committee for Equity Indices (participant institutions):

- Barclays Global Investors (Deutschland) AG
- BNP Paribas
- Commerzbank AG
- Deutsche Bank AG
- Deutsche Börse AG
- ETFlab Investment GmbH

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Hypovereinsbank AG

MEAG Asset Management GmbH

RCM Global Advisors

Sal. Oppenheim jr. & Cie. KGaA

UBS Deutschland AG

Union Investment Privatfonds GmbH

WestLB AG

## 2 Index Composition

Depending on the concept of composition, indices are either designed to be All Share indices (including Sector indices) or Selection indices.

### 2.1 All Share Indices and Sector Indices

All Share and Sector indices comprise any of the shares listed in the relevant market segment or sector, i.e. they are not restricted to a certain number of issues. Hence, each of them measures the performance of an entire segment. Changes in the composition of the relevant segment, ensuing from new listings, deletions, mergers, etc., are therefore directly reflected in the respective index.

Deutsche Börse calculates the following All Share indices: Prime All Share, Technology All Share, Classic All Share<sup>®</sup>, Entry All Share and CDAX<sup>®</sup>. This set is complemented by 18 Sector indices and a total of 63 Subsector indices in the Prime Standard segment as well as in the larger portfolio consisting of all companies listed in Prime Standard, General Standard and Entry Standard.

#### 2.1.1 New Listings and Deletions

The listing of a new class of shares in the Prime Standard or General Standard segments of the Frankfurt Stock Exchange leads to its inclusion in the corresponding All Share index (Prime/Classic/Technology All Share or CDAX<sup>®</sup>). Two possible scenarios must be distinguished in this context:

a) A class of shares is listed at the Frankfurt Stock Exchange for the first time:

This class is included in the index on the day after first listing.

b) A class of shares was previously listed in another segment of the Frankfurt Stock Exchange:

Inclusion in the index is carried out on the day of first quotation in the new segment.

Deletions from the various indices are effected after the close of trading on the day on which the respective share was last quoted in the corresponding segment.

#### 2.1.2 Merger of Companies

Companies which have been taken over are deleted immediately after their delisting, with the index to be chained accordingly.

In cases where the new shares do not constitute the continued quotation of one of the original companies, they are included in the index as a completely new issue.

## 2.2 Selection Indices

In contrast, Selection indices only cover certain parts of segments, usually comprising and reflecting a fixed number of shares. Deutsche Börse calculates the following selection indices: DAX<sup>®</sup>, MDAX<sup>®</sup>,

SDAX<sup>®</sup>, TecDAX<sup>®</sup>, Entry Standard Index and General Standard Index as well as the HDAX<sup>®</sup> and the Midcap Market Index that are derived from the first group.

The composition of these indices, which are often used as underlying instruments for derivative products or as benchmarks by fund managers, is regularly adjusted only on the respective maturity dates of the DAX-Future at the Eurex derivatives exchange. Such maturity date is always the third Friday of the last month of a quarter (i.e. March, June, September and December).

## 2.2.1 Selection Criteria

### 2.2.1.1 Selection Criteria for DAX, MDAX, SDAX and TecDAX

To be included or to remain in a selection index, companies have to satisfy certain prerequisites, which are contingent upon the respective index (for Entry Standard Index and General Standard Index special requirements apply, cf. chapter 2.2.1.2 and chapter 2.2.1.3). All classes of shares must

- § be listed in the Prime Standard segment
- § be traded continuously on Xetra<sup>®</sup> and
- § show a free float portion of at least 10 percent
- § for inclusion in MDAX<sup>®</sup> or SDAX<sup>®</sup> belong to a sector or subsector that is assigned to the "Classic" area (cf. chapter 4.2)
- § for inclusion in TecDAX<sup>®</sup> belong to sectors classified as "Technology"

If for any company more than one class of shares fulfils the above criteria, only the respective larger or more liquid class can be included in a selection index.

Moreover, companies must fulfil the following criteria:

Either

- § the companies must have their headquarters in Germany. Other than the registered office this can also be operating headquarters.

or

- § the companies must have a major share of the stock exchange turnover at the Frankfurt Stock Exchange and their juristic headquarters in the European Union or in an EFTA state.

Operating headquarters is defined as the location of management or company administration, in part or in full. If a company has its operating headquarters in Germany, but not its registered office, this must be publicly identified by the company. The primary trading turnover requirement is met if at least 33 percent of aggregate turnover for each of the last three months took place on the Frankfurt Stock Exchange, including Xetra.

To preserve the character of the selection indices DAX, MDAX, SDAX and TecDAX as leading equity indices for Germany, the Management Board of Deutsche Börse reserves the right to exclude certain

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companies from the respective rankings in coordination with the Working Committee for Equity Indices (Arbeitskreis Aktienindizes). Possible reasons for such an exclusion could be:

- § Foreign holding companies with headquarters in Germany, but a clear focus of business activities abroad

Foreign companies listed in MDAX, TecDAX and SDAX earlier than 1 October 2006 will not be removed from the index before December 2008 due to non-fulfilment of the new criteria (Operating headquarters or primary trading turnover in Germany).

The criteria relevant to the composite HDAX<sup>®</sup> and Midcap Market selection indices result indirectly from the criteria set out above.

With the respective prerequisites being satisfied, component issues are selected for the DAX<sup>®</sup>, MDAX, SDAX and TecDAX according to the following criteria:

- § Order book turnover on Xetra and in Frankfurt floor trading (within the preceding twelve months)
- § Free float market capitalization as at a certain reporting date (last trading day of each month).

The market capitalization is determined using the average of the volume-weighted average price ("VWAP") of the last 20 trading days prior to the last day of the month.

The DAX-index will be reviewed exclusively on the basis of these criteria. Apart from these two key criteria, there are other aspects which continue to influence the decision-making process for all other selection indices:

- § the free float
- § market availability (measured on the basis of trading volumes, frequency of price determination, turnover or the Xetra Liquidity Measure)
- § sector affiliation and
- § the period during which a company has met the criteria for inclusion in, or elimination from, the index (retroactive view)

Taking all these criteria into account, the Working Committee for Equity Indices submits proposals to the Management Board of Deutsche Börse to leave the current index composition unchanged, or to effect changes, respectively. The final decision as to whether or not to replace an index component issue is taken by the Management Board of Deutsche Börse. In the case of the DAX, such decisions will be directly reflected by the respective rankings (cf. chapter 1.10).

Such replacements are announced by Deutsche Börse in time (i.e. on the evening of the decision), also on [www.deutsche-boerse.com](http://www.deutsche-boerse.com), and thus in good time prior to the chaining process when they will become relevant.

### 2.2.1.2 Selection Criteria for Entry Standard Index

To be included in Entry Standard Index, companies have to be listed in Entry Standard segment as well as in Xetra®. With this prerequisite being satisfied, the 30 component issues are selected for the index according to order book turnover on Xetra and on Frankfurt floor trading (within the preceding twelve months).

### 2.2.1.3 Selection Criteria for General Standard Index

To be included in General Standard Index, companies have to be listed in General Standard segment as well as in Xetra®. Given this prerequisite, the 200 most liquid component issues (except blue chip issues cp. chapter 2.2.2.4) are selected for the index according to order book turnover on Xetra and on Frankfurt floor trading (within the preceding twelve months).

## 2.2.2 Application of the Selection Criteria

### 2.2.2.1 DAX

The selection of companies for the DAX® is exclusively based on two quantitative criteria: exchange turnover and market capitalization. There are four rules in this respect, to be applied successively.

The following table illustrates the manner and sequence of application for these rules:

DAX®		March	June	September	December
Fast Exit	45/45	x	X	x	x
Fast Entry	25/25	x	X	x	x
Regular Exit	40/40			x	
Regular Entry	30/30			x	

If more than one company fulfils the criteria for inclusion or exclusion, the company that is taken into or left out of the portfolio is chosen based on its free float market capitalization only.

#### 2.2.2.1.1 Ordinary Adjustments

Once a year, the DAX® is subject to ordinary adjustment:

- 1) Fast Exit (45/45 rule): An index component issue is replaced if its ranking in either exchange turnover or market capitalization is worse than 45, provided that an advancing issue ranks no. 35 or better in market capitalization and no. 45 or better in exchange turnover.
- 2) Fast Entry (25/25 rule): A share outside the index is included if it ranks no. 25 or better in both criteria. In return, the index component issue with a ranking worse than 35 in one criterion and the lowest market capitalization is removed. Where no such issue exists, the respective component issue with the lowest market capitalization is removed from the index instead.
- 3) Regular Exit (40/40 rule): An index component issue is replaced if its ranking in either exchange turnover or market capitalization is worse than 40, provided there is an advancing issue ranking no. 35 or better in both criteria.

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4) Regular Entry (30/30 rule): A share outside the index is included if it ranks no. 30 or better in both criteria, provided there is an index value ranking worse than 35 in one criterion.

In case there are several companies meeting the criteria for any of the above rules, the best and worst candidates according to free float market capitalization are included or removed, respectively.

In exceptional cases, including takeovers announced at short notice or significant changes in a company's free float, the Management Board of Deutsche Börse AG may – in agreement with the Working Committee for Equity Indices – deviate from the aforementioned rules.

#### 2.2.2.1.2 Extraordinary Adjustments

The DAX<sup>®</sup> is reviewed every three months on the basis of the first two rules (i.e. "Fast Exit" and "Fast Entry").

Extraordinary adjustments to index composition have to be performed, regardless of "Fast Exit" or "Fast Entry", upon occurrence of specific events such as insolvency.

Whereby:

- § Companies for which insolvency proceedings are not initiated for lack of assets, or which are currently in liquidation, are immediately removed from the corresponding selection index. In this case, a suitable successor is determined – again, on the basis of the four rules set out in chapter 2.2.2.1.1, whereby the respective current rankings are used.
- § In contrast, companies over whose assets insolvency proceedings have been initiated are removed from the selection indices on the respective next chaining date.
- § Companies no longer meeting the minimum requirements in order to remain in the index regarding free float, Prime Standard listing or continuous trading are removed on the basis of the "Fast Exit" rule. Deutsche Börse communicates this decision and replaces the relevant company, usually two full trading days after announcement. In justified cases (e.g. in case of inclusion of the overtaking company in the index) the replacement can be delayed up to ten trading days. Where non-compliance with these rules on a future date is already certain, the relevant company may be replaced as early as on the next chaining date.

In line with ordinary adjustments, the Management Board of Deutsche Börse AG may deviate from the aforementioned rules in exceptional cases – in agreement with the Working Committee for Equity Indices.

In addition, a company can be removed immediately if its index weight based on the actual market capitalization exceeds 10 percent and its annualized 30-day volatility exceeds 250 percent. The relevant figures are published by Deutsche Börse AG on a daily basis. The Management Board of Deutsche Börse AG in agreement with the Working Committee for Equity Indices may decide on the removal and replaces the company two full trading days after the announcement.

## 2.2.2.2 MDAX, SDAX and TecDAX

The following table shows when the rules explained in the next chapter are applied.

			March	June	September	December
MDAX®	Fast Entry	40/40	X	x	x	x
	Fast Exit	75/75	X	x	x	x
	Regular Exit/Entry	60/60	X		x	
TecDAX®	Fast Entry	25/25	X	x	x	x
	Fast Exit	45/45	X	x	x	x
	Regular Exit/Entry	35/35	X		x	
SDAX®	Regular Exit/Entry	110/110	X	x	x	x

When selecting companies for the MDAX®, SDAX® and TecDAX® in addition to quantitative criteria, also qualitative criteria under 2.2.1.1 are taken into account.

## 2.2.2.2.1 Ordinary Adjustments MDAX, SDAX and TecDAX

Depending on the respective index, ordinary adjustments take place every three or six months:

The Regular Exit/Regular Entry rules imply that a company can be included in the respective index if it meets the following requirements:

A) Minimum turnover ranking of 35 (TecDAX®) (60 (MDAX®) and 110 (SDAX®) respectively) and minimum market capitalization ranking of 35 (60 and 110 respectively).

A company may be removed from the index if the following conditions apply:

B) Turnover ranking worse than 35 (60 and 110 respectively) or market capitalization ranking worse than 35 (60 and 110 respectively).

Replacement can take place if only one of the two criteria A) or B) is met.

Selection indices not subject to quarterly adjustments (MDAX, TecDAX, and thus also the HDAX® and Midcap Market Index) are governed by a set of additional rules with regard to changes during the year; these rules are, however, conceived in such a way that they only take effect in exceptional cases. This mainly refers to large new issues which need to be reflected by the indices within a relatively short period of time ("Fast Entry" rule). Conversely, it should be possible to remove companies which no longer meet the respective index criteria, for instance, as a result of major shifts in free float or a sharp price decline, from the selection indices every three months ("Fast Exit" rule).

The "Fast Entry" rule implies that a company can be included in the respective index on a chaining date outside those regular dates if:

A) it has a minimum turnover ranking of 25 (40) and a minimum market capitalization ranking of 25 (40).

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According to the "Fast Exit" rule, a company may be removed from the index on a chaining date outside those regular dates if:

B) its turnover ranking is worse than 45 (75) or its market capitalization ranking is worse than 45 (75).

Based on the rankings and further criteria involved, the Working Committee for Equity Indices recommends in these cases if – and if so, against which issue – such company is to be admitted to the index.

#### 2.2.2.2.2 Extraordinary Adjustments

Extraordinary adjustments to index composition have to be performed, regardless of "Fast Exit" or "Fast Entry", upon occurrence of specific events such as insolvency. Whereby:

- § Companies for which insolvency proceedings are not initiated for lack of assets, or which are currently in liquidation, are immediately removed from the corresponding selection index. In this case, the Working Committee also proposes a suitable successor on the basis of the aforementioned criteria. The Exchange communicates this decision and replaces the relevant company, usually two full trading days after announcement.
- § In contrast, companies over whose assets insolvency proceedings have been initiated are removed from the selection indices on the respective next chaining date.
- § Companies no longer meeting the minimum requirements regarding free float, Prime Standard listing or continuous trading, in order to remain in the index, are removed. In this case, the Working Committee also proposes a suitable successor on the basis of the aforementioned criteria. The Exchange communicates this decision and replaces the relevant company, usually two full trading days after announcement. In justified cases (e.g. in case of inclusion of the overtaking company in the index) the replacement can be delayed up to ten trading days. Where non-compliance with these rules on a future date is already certain, the relevant company may be replaced as early as on the next chaining date.

In line with ordinary adjustments, the Management Board of Deutsche Börse AG may deviate from the aforementioned rules in exceptional cases – in agreement with the Working Committee for Equity Indices.

In addition, a company can be removed immediately if its index weight based on the actual market capitalization exceeds 10 percent and its annualized 30-day volatility exceeds 250 percent. The relevant figures are published by Deutsche Börse AG on a daily basis. The Management Board of Deutsche Börse AG in agreement with the Working Committee for Equity Indices may decide on the removal and replaces the company two full trading days after the announcement.

#### 2.2.2.3 Entry Standard Index

The selection of companies for Entry Standard Index is based on exchange turnover.

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Entry Standard Index adjustment is carried out quarterly at the usual chaining days, using the 30 most liquid issues according to their exchange turnover within the preceding twelve months.

Extraordinary adjustments to index composition have to be performed, regardless of the adjustment rules, upon occurrence of specific events such as insolvency. Whereby:

- § Companies for which insolvency proceedings are not initiated for lack of assets, or which are currently in liquidation, are immediately removed from the corresponding selection index. In this case, a suitable successor is determined – again, on the basis of the aforementioned rules, whereby the respective current rankings are used.
- § In contrast, companies over whose assets insolvency proceedings have been initiated are removed from the selection indices on the respective next chaining date.
- § Companies no longer meeting the minimum requirement as Entry Standard listing, in order to remain in the index, are removed. In this case, Deutsche Börse decides on a successor on the basis of the criteria mentioned. Deutsche Börse communicates this decision and replaces the relevant company, usually two full trading days after announcement. Where non-compliance with these rules on a future date is already certain, the relevant company may be replaced as early as on the next chaining date.

In exceptional cases, including takeovers announced at short notice the Management Board of Deutsche Börse AG may deviate from the aforementioned rules in exceptional cases.

#### 2.2.2.4 General Standard Index

The selection of companies for General Standard Index is based on exchange turnover.

General Standard Index adjustment is carried out quarterly at the usual chaining days, using the 200 most liquid issues according to their exchange turnover within the preceding twelve months.

Only companies with a market capitalization less than €5 billion will be selected for the index. To guarantee the index continuity the companies which have been removed from the index due to market capitalization exceeding €5 billion will be included as soon as the market capitalization falls below €4 billion.

New issues must be listed in General Standard segment for at least 30 days.

Extraordinary adjustments to index composition have to be performed, regardless of the adjustment rules, upon occurrence of specific events such as insolvency. Whereby:

- § Companies for which insolvency proceedings are not initiated for lack of assets, or which are currently in liquidation, are immediately removed from the corresponding selection index. In this case, on the next chaining date a suitable successor is determined.
- § In contrast, companies over whose assets insolvency proceedings have been initiated are removed from the selection indices on the respective next chaining date.

- § Companies are removed from the index if they no longer meet the minimum requirement of a listing in General Standard segment. In this case, on the next chaining date Deutsche Börse decides on a successor on the basis of the criteria mentioned. Where non-compliance with these rules on a future date is already certain, the relevant company may be replaced as early as on the next chaining date.

In exceptional cases, including takeovers announced at short notice the Management Board of Deutsche Börse AG may deviate from the aforementioned rules in exceptional cases.

#### 2.2.2.5 Adjustments in Case of Mergers and Acquisitions

Two possible scenarios must be distinguished in this context:

- a) Absorbing or emerging company meets basis criteria for inclusion in the index

As soon as the free float of the absorbed company falls below 10 percent, the company is removed from the index according to chapter 2.2.2.1.2 and 2.2.2.2.2 respectively. The absorbed company is replaced by the absorbing or emerging company on the same date.

- b) Absorbing company is already included in the index or does not meet the basis criteria for inclusion in the index

As soon as the free float of the absorbed company falls below 10 percent, the company is removed from the index according to chapter 2.2.2.1.2 and 2.2.2.2.2 respectively. On the same date the absorbed company is replaced by a new company determined by the "Fast Exit" rule (in case of DAX®) and after recommendation of the Working Committee for Equity Indices (in case of the other indices).

The weight of the company represented in the index is adjusted to the new number of shares on the quarterly date after the merger has taken place.

### 3 Calculation

#### 3.1 Index Calculation

##### 3.1.1 Methodology

The equity indices of DAX® family are weighted by market capitalization; however, only freely available and tradable shares ("free float") are taken into account. The indices are calculated and disseminated as both performance and price indices.

Price indices measure the actual price performance, and are only adjusted for income from subscription rights and special distributions.

As for performance indices, all income from dividend and bonus payments is additionally reinvested in the index portfolio.

On top of that a daily settlement price is calculated once a day for particular indices involved, using the prices determined in the course of the midday intra-day auction.

##### 3.1.2 Index Formula

The indices of the DAX® family are conceived according to the Laspeyres formula set out below:

$$\text{Index}_t = K_T \cdot \frac{\sum p_{it} \cdot \text{ff}_{iT} \cdot q_{iT} \cdot c_{it}}{\sum p_{i0} \cdot q_{i0}} \cdot \text{Base}$$

whereby:

$c_{it}$  = Adjustment factor of company i at time t

$\text{ff}_{iT}$  = Free float factor of share class i at time T

n = Number of shares in the index

$p_{i0}$  = Closing price of share i on the trading day before the first inclusion in an index of Deutsche Börse

$p_{it}$  = Price of share i at time t

$q_{i0}$  = Number of shares of company i on the trading day before the first inclusion in an index of Deutsche Börse

$q_{iT}$  = Number of shares of company i at time T

t = calculation time of the index

$K_T$  = Index-specific chaining factor valid as of chaining date T

T = Date of the last chaining

The formula set out below is equivalent in analytic terms, but designed to achieve relative weightings:

$$\text{Index}_t = \frac{\sum_{i=1}^n p_{it} \cdot (K_T \cdot \frac{ff_{iT} \cdot q_{iT}}{\sum_{i=1}^n q_{i0}} \cdot 100 \cdot c_{it})}{\sum_{i=1}^n p_{i0} \cdot \frac{q_{i0}}{\sum_{i=1}^n q_{i0}} \cdot 100} \cdot \text{Base} = \frac{\sum_{i=1}^n p_{it} \cdot F_i}{A} \cdot \text{Base}$$

whereby: 
$$A = \frac{\sum_{i=1}^n p_{i0} \cdot q_{i0} \cdot 100}{\sum_{i=1}^n q_{i0}}$$

and: 
$$F_i = K_T \cdot \frac{ff_{iT} \cdot q_{iT}}{\sum_{i=1}^n q_{i0}} \cdot 100 \cdot c_{it}$$

Index calculation can be reproduced in simplified terms by using the expression  $F_i$ :

- § Multiply the current price by the respective  $F_i$  weighting factor;
- § Take the sum of these products; and
- § Divide this by the base value (A) which remains constant until a modification in the index composition occurs.

The  $F_i$  factors provide information on the number of shares required from each company to track the underlying index portfolio.

### 3.1.3 Daily Settlement Indices

For DAX<sup>®</sup>, MDAX<sup>®</sup> und TecDAX<sup>®</sup> an option settlement index is calculated once a day, using the prices determined in the course of the midday intra-day auction on Xetra<sup>®</sup>. If for a company no price results from the midday intra-day auction, the next price available is used. In case there's no price available by the end of the calculation period, the last price available is used for calculation.

On chaining days a future settlement index is calculated in line.

### 3.1.4 Specifics of Entry Standard Index and Entry All Share Index

To calculate Entry Standard Index and Entry All Share Index the same formula is used as for other equity indices.

The following factors have to be considered especially with respect to the equally weighting of the indices.

$$ff_{iT} = 1$$

$$q_{i0} = \text{Weighting factor of company } i \text{ on the trading day before the first inclusion in Entry Standard Index or Entry All Share Index}$$

$$q_{iT} = \text{Weighting factor of company } i \text{ at time } T$$

### 3.1.5 Specifics of General Standard Index

To calculate General Standard Index the same formula is used as for other equity indices.

The free-float-factors have to be considered especially with respect to the market capitalization weighting of the index.

$$ff_{iT} = 1$$

## 3.2 Prices Used and Calculation Frequency

Index calculation is performed on every exchange trading day in Frankfurt, using prices traded on Deutsche Börse's electronic trading system Xetra<sup>®</sup>, whereby the last determined prices are used.

The various performance indices (except for the industry group indices, Entry Standard Index and General Standard Index) are calculated continuously once a second or once a minute, whereas computation of the price indices is carried out once a day, at the close of trading.

The price indices for Entry Standard Index and General Standard Index are calculated continuously every 60 seconds, the performance indices once at the close of trading.

The industry group indices are usually calculated at the close of trading.

On top of that a daily settlement price is calculated once a day for each index involved (on the basis of intra-day midday auction prices as soon as all prices for the component issues of the respective index are available).

The selection indices (calculated once a second or once a minute) are distributed as soon as current prices are available for a minimum number of companies belonging to the respective indices. As long as opening prices for individual shares are not available, the particular closing prices of the previous day are taken instead for calculating the indices. The minimum number required for the calculation of the respective indices can be found in the following table. When the total number is reached the index is distributed with the label "A" (amtlich) for officially.

If the number of relevant constituents is between the minimum and the in the table below denoted total number of constituents the indices are distributed with the label "R" for representative.

If the minimum number of constituents has not been met at the end of the day the index value is derived from the last available prices at the end of the calculation period. The index is then labelled with "I" for indicative.

	Minimum Number of companies	Total Number of companies
DAX®	20	30
MDAX®	35	50
SDAX®	35	50
TecDAX®	20	30
Midcap Market Index	55	80
HDAX®	75	110
	Minimum Number of companies	
Entry Standard Index	-	-
General Standard Index	-	-

In the event of a suspension during trading hours, the last price determined before such a suspension is used for all subsequent computations. If such suspension occurs before the start of trading, the closing price of the previous day is taken instead. The "official" closing index level is calculated using the respective closing prices (or last prices) established on Xetra.

### 3.3 Index Formula for X-Indices

X-Indices are calculated based on FDAX®, F2MX- and FTDX prices as follows:

$$\text{Index}_t^j = \frac{1}{1 + r_t \cdot \frac{T_{F,t}}{360}} \cdot \text{Futures}_t^F$$

where:

- j = Index j stands for the respective index X-DAX®, X-MDAX® or X-TecDAX®
- Futures<sub>t</sub><sup>F</sup> = Last price of futures F (FDAX, F2MX or FTDX) on index j with the shortest time to expiration
- T<sub>F,t</sub> = Number of days to expiration of future F at time t
- r<sub>t</sub> = Risk-free interest rate at time t
- t = Time of calculation

The risk-free interest rate is derived by interpolation from the rates for secured money market transactions (Eurepo) as described below:

$$r_t = r_k \frac{T_{k+1} - T_{F,t}}{T_{k+1} - T_k} + r_{k+1} \frac{T_{F,t} - T_k}{T_{k+1} - T_k} \quad , \text{ mit } T_k \leq T_{F,t} \leq T_{k+1}$$

where:

$T_k, T_{k+1}$	=	Number of days in the respective class
$T_{F,t}$	=	Number of days to expiration of futures F at time t
K	=	Eurepo classes
t	=	Time of calculation

The number of days to the expiration of the respective futures F ( $T_{F,t}$ ) is determined once a day after close of calculation of the indices. It is calculated as the difference of the expiration date and the current date. It is constant for the entire trading day.

### 3.4 Computational Accuracy

The  $K_T$  chaining factors are used and published as figures rounded to seven decimal places.

The  $c_{it}$  adjustment factors are included in the index formula on the basis of six decimal places. In the event of several adjustment events coinciding, such as "ex-dividend" and "ex subscription right" markdowns on the same day, only one single adjustment factor (six decimal places) is computed using the total markdown. Where several adjustment events are required for a single share but at different times, the factors rounded that way are multiplied by each other, and the product is rounded to six decimal places again.

When determining the  $c_{it}$  adjustment factor for subscription rights, the rights value is used as a figure with two decimal places. Only in the case of a capital increase out of company reserves, such rights value is not rounded at all. If a dividend disadvantage has to be prorated (e.g. for three months), the value of such disadvantage used for index calculation is rounded to two decimal places.

The free-float-factors are used as figures rounded to four decimal places.

The indices are rounded to two decimal places and published accordingly. The  $F_i$  factors are rounded to five decimal places and published accordingly, changing with each share-specific adjustment.

### 3.5 Cap Limit

#### 3.5.1 Cap limit in the course of scheduled chaining

On the day of regular quarterly chaining, the weight of any single company in DAX<sup>®</sup>, MDAX<sup>®</sup>, SDAX<sup>®</sup> and TecDAX<sup>®</sup> is capped to 10 percent of the index capitalization, respectively.

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For this purpose, the index capitalization is computed using the total number of all freely available shares. If any single class of shares accounts for a share of more than 10 percent in the respective capitalization, the number of shares used as weight for that company is reduced to 10 percent of the index capitalization (which is being reduced accordingly). Should yet another company exceed the cap limit after that, the capitalization is to be determined with which both companies would account for exactly 10 percent of the revised index capitalization. This procedure is repeated for as long as there is no company exceeding the respective cap limit. Then the next smaller integer of shares resulting in the desired capitalization is used as the new weight for calculating the index.

Where the capped share of a company falls or rises below or above 10 percent during the quarter, it may only be raised or lowered to 10 percent again on the following chaining date as the above-described procedure is repeated for every single chaining process.

In principle, there are no cap limits for Entry Standard Index, General Standard Index and the various All Share, sector and subsector indices.

### 3.5.2 Cap limit in the course of unscheduled chaining

In case that a share in the course of an unscheduled chaining is included in one of the German indices for which a maximum weight is determined its weight is limited to a maximum of 10 percent of the index capitalization.

The relevant number of shares of the newly to the index included constituent is so reduced that its weight is exactly 10 percent of the then lower index market capitalization. The number of shares of the other index members does not change.

## 3.6 Adjustments

The performance indices of Deutsche Börse are adjusted for exogenous influences (e.g. price-relevant capital changes) by means of certain correction factors, assuming a reinvestment according to the "opération blanche". If the absolute amount of the accumulated distributions (dividends, bonus and special distributions, spin-offs or subscription rights on other security-classes) between two regular chaining dates accounts for more than 10 percent of the market capitalization of the distributing company on the day before the first distribution, the part of the distribution exceeding the 10 percent will not be reinvested in a single stock but in the overall index portfolio per unscheduled chaining date.

All continuously calculated indices require a simultaneous adjustment of systematic price changes. The prerequisite for this is to calculate the correction factor on an ex-ante basis.

Consequently, already the first "ex" price can be adequately included for index calculation purposes. The ex-ante incorporation of adjustments presupposes a general acceptance of the computation formula as well as a general availability of the parameters used.

All parameters necessary for the respective computation are available from Deutsche Börse via its website ([www.deutsche-boerse.com](http://www.deutsche-boerse.com)) on the evening before each adjustment. As with all other adjustment processes, there may be differences between the computed values and the actually traded

prices. However, since a preliminary correction is necessary and any delay would be problematic, this procedure remains the most appropriate one.

The calculated adjustment factor and a synthetic price accordingly adjusted for this factor are used in the index from the ex-date of a share as long as there is no "ex" price available.

### 3.6.1 Cash dividends and Other Distributions

The  $c_{it}$  adjustment factors for cash dividends, bonus and special distributions are calculated as follows:

$$C_{it} = \frac{p_{i,t-1}}{p_{i,t-1} - D_{i,t}} \cdot C_{it-1}$$

whereby:

$p_{i,t-1}$  = Closing price of the relevant share on the day before the ex date

$D_{i,t}$  = Cash dividend, bonus dividend or special distribution on day t

Within the framework of index calculation, the share price is thus modified by the amount of the respective cash distribution, without deduction of capital gains tax.

Cash dividends and bonus distributions are corrected only in performance indices. Special distributions are taken account of in both performance and price indices.

### 3.6.2 Stock dividends

The issue of shares instead of the distribution of cash to provide dividends is treated in the same way as bonus shares or nominal value changes (3.6.5) and is accounted for in both performance and in price indices. If the holder is provided the right to choose between cash dividend and stock dividend, the draw of cash dividend is assumed.

### 3.6.3 Capital Increases

The  $c_{it}$  adjustment factors for capital increases (against cash contributions, or out of company reserves) are determined as follows:

$$C_{it} = \frac{p_{i,t-1}}{p_{i,t-1} - BR_{i,t-1}} \cdot C_{it-1}$$

whereby:

$$BR_{i,t-1} = \frac{p_{i,t-1} - p_B - DN}{BV + 1}$$

and:

$p_{i,t-1}$  = Closing price on the day before the ex date

$BR_{i,t-1}$  = Theoretical value of subscription rights

$p_B$  = Subscription price

$BV$  = Subscription ratio

$DN$  = Dividend disadvantage

For capital increases out of company reserves:  $p_B = 0$

The dividend disadvantage is equivalent to the last dividend paid or the proposed dividend already published in "Börsen-Zeitung", or via the Securities Master Data System ("WSS - Wertpapier-Service-System"). For issues on which options are traded at Eurex, this procedure is coordinated with Eurex which takes account of the respective rights markdown to adjust the exercise prices of the various equity options.

#### 3.6.4 Capital Reductions

The following formula is used to calculate the  $c_{it}$  adjustment factor in the case of a simplified capital reduction:

$$c_{it} = \frac{1}{V_{it}} \cdot c_{it-1}$$

whereby:

$V_{it}$  = Reduction ratio of company i valid at time t

However, in the case of selection indices, verification is generally carried out in advance as to whether the relevant company is to remain in the index.

In the event of a capital reduction and subsequent capital increase against additional contributions, the introduction of a new class of shares is handled as follows:

The old classes are removed, and the new one is included with the corresponding computation of a chaining factor. In this context, two assumptions are made: first that the last traded price could have been achieved for the purpose of the theoretical transaction, and the released capital would be invested in the new class on the subsequent day.

The new class is included in the index based on the respective opening price on the first day of the new quotation.

### 3.6.5 Nominal Value Changes and Share Splits

In the case of nominal value changes (or share splits), it is assumed that the respective price changes occur in proportion to the related nominal value (or number of shares). The adjustment factor reflects this assumption accordingly:

$$C_{it} = \frac{N_{i,t-1}}{N_{i,t}} \cdot C_{it-1}$$

whereby:

$N_{i,t-1}$  = Previous nominal value of share class i (or new number of shares)

$N_{i,t}$  = New nominal value of share class i (or previous number of shares)

### 3.6.6 Subscription Rights on Other Share Classes

Where shareholders of a company (class A) are granted subscription rights to shares of another class (class B) of the same company, two different scenarios must be distinguished:

#### 3.6.6.1 The shares for which such a subscription right exists are already listed

The  $c_{it}$  adjustment factor is computed in line with a capital increase of class-A shares:

$$C_{it} = \frac{p_{it-1}^A}{p_{it-1}^A - BR_{it-1}}$$

whereby:

$$BR_{it-1} = \frac{p_{it-1}^A - p_B - DN}{BV + 1}$$

$BR_{it-1}$  = Theoretical value of subscription rights

$p_{it-1}^A$  = Closing price of class-A shares on the day before the ex date

$p_B$  = Subscription price

$BV$  = Subscription ratio

$DN$  = Dividend disadvantage of class B

#### 3.6.6.2 New issue of shares to which such subscription right is related

In this case, the exact theoretical value of subscription rights cannot be calculated on an ex-ante basis since there is no closing price with respect to the new class. Therefore, the index is corrected as follows:

The expected price for the new shares is determined on the basis of the price difference between ordinary and preference shares of comparable companies. This price is used in line with the procedure described above to compute the respective subscription right.

### 3.6.7 Spin-Offs

Where a company ("company A") spins off one of its divisions into a new, independent company ("company B"), the adjustment is carried out as described below.

A theoretical mark-down cannot be calculated on an ex-ante basis since there is no closing price with respect to the shares of new company B.

"B" shares are additionally included in the index at the ex-date so as to avoid any index-tracking error. For a spin-off affecting the DAX<sup>®</sup>, for instance, this implies that the index is calculated on the basis of 31 issues for at least one day. On their first trading day, following the Xetra<sup>®</sup> closing auction, "B" shares are removed again from the index. At the same time, the  $c_i$  factor of company A is adjusted as follows:

$$c_{i,t}^A = \left( 1 + \frac{c_{i,t-1}^B \cdot p_{i,t-1}^B}{c_{i,t-1}^A \cdot p_{i,t-1}^A \cdot BV} \right) \cdot c_{i,t-1}^A$$

whereby:

$p_{i,t-1}^A$  = Closing price of "A" shares on the first trading day of "B" shares

$p_{i,t-1}^B$  = Closing price of "B" shares on their first trading day

BV = Subscription ratio

t = ex date

### 3.6.8 Subscription Rights On Fixed-Income Instruments

An evaluation of the respective fixed-income instrument on the basis of the net present value method is necessary to determine the value of rights. Future revenues are estimated without deducting capital gains tax, and are first being discounted on the date on which payment of the subscription price becomes due.

No adjustment is required if there is no rights trading (in the event of issuing terms in line with prevailing market conditions).

#### 3.6.8.1 Subscription Rights on Profit-Participation Certificates

The  $c_{it}$  adjustment factor for rights related to profit-participation certificates is calculated in the following way:

$$c_{it} = \frac{p_{i,t-1}}{p_{i,t-1} - BR_{i,t-1}} \cdot c_{it-1}$$

whereby:

$p_{i,t-1}$  = Closing price of share i on the day before the ex date

$BR_{i,t-1}$  = Theoretical value of subscription rights

Discounting is effected using the actual/actual day count.

With the purchase price being taken into account, the capital value at the time of payment is obtained according to the following equation:

$$KW_{t-1} = -P + K_1 \cdot q^{\left(\frac{-t}{365}\right)} + K_2 \cdot q^{\left(\frac{-t}{365}\right)} \cdot q^{-1} + \dots + (T + K_n) \cdot q^{\left(\frac{-t}{365}\right)} \cdot q^{-n+1}$$

whereby:

$KW_{t-1}$  = Capital value of the participation certificate on the day before the ex date

$q$  =  $1 + r$

$r$  = Discounting interest rate

$t$  = Period from the date of issue to the first interest due date (in days)

$P$  = Purchase price of the profit-participation certificate

$K_i$  = Coupon payment in year i

$T$  = Redemption

$n$  = Term of the participation certificate (in years)

The discounting interest rate applied here is equivalent to the yield of a zero bond with the corresponding maturity, plus a risk add-on determined in line with comparable instruments. The capital value is rounded to two decimal places.

Assuming that profit-participation certificates are offered using a z: 1 ratio, the value of rights ( $BR_{i,t-1}$ ) per share is

$$BR_{i,t-1} = \frac{KW_{t-1}}{z}$$

### 3.6.8.2 Subscription Rights on Bonds

The procedure is in line with that described in section 3.6.8.1, with the respective bond to be valued by means of the net present value method. After that, the subscription ratio is taken into account and the correction factor established.

### 3.6.9 Subscription Rights on Instruments with Embedded Options

The procedure for subscription rights that involve instruments vesting an option right also facilitates the computation of the various correction factors on an ex-ante basis. Experience with previous issues appears to support the chosen method as being a good approximation of actual market conditions.

#### 3.6.9.1 Subscription Rights on Profit-Participation Certificates Cum Warrants ("Options-Genussscheine")

The  $c_{it}$  adjustment factor for subscription rights on profit-participation certificates cum warrants is determined according to the following pattern:

- 1) Valuation of the fixed-interest component of the profit-participation certificates cum warrants issue
- 2) Valuation of warrants
- 3) Calculation of the value of subscription rights
- 4) Computation of the adjustment factor

to 1) Valuation of the fixed-interest component of profit-participation certificates cum warrants

The valuation of the fixed-interest component of profit-participation certificates cum warrants ( $KW_{t-1}$ ) is consistent with the valuation of profit-participation certificates set out in section 3.6.8.

to 2) Valuation of warrants

Warrants are valued using the binomial option pricing model which permits dividend payments to be taken into account during computation. The dividend used is the average of the last three dividends paid. Where a dividend has already been announced, then the aggregate of this value and the two preceding dividend payments is taken for averaging purposes. The volatility used is the annualized 250-day volatility of the underlying instrument. The interest rate applied here is equivalent to the yield of a zero-coupon bond with a maturity corresponding to the option's lifetime.

The option is valued at the time of issue of the respective profit-participation certificates cum warrants, irrespective of its exercise period. The option value is rounded to two decimal places.

The dilution effect is taken into account as follows:

$$O = \frac{O_B \cdot N}{N + n}$$

whereby:

O = Option value

$O_B$  = Value of the option right without dilution effect

N = Number of shares prior to the exercise of option rights

n = Potential number of shares ensuing from the exercise of option rights

to 3) Calculation of the value of subscription rights

The capital value of the profit-participation certificate and the option value are aggregated to form the total value of a profit-participation certificate cum warrants.

Assuming that profit-participation certificates cum warrants are offered using a z: 1 ratio, the value of rights ( $BR_{i,t-1}$ ) per share is

$$BR_{it} = \frac{KW_{t-1} + O}{z}$$

to 4) Computation of the adjustment factor

The adjustment factor is computed as follows:

$$C_{it} = \frac{p_{i,t-1}}{p_{i,t-1} - BR_{i,t-1}} \cdot C_{it-1}$$

### 3.6.9.2 Subscription Rights on Bonds with Warrants or Convertible Bonds

Computation is in line with the procedure described in section 3.6.8.1 above. The fixed-interest and option components are valued on a separate basis and then aggregated. The dilution effect and subscription ratio are subsequently taken into account, and the adjustment factor is determined.

### 3.6.10 Distributions > 10 percent of Market Capitalization

If the absolute amount of the accumulated distributions (dividends, bonus and special distributions, spin-offs or subscription rights on other security-classes) between two regular chaining dates accounts for more than 10 percent of the market capitalization of the distributing company on the day before the first distribution, the part of the distribution exceeding the 10 percent will not be reinvested in a single stock but in the overall index portfolio per unscheduled chaining date.

In such case the adjustment factor for the expecting markdown for 10 percent of the distribution will be calculated according to the formulas described in chapter 3.6.1 and 3.6.9. The rest of the expecting price down will be affected with the adjustment of chaining factor as described in chapter 3.7.4.

Example 1 –Dividend distribution of 25 percent

A company A which is included to the index with a current share price of €100 and current adjustment factor of 1 pays a special dividend of €25 to the equity holders on the ex date. For the

part of the distribution which accounts for 10 percent of the overall capital (€10) an adjustment factor (1.11111) will be calculated according to chapter 3.6.1. The remaining price down of €15 will be adjusted on the chaining date as described in chapter 3.7.4.

Example 2 – Dividend distribution of 5 percent on day  $t$ , Spin-Off of 10 percent on the next day

A company B which is included to the index with a current share price of €10 and current adjustment factor of 2 pays a special dividend of €0.5 on the ex-day. The special dividend will be adjusted with the adjustment factor as described in chapter 3.6.1. The new adjustment factor correspondingly is calculated as 2.105263. On the next day company C will be spun-off from company B. Firstly, the company C will be included in the index and excluded on the next day with the close price of €1 as described in chapter 3.6.7. The price down is €1 or 10 percent based on the capitalization before the first distribution. The accumulated price down is 15 percent of the market value. Up to and including 10 percent the price down - in this case €0.5 - will be adjusted by the  $c_i$  factor. The remaining price down of €0.5 will be adjusted on the chaining date as described in 3.7.4.

### 3.6.11 Changes in Composition

#### 3.6.11.1 Changes in the composition of All Share Indices

##### 3.6.11.1.1 New Listings and Deletions

a) A class of shares is listed on a German exchange for the first time.

The current number of shares in the issued share capital is used as the value for factors  $q_{i0}$  and  $q_{it}$ . While the opening price of the first exchange trading day is chosen as the base price  $p_{i0}$ , the current price  $p_{it}$  is reflected by the closing price of that day (cf. also chapter 3.1.2).

b) A class of shares was previously listed in another segment of the Frankfurt Stock Exchange.

The price  $p_{it}$  on which such inclusion is based represents the last price of the other market segment. The price or number of shares on the base date ( $p_{i0}$  or  $q_{i0}$ , respectively) is reflected by the respective data from the other segment as per that date, or the date of issue in case that the shares were not yet listed at that time. Inclusion of the shares is carried out on the basis of their current number ( $q_{it}$ ) and the current free float factor ( $ff_{it}$ ).

After a new listing or deletion has occurred, a chaining factor is calculated in line with the quarterly chaining process in order to avoid a gap in the index, however, without adjusting the number of shares or the free float and  $c_{it}$  factors.

##### 3.6.11.1.2 Merger of Companies

Companies which have been taken over are deleted immediately after their delisting, with the index to be chained accordingly. The capital of the company which has taken over remains unchanged. The  $q_{it}$  and  $ff_{it}$  factors of the latter are subject to adjustment on the next regular chaining date, with no change to the  $q_{i0}$  factor.

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In cases where the new shares do not constitute the continued quotation of one of the original companies, they are included in the index as a completely new issue; the current capital of which is reflected by  $q_{i0}$ . The index is also chained accordingly.

### 3.6.11.2 Changes in the Composition of Selection Indices

#### 3.6.11.2.1 New Listings and Deletions

Regular modifications to the index composition only occur every three months, on the respective chaining date. This process is predominantly based on the criteria as set out in chapter 2.2.

Additionally, extraordinary adjustments have to be made according to chapter 2.2.2 and 2.2.2.2 where required.

#### 3.6.11.2.2 Conversion of Preferred Shares into Ordinary Shares

a) Ordinary shares are already included in the index.

No chaining is carried out. The number of shares remains unchanged until the next chaining date.

b) Preferred shares are already included in the index.

The ordinary shares are included in the index, taking the place of the preferred shares. The number of ordinary shares and the free float factor are adopted from the (number of) preferred shares, and are subject to adjustment only on the next regular chaining date. Due to price differences, the index is chained accordingly.

### 3.6.12 Extraordinary free float adjustments

If the free float of a company included in a selection index of Deutsche Börse changes between two regular chaining dates due to a corporate event (e.g. subscription right, changes in share capital, acquisitions as defined by the German Securities Acquisition and Takeover Act (WpÜG)) by more than 10 percentage points the free float factor will be updated extraordinarily. Deutsche Börse will announce the new parameters two days before they become effective. In ongoing acquisitions the free float resulting from the first public announcement in the course of the acquisition offer as well as from the announcement made at the end of the offer periods will be adjusted in the index with two days prior notice.

The extraordinary adjustment in each case will be carried out as described in chapter 3.7.3 with the only difference that the index composition will not be changed and only the free float factor of the affected company will be updated.

### 3.6.13 Extraordinary treatment of acquisitions in selection indices

In cases of acquisitions the Executive Board of Deutsche Börse in agreement with the Working Committee reserves the right to take a decision that deviates from the rules set out in this guide. Such a decision will be made public immediately and with due notice.

### 3.7 Chaining

In line with the concept conceived by Deutsche Börse for its indices, dividend payments and capital changes are initially reflected through an adjustment of the respective  $c_{it}$  adjustment factors. Quarterly chaining is carried out on the maturity date of the various equity index futures of Eurex<sup>®</sup>, implying that on this day (i.e. on the third Friday of the last month of a quarter), the index is calculated for the last time on the basis of weights valid up to that point. Chaining is based on the Xetra<sup>®</sup> closing prices established on that day, with the new weights to be applied as from the following trading day.

A change in the index composition also becomes necessary in the event of an index component issue being or becoming subject to extraordinary circumstances, such as deletion, composition proceedings, bankruptcy, new admission, etc.

#### 3.7.1 Quarterly Chaining

The quarterly chaining procedure encompasses (with the exception of Entry Standard Index and Entry All Share) the following measures:

- § Changes to the composition of the various indices (cf. chapter 2.2)
- § The number of shares and the respective free-float-factors are updated in accordance with the capital changes carried out.
- § The accumulated income from distributions and capital changes is allocated to the index component issues according to the respective new weights. For this purpose, the individual  $c_{it}$  adjustment factors are set to 1.
- § A chaining factor is calculated to avoid a gap in the respective index.

These measures help to prevent the weighting scheme from "ageing" due to capital changes and the accumulation of income.

Chaining is carried out in three steps:

a) Calculation of the index value on the chaining date according to the old weighting scheme

The following applies accordingly:

$$\text{Index}_t = K_T \cdot \frac{\sum_{i=1}^n p_{it} \cdot ff_{iT} \cdot q_{iT} \cdot c_{it}}{\sum_{i=1}^n p_{i0} \cdot q_{i0}} \cdot \text{Base}$$

This value corresponds to the closing index published on the date of chaining, and is used with two decimal places (as published) for all subsequent calculations.

b) Computation of an interim value

The interim value is computed using the number of shares valid on the chaining date ( $q_{i,T+1}$ ) and the current free float factors<sup>7</sup> ( $ff_{i,T+1}$ ). The  $c_{it}$  adjustment factors are set to 1.

The following applies accordingly:

$$\text{Interim value} = \frac{\sum_{i=1}^n p_{it} \cdot ff_{i,T+1} \cdot q_{i,T+1}}{\sum_{i=1}^n p_{i0} \cdot q_{i0}} \cdot \text{Base}$$

The interim value is used as an exact figure for subsequent calculations.

c) Calculation of the new chaining factor

The following applies accordingly:

$$K_{T+1} = \frac{\text{Index}_t}{\text{Interim value}}$$

After chaining, the index is computed on the basis of the new chaining factor ( $K_{T+1}$ ).

After calculation of the chaining factor, capital changes and dividend payments due on the date of chaining are taken into account via the  $c_{it}$  factor.

The  $F_i$  weighting factors of the index formula based on relative weights are calculated as follows:

$$F_i = K_{T+1} \cdot \frac{ff_{i,T+1} \cdot q_{i,T+1} \cdot c_{it}}{\sum_{i=1}^n q_{i0}} \cdot 100$$

### 3.7.2 Specifics of Entry Standard Index and Entry All Share

The weighting factor  $q_{i,T+1}$  of every constituent will be adjusted during each ordinary and extraordinary chaining in order that every company has the same weighting in the index.

The following applies accordingly:

$$q_{i,t+1} = \frac{1}{p_{it} \cdot n}$$

where:

t = Time of last trading on the day of ordinary and extraordinary chaining

n = Number of shares in index

<sup>7</sup> For General Standard Index:  $ff_{i,T}, ff_{i,T+1} = 1$

$p_{it}$  = Price of share  $i$  at time  $t$

$q_{it+1}$  = Weighting factor of company  $i$  at time  $t+1$

### 3.7.3 Unscheduled Chaining

In the event of a change in the index composition, chaining is carried out in line with the procedure described in section 3.7.1 above, however, usually without adjustment to the number of shares and the various  $c_{it}$  factors. Newly included issues are taken into account with their current factors from Prime All Share. In case of an unscheduled segment change from General Standard to Prime Standard the factors from CDAX® are taken.

Computation of the interim value is based on the component issues of the revised index portfolio.

$$\text{Interim value} = \frac{\sum_{i=1}^n p_{it} \cdot ff_{iT} \cdot q_{iT} \cdot c_{it}}{\sum_{i=1}^n p_{i0} \cdot q_{i0}} \cdot \text{Base}$$

With the new chaining factor to result as:

$$K_{T+1} = \frac{\text{Index}_t}{\text{Interim value}}$$

### 3.7.4 Adjustment per Unscheduled Chaining

Distributions will be adjusted per unscheduled chaining as described in chapter 3.6.10. Calculation of the interim value is based on the already adjusted price and correction factors:

$$\text{Interim value} = \frac{\sum_{i=1}^n p_{it} \cdot ff_{iT} \cdot q_{iT} \cdot c_{it}}{\sum_{i=1}^n p_{i0} \cdot q_{i0}} \cdot \text{Base}$$

In this case, for the distributing share  $i$  the price after expected price down in full and the newly calculated correction factor  $c_i$  are applied.

With the new chaining factor to result as:

$$K_{T+1} = \frac{\text{Index}_t}{\text{Interim value}}$$

### 3.7.5 Index Flags

An index is published with the label "A" ("amtlich") once the opening criteria are fulfilled. Where the opening criteria have not been met for an index on a certain trading day, an index value is derived

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from the last available prices at the end of the calculation period. Accordingly, this index is labelled "I" (indicative).

In the event of price changes of more than 1 percent against the last traded price, the corresponding index is labelled "U" (unchecked). The calculated index value is subsequently checked for data entry or computation errors. Any data entry or computation error is corrected accordingly, followed by a recalculation of the respective index. In the case of a deviation in excess of 1 percent where no error has occurred, the index is revalidated (i.e. labelled in keeping with its corresponding status).

## 4 Appendix

## 4.1 Supersectors, Sectors and Subsectors

Supersector	Sector	Subsector	Description
Consumer Goods	Automobile	Auto Parts & Equipment	Producers of parts and accessories for motor vehicles and motorcycles (including tyres and batteries)
	Automobile	Automobile Manufacturers	Companies primarily active in the production of passenger vehicles, small lorries and motorcycles
	Consumer	Clothing & Footwear	Companies producing mainly textile goods and shoes, including related cleaning services
	Consumer	Consumer Electronics	Companies producing mainly consumer electronics goods (such as TV sets, VCRs/camcorders HiFi equipment, etc.) (This excludes producers focusing on computers and telecommunications equipment.)
	Consumer	Home Construction & Furnishings	Producers of prefabricated homes, DIY products and furnishings (such as furniture or lighting)
	Consumer	Household Appliances & Housewares	Producers of household and garden products (such as cutlery, dishes or cleaning products), or of household appliances ("white goods")
	Consumer	Leisure Goods & Services	Producers of leisure goods (such as sports equipment, toys, bicycles), as well as restaurant, hotel or casino operators
	Consumer	Personal Products	Producers of cosmetics and personal care products
	Food & Beverages	Beverages	Producers of beverages of all kinds
	Food & Beverages	Food	Producers of food and tobacco products of all kinds
FIRE <sup>8</sup>	Banks	Credit Banks	Commercial and universal banks which do not fall into the categories of Mortgage Banks or Financial Services Providers
	Banks	Mortgage Banks	Specialist banks exclusively (or predominantly) extending long-term loans against liens on real property, or communal loans
	Financial Services	Diversified Financial	Financial services providers that do not have universal bank status, but who distribute a range of financial services
	Financial Services	Private Equity & Venture Capital	Holding companies investing in diversified business areas
	Financial Services	Real Estate	Companies investing in property/real estate (directly or indirectly)
	Financial Services	Securities Brokers	Companies active in the securities business, such as brokers, online banks, exchanges, etc.
	Insurance	Insurance	Companies mainly underwriting policies for life, accident, health or home contents cover
	Insurance	Re-Insurance	Companies mainly underwriting reinsurance cover
Basic Materials	Basic Resources	Forest & Paper Products	Producers of wood or basic wood products, and paper producers
	Basic Resources	Mining	Companies extracting commodities such as iron ore, minerals, aluminium, coal, diamonds or similar substances
	Basic Resources	Oil & Gas	Companies drilling for oil and gas, which do not fall under the Oil & Gas Distribution category
	Basic Resources	Steel & Other Metals	Producers of steel or related in-process products; producers of iron, non-iron metals or precious metals
	Chemicals	Chemicals, Commodity	Producers of simple, standardised chemical products
	Chemicals	Chemicals, Specialty	Producers of non-standard, specialty chemical products
	Chemicals	Industrial Gases	Producers of industrial gases

<sup>8</sup> FIRE = „Finance, Insurance and Real Estate“

Supersector	Sector	Subsector	Description
Industrials	Construction	Building Materials	Producers of basic construction materials, such as cement, flooring, doors, windows, etc.
	Construction	Construction & Engineering	Companies active in the development and construction of buildings and infrastructure projects (e.g. roads) (excluding prefabricated homes)
	Industrial	Advanced Industrial Equipment	Companies using sophisticated technology or providing engineering for the production of high-tech industrial goods (for example, producers of lasers, robots or optical storage media)
	Industrial	Containers & Packaging	Companies specialising in all kinds of packaging
	Industrial	Heavy Machinery	Producers of large but mobile machinery, such as heavy goods vehicles, ships, agricultural machines, etc.
	Industrial	Industrial Machinery	Producers of industrial machinery or related components, such as machine tools, compressors, printing machines, etc.
	Industrial	Industrial, Diversified	Companies with activities across various industrial sectors (including holding companies investing in different sectors)
	Industrial	Renewable Energies	Companies developing equipment for alternative and/or renewable energy generation, such as solar technology or wind-powered turbines
	Industrial	Industrial Products & Services	Producers/providers of other industrial products or services (e.g. market research, human resources, industrial wholesalers, waste disposal)
	Transportation & Logistics	Airlines	Aviation companies mainly carrying passengers
	Transportation & Logistics	Logistics	Providers of industrial transport services (land transport/ aviation cargo/ freight shipping)
	Transportation & Logistics	Transportation Services	Providers of infrastructural or other specialised transport services (including airport operators, road or rail networks, tour operators, etc.)
	Consumer Services	Media	Advertising
Media		Broadcasting	Providers of cable and satellite transmission services, and radio/television broadcasters
Media		Movies & Entertainment	Companies producing (or trading in) entertainment products and services, including producers, distributors and broadcasters of feature films and television shows, music producers and distributors, theatre operators and sports teams
Media		Publishing & Printing	Publishers of newspapers, magazines and books, and providers of printed or electronic information; including providers of related services (including educational institutions)
Retail		Retail, Catalogue	Retailers selling mainly by mail order, which are not categorised under Retail, Internet
Retail		Retail, Food & Drug	Owners/operators of food stores, pharmacies and drugstores (wholesale and retail)
Retail		Retail, Internet	Retailers selling their goods or services mainly over the Internet
Retail		Retail, Multiline	Retail companies with a broad product range (department stores)
Retail		Retail, Specialty	Retail companies with a very specific product range (such as fashion, electronics, etc.)

Supersector	Supersector	Sector	Description
Pharma & Healthcare	Pharma & Healthcare	Pharmaceuticals	Companies researching, developing or producing pharmaceuticals (including veterinary products)
	Pharma & Healthcare	Healthcare	Owners/operators of healthcare institutions (such as hospitals or nursing homes), providers of healthcare services (e.g. dialysis) and providers of medical material (such as syringes, swabs, etc.)
	Pharma & Healthcare	Biotechnology	Companies mainly active in developing, producing, marketing or licensing products based on biotechnological research
	Pharma & Healthcare	Medical Technology	Producers of technological products and devices used in healthcare, such as pacemakers, dialysis equipment or UV therapy systems
Information Technology	Software	Internet	Companies providing and developing Internet infrastructure (Internet access, portals, software, etc.)
	Software	IT-Services	Companies active in IT consulting, IT operations, systems integration, etc.
	Software	Software	Companies focused on the development of standard or specialised software solutions
	Technology	Communications Technology	Companies developing telecommunications technology and/or products (such as user devices or network components)
	Technology	Electronic Components & Hardware	Producers of electronic components (printed circuit boards, integrated circuits, smart cards) or computer hardware (PCs, monitors, etc.)
Tele-communication	Telecommunication	Fixed-Line Telecommunication	Telecommunications carriers mainly providing fixed-line local and long-distance services
	Telecommunication	Wireless Telecommunication	Telecommunications carriers mainly providing wireless/mobile services
	Telecommunication	Telecommunication Services	Providers of ancillary or specialised telecommunications services
Utilities	Utilities	Electricity	Companies generating and/or distributing electricity (including operators of power stations)
	Utilities	Water	Providers of water to end-users (this segment includes operators of purification plants)
	Utilities	Oil & Gas (Distribution)	Utilities mainly providing energy in the form of oil and gas
	Utilities	Multi-Utilities	Companies active across various energy sectors

## 4.2 Alpha Codes, ISINs and Sector Assignment (Tech/Classic)

Index	Alpha (Perf.)	ISIN (Perf.)	Alpha (Price)	ISIN (Price)	Sector
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## Selection Indices

DAX <sup>®</sup>	DAX	DE0008469008	DAXK	DE0008467440	Tech & Classic
TecDAX <sup>®</sup>	TDXP	DE0007203275	TDXK	DE0007203283	Tech
MDAX <sup>®</sup>	MDAX	DE0008467416	MKDX	DE0008467531	Classic
SDAX <sup>®</sup>	SDXP	DE0009653386	SDXK	DE0009653394	Classic
HDAX <sup>®</sup>	HDAX	DE0008469016	HKDX	DE0008469974	Tech & Classic
Midcap Market-Index	MIDP	DE0007203291	MIDK	DE0007203317	Tech & Classic
Entry Standard Index	ED6P	DE000A0G8342	ED6K	DE000A0G83N6	-
General Standard Index	D1AP	DE000A0C4B83	D1AQ	DE000A0C4B91	-

## X-Indices

X-DAX <sup>®</sup>	D1AR	DE000A0C4CA0	n/a	n/a	-
X-MDAX <sup>®</sup>	3BSJ	DE000A0S3BG3	n/a	n/a	-
X-TecDAX <sup>®</sup>	3BSL	DE000A0S3BJ7	n/a	n/a	-

## Late Indices

L-DAX <sup>®</sup>	DAXL	DE0001717049	n/a	n/a	Tech & Classic
L-TecDAX <sup>®</sup>	TDXL	DE0001717072	n/a	n/a	Tech
L-MDAX <sup>®</sup>	MDXL	DE0001717056	n/a	n/a	Classic
L-SDAX <sup>®</sup>	SDXL	DE0001717064	n/a	n/a	Classic

## All Share Indices

Prime All Share	PXAP	DE0007203325	PXAK	DE0007203333	Tech & Classic
CDAX <sup>®</sup>	CDAX	DE0008469602	CXKX	DE0008469800	Tech & Classic
Technology All Share	NMDP	DE0008468943	NMDK	DE0008468968	Tech
Classic All Share	CLXP	DE0007203341	CLXK	DE0007203358	Classic
General All Share	3BTU	DE000A0S3CV0	3BTT	DE000A0S3CU2	-
Entry All Share	D1AH	DE000A0C4B18	D1AG	DE000A0C4B00	-

Index	Alpha (Perf.)	ISIN (Perf.)	Alpha (Price)	ISIN (Price)	Sector
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## DAXsupersector Indizes

DAXsupersector Basic Materials	4NAF	DE000A0SM9Z7	4N7A	DE000A0SM718	Classic
DAXsupersector Consumer Goods	4NAG	DE000A0SNAA3	4N7B	DE000A0SM726	Classic
DAXsupersector Consumer Services	4NAH	DE000A0SNAB1	4N7C	DE000A0SM734	Classic
DAXsupersector FIRE	4NAI	DE000A0SNAC9	4N7D	DE000A0SM742	Classic
DAXsupersector Industrials	4NAJ	DE000A0SNAD7	4N7E	DE000A0SM759	Tech & Classic
DAXsupersector Information Technology	4NAK	DE000A0SNAE5	4N7F	DE000A0SM767	Tech
DAXsupersector Pharma & Healthcare	4NAL	DE000A0SNAF2	4N7G	DE000A0SM775	Tech & Classic
DAXsupersector Telecommunication	4NAM	DE000A0SNAGO	4N7H	DE000A0SM783	Tech
DAXsupersector Utilities	4NAN	DE000A0SNAH8	4N7I	DE000A0SM791	Classic

## DAXsector Indizes

DAXsector Automobile	CXPA	DE0009660084	CXKA	DE0009660092	Classic
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Index	Alpha (Perf.)	ISIN (Perf.)	Alpha (Price)	ISIN (Price)	Sector
DAXsector Banks	CXPB	DE0009660100	CXKB	DE0009660118	Classic
DAXsector Basic Resources	CXPE	DE0009660167	CXKE	DE0009660175	Classic
DAXsector Chemicals	CXPC	DE0009660126	CXKC	DE0009660134	Classic
DAXsector Consumer	CXPY	DE0009660449	CXKY	DE0009660456	Classic
DAXsector Construction	CXPO	DE0009660308	CXKO	DE0009660316	Classic
DAXsector Financial Services	CXPV	DE0009660423	CXKV	DE0009660431	Classic
DAXsector Food & Beverages	CXPF	DE0009660183	CXKF	DE0009660191	Classic
DAXsector Industrial	CXPN	DE0009660282	CXKN	DE0009660290	Tech & Classic
DAXsector Insurance	CXPI	DE0009660225	CXKI	DE0009660233	Classic
DAXsector Media	CXPD	DE0009660142	CXKD	DE0009660159	Classic
DAXsector Pharma & Healthcare	CXPP	DE0009660324	CXKP	DE0009660332	Tech & Classic
DAXsector Retail	CXPR	DE0009660340	CXKR	DE0009660357	Classic
DAXsector Software	CXPS	DE0009660365	CXKS	DE0009660373	Tech
DAXsector Technology	CXPH	DE0009660209	CXKH	DE0009660217	Tech
DAXsector Telecommunication	CXPT	DE0009660381	CXKT	DE0009660399	Tech
DAXsector Transportation & Logistics	CXPL	DE0009660241	CXKL	DE0009660258	Classic
DAXsector Utilities	CXPU	DE0009660407	CXKU	DE0009660415	Classic

## DAXsubsector Indizes

DAXsubsector Auto Parts & Equipment	I1AA	DE0007203366	I2AA	DE0007203374	Classic
DAXsubsector Automobile Manufacturers	I1AB	DE0007203382	I2AB	DE0007203390	Classic
DAXsubsector Credit Banks	I1BA	DE0007203416	I2BA	DE0007203424	Classic
DAXsubsector Mortgage Banks	I1BB	DE0007203432	I2BB	DE0007203440	Classic
DAXsubsector Forest & Paper Products	I1EA	DE0007203457	I2EA	DE0007203465	Classic
DAXsubsector Mining	I1EB	DE0007203473	I2EB	DE0007203481	Classic
DAXsubsector Oil & Gas	I1EC	DE0007203499	I2EC	DE0007203515	Classic
DAXsubsector Steel & Other Metals	I1ED	DE0007203523	I2ED	DE0007203531	Classic
DAXsubsector Chemicals, Commodity	I1CA	DE0007203549	I2CA	DE0007203556	Classic
DAXsubsector Chemicals, Specialty	I1CB	DE0007203564	I2CB	DE0007203572	Classic
DAXsubsector Industrial Gases	I1CC	DE0007203580	I2CC	DE0007203598	Classic
DAXsubsector Clothing & Footwear	I1YA	DE0007203655	I2YA	DE0007203663	Classic
DAXsubsector Consumer Electronics	I1YB	DE0007203671	I2YB	DE0007203689	Classic
DAXsubsector Home Construction & Furnishings	I1YC	DE0007203697	I2YC	DE0007203713	Classic
DAXsubsector Household Appliances & Housewares	I1YD	DE0007203721	I2YD	DE0007203739	Classic
DAXsubsector Leisure	I1YE	DE0007203747	I2YE	DE0007203754	Classic
DAXsubsector Personal Products	I1YF	DE0007203762	I2YF	DE0007203770	Classic
DAXsubsector Building Materials	I1OA	DE0007203614	I2OA	DE0007203622	Classic
DAXsubsector Construction & Engineering	I1OB	DE0007203630	I2OB	DE0007203648	Classic
DAXsubsector Diversified Financial	I1VA	DE0007203788	I2VA	DE0007203796	Classic
DAXsubsector Real Estate	I1VB	DE0007203812	I2VB	DE0007203820	Classic
DAXsubsector Securities Brokers	I1VC	DE0007203838	I2VC	DE0007203846	Classic
DAXsubsector Beverages	I1FA	DE0007203853	I2FA	DE0007203861	Classic
DAXsubsector Food	I1FB	DE0007203879	I2FB	DE0007203887	Classic
DAXsubsector Advanced Industrial Equipment	I1NA	DE0007203895	I2NA	DE0007203911	Tech
DAXsubsector Containers & Packaging	I1NB	DE0007203929	I2NB	DE0007203937	Classic
DAXsubsector Heavy Machinery	I1NC	DE0007203945	I2NC	DE0007203952	Classic
DAXsubsector Industrial Machinery	I1ND	DE0007203960	I2ND	DE0007203978	Classic
DAXsubsector Industrial, Diversified	I1NE	DE0007203986	I2NE	DE0007203994	Classic
DAXsubsector Renewable Energies	I1NF	DE0007237802	I2NF	DE0007237810	Tech

Index	Alpha (Perf.)	ISIN (Perf.)	Alpha (Price)	ISIN (Price)	Sector
DAXsubsector Industrial Products & Services	I1NG	DE0007237828	I2NG	DE0007237836	Classic
DAXsubsector Insurance	I1IA	DE0007237844	I2IA	DE0007237851	Classic
DAXsubsector Re-Insurance	I1IB	DE0007237869	I2IB	DE0007237877	Classic
DAXsubsector Advertising	I1DA	DE0007237885	I2DA	DE0007237893	Classic
DAXsubsector Broadcasting	I1DB	DE0007237901	I2DB	DE0007237919	Classic
DAXsubsector Movies & Entertainment	I1DC	DE0007237927	I2DC	DE0007237935	Classic
DAXsubsector Publishing & Printing	I1DD	DE0007237943	I2DD	DE0007237950	Classic
DAXsubsector Pharmaceuticals	I1PA	DE0007237968	I2PA	DE0007237976	Classic
DAXsubsector Health Care	I1PB	DE0007237984	I2PB	DE0007237992	Classic
DAXsubsector Biotechnology	I1PC	DE0007238008	I2PC	DE0007238016	Tech
DAXsubsector Medical Technology	I1PD	DE0007238024	I2PD	DE0007238032	Tech
DAXsubsector Retail, Catalogue	I1RA	DE0007238040	I2RA	DE0007238057	Classic
DAXsubsector Retail, Food & Drug	I1RB	DE0007238065	I2RB	DE0007238073	Classic
DAXsubsector Retail, Internet	I1RC	DE0007238081	I2RC	DE0007238099	Classic
DAXsubsector Retail, Multiline	I1RD	DE0007238107	I2RD	DE0007238115	Classic
DAXsubsector Retail, Specialty	I1RE	DE0007238123	I2RE	DE0007238131	Classic
DAXsubsector Internet	I1SA	DE0007238149	I2SA	DE0007238156	Tech
DAXsubsector IT-Services	I1SB	DE0007238164	I2SB	DE0007238172	Tech
DAXsubsector Software	I1SC	DE0007238180	I2SC	DE0007238198	Tech
DAXsubsector Fixed-Line Telecommunication	I1TA	DE0007238263	I2TA	DE0007238271	Tech
DAXsubsector Wireless Telecommunication	I1TB	DE0007238289	I2TB	DE0007238297	Tech
DAXsubsector Telecommunication Services	I1TC	DE0007238305	I2TC	DE0007238313	Tech
DAXsubsector Communications Technology	I1HA	DE0007238206	I2HA	DE0007238214	Tech
DAXsubsector Electronic Components & Hardware	I1HB	DE0007238222	I2HB	DE0007238230	Tech
DAXsubsector Semiconductors	I1HC	DE0007238248	I2HC	DE0007238255	Tech
DAXsubsector Airlines	I1LA	DE0007238321	I2LA	DE0007238339	Classic
DAXsubsector Logistics	I1LB	DE0007238347	I2LB	DE0007238354	Classic
DAXsubsector Transportation Services	I1LC	DE0007238362	I2LC	DE0007238370	Classic
DAXsubsector Electricity	I1UA	DE0007238388	I2UA	DE0007238396	Classic
DAXsubsector Water	I1UB	DE0007238404	I2UB	DE0007238412	Classic
DAXsubsector Oil & Gas (Distribution)	I1UC	DE0007238420	I2UC	DE0007238438	Classic
DAXsubsector Multi-Utilities	I1UD	DE0007238446	I2UD	DE0007238453	Classic
DAXsubsector Private Equity & Venture Capital	P4E7	DE000A0MER13	P4E8	DE000A0MER21	Classic

## DAXsector All Indices

DAXsector All Automobile	3BV6	DE000A0S3FB5	3BV7	DE000A0S3FC3	Classic
DAXsector All Banks	3BV8	DE000A0S3FD1	3BV9	DE000A0S3FE9	Classic
DAXsector All Basic Resources	3BWA	DE000A0S3FF6	3BWB	DE000A0S3FG4	Classic
DAXsector All Chemicals	3BWC	DE000A0S3FH2	3BWD	DE000A0S3FJ8	Classic
DAXsector All Construction	4N7V	DE000A0SM7M9	4N50	DE000A0SM403	Classic
DAXsector All Consumer	4N7W	DE000A0SM7N7	4N51	DE000A0SM411	Classic
DAXsector All Financial Services	4N7X	DE000A0SM7P2	4N52	DE000A0SM429	Classic
DAXsector All Food & Beverages	4N7Y	DE000A0SM7Q0	4N53	DE000A0SM437	Classic
DAXsector All Industrial	4N7Z	DE000A0SM7R8	4N54	DE000A0SM445	Tech & Classic
DAXsector All Insurance	4N80	DE000A0SM7S6	4N55	DE000A0SM452	Classic
DAXsector All Media	4N81	DE000A0SM7T4	4N56	DE000A0SM460	Classic
DAXsector All Pharma & Healthcare	4N82	DE000A0SM7U2	4N57	DE000A0SM478	Tech & Classic
DAXsector All Retail	4N83	DE000A0SM7V0	4N58	DE000A0SM486	Classic

Index	Alpha (Perf.)	ISIN (Perf.)	Alpha (Price)	ISIN (Price)	Sector
DAXsector All Software	4N84	DE000A0SM7W8	4N59	DE000A0SM494	Tech
DAXsector All Technology	4N85	DE000A0SM7X6	4N5A	DE000A0SM4Z8	Tech
DAXsector All Telecommunication	4N86	DE000A0SM7Y4	4N5B	DE000A0SM502	Tech
DAXsector All Transportation & Logistics	4N87	DE000A0SM7Z1	4N5C	DE000A0SM510	Classic
DAXsector All Utilities	4N88	DE000A0SM809	4N5D	DE000A0SM528	Classic

## DAXsubsector All Indizes

DAXsubsector All Advanced Industrial Equipment	4N89	DE000A0SM817	4N5E	DE000A0SM536	Tech
DAXsubsector All Advertising	4N8A	DE000A0SM825	4N5F	DE000A0SM544	Classic
DAXsubsector All Airlines	4N8B	DE000A0SM833	4N5G	DE000A0SM551	Classic
DAXsubsector All Auto Parts & Equipment	4N8C	DE000A0SM841	4N5H	DE000A0SM569	Classic
DAXsubsector All Automobile Manufacturers	4N8D	DE000A0SM858	4N8E	DE000A0SM866	Classic
DAXsubsector All Beverages	4N5I	DE000A0SM577	4N5J	DE000A0SM585	Classic
DAXsubsector All Biotechnology	4N8F	DE000A0SM874	4N5K	DE000A0SM593	Tech
DAXsubsector All Broadcasting	4N8G	DE000A0SM882	4N5L	DE000A0SM5A8	Classic
DAXsubsector All Building Materials	4N8H	DE000A0SM890	4N5M	DE000A0SM5B6	Classic
DAXsubsector All Chemicals, Commodity	4N8I	DE000A0SM8A2	4N5N	DE000A0SM5C4	Classic
DAXsubsector All Chemicals, Specialty	4N8J	DE000A0SM8B0	4N5P	DE000A0SM5D2	Classic
DAXsubsector All Clothing & Footwear	4N8K	DE000A0SM8C8	4N5Q	DE000A0SM5E0	Classic
DAXsubsector All Communications Technology	4N8L	DE000A0SM8D6	4N5R	DE000A0SM5F7	Tech
DAXsubsector All Construction & Engineering	4N8M	DE000A0SM8E4	4N5S	DE000A0SM5G5	Classic
DAXsubsector All Consumer Electronics	4N8N	DE000A0SM8F1	4N5T	DE000A0SM5H3	Classic
DAXsubsector All Containers & Packaging	4N8P	DE000A0SM8G9	4N5U	DE000A0SM5J9	Classic
DAXsubsector All Credit Banks	4N8Q	DE000A0SM8H7	4N5V	DE000A0SM5K7	Classic
DAXsubsector All Diversified Financial	4N8R	DE000A0SM8J3	4N5W	DE000A0SM5L5	Classic
DAXsubsector All Electricity	4N8S	DE000A0SM8K1	4N5X	DE000A0SM5M3	Classic
DAXsubsector All Electronic Components & Hardware	4N8T	DE000A0SM8L9	4N5Y	DE000A0SM5N1	Tech
DAXsubsector All Fixed-Line Telecommunication	4N8U	DE000A0SM8M7	4N5Z	DE000A0SM5P6	Tech
DAXsubsector All Food	4N8V	DE000A0SM8N5	4N60	DE000A0SM5Q4	Classic
DAXsubsector All Forest & Paper Products	4N8W	DE000A0SM8P0	4N61	DE000A0SM5R2	Classic
DAXsubsector All Health Care	4N8X	DE000A0SM8Q8	4N62	DE000A0SM5S0	Classic
DAXsubsector All Heavy Machinery	4N8Y	DE000A0SM8R6	4N63	DE000A0SM5T8	Classic
DAXsubsector All Home Construction & Furnishings	4N8Z	DE000A0SM8S4	4N64	DE000A0SM5U6	Classic
DAXsubsector All Household Appliances & Housewares	4N90	DE000A0SM8T2	4N65	DE000A0SM5V4	Classic
DAXsubsector All Industrial Gases	4N91	DE000A0SM8U0	4N66	DE000A0SM5W2	Classic
DAXsubsector All Industrial Machinery	4N92	DE000A0SM8V8	4N67	DE000A0SM5X0	Classic
DAXsubsector All Industrial Products & Services	4N93	DE000A0SM8W6	4N68	DE000A0SM5Y8	Classic
DAXsubsector All Industrial, Diversified	4N94	DE000A0SM8X4	4N69	DE000A0SM5Z5	Classic
DAXsubsector All Insurance	4N95	DE000A0SM8Y2	4N6A	DE000A0SM601	Classic
DAXsubsector All Internet	4N6B	DE000A0SM619	4N96	DE000A0SM8Z9	Tech
DAXsubsector All IT-Services	4N97	DE000A0SM908	4N6C	DE000A0SM627	Tech
DAXsubsector All Leisure	4N98	DE000A0SM916	4N6D	DE000A0SM635	Classic
DAXsubsector All Logistics	4N99	DE000A0SM924	4N6E	DE000A0SM643	Classic

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Index	Alpha (Perf.)	ISIN (Perf.)	Alpha (Price)	ISIN (Price)	Sector
DAXsubsector All Medical Technology	4N9A	DE000A0SM932	4N6F	DE000A0SM650	Tech
DAXsubsector All Mining	4N9B	DE000A0SM940	4N6G	DE000A0SM668	Classic
DAXsubsector All Mortgage Banks	4N9C	DE000A0SM957	4N6H	DE000A0SM676	Classic
DAXsubsector All Movies & Entertainment	4N9D	DE000A0SM965	4N6I	DE000A0SM684	Classic
DAXsubsector All Multi-Utilites	4N9E	DE000A0SM973	4N6J	DE000A0SM692	Classic
DAXsubsector All Oil & Gas	4N9G	DE000A0SM999	4N6L	DE000A0SM6B4	Classic
DAXsubsector All Oil & Gas (Distribution)	4N9H	DE000A0SM9A0	4N6M	DE000A0SM6C2	Classic
DAXsubsector All Personal Products	4N9I	DE000A0SM9B8	4N6N	DE000A0SM6D0	Classic
DAXsubsector All Pharmaceuticals	4N9J	DE000A0SM9C6	4N6P	DE000A0SM6E8	Classic
DAXsubsector All Private Equity & Venture Capital	4N9K	DE000A0SM9D4	4N6Q	DE000A0SM6F5	Classic
DAXsubsector All Publishing & Printing	4N9L	DE000A0SM9E2	4N6R	DE000A0SM6G3	Classic
DAXsubsector All Real Estate	4N9M	DE000A0SM9F9	4N6S	DE000A0SM6H1	Classic
DAXsubsector All Re-Insurance	4N9N	DE000A0SM9G7	4N6T	DE000A0SM6J7	Classic
DAXsubsector All Renewable Energies	4N9Q	DE000A0SM9J1	4N6V	DE000A0SM6L3	Tech
DAXsubsector All Retail, Catalogue	4N9S	DE000A0SM9L7	4N6X	DE000A0SM6N9	Classic
DAXsubsector All Retail, Food & Drug	4N9T	DE000A0SM9M5	4N6Y	DE000A0SM6P4	Classic
DAXsubsector All Retail, Internet	4N9U	DE000A0SM9N3	4N6Z	DE000A0SM6Q2	Classic
DAXsubsector All Retail, Multiline	4N9V	DE000A0SM9P8	4N70	DE000A0SM6R0	Classic
DAXsubsector All Retail, Specialty	4N9W	DE000A0SM9Q6	4N71	DE000A0SM6S8	Classic
DAXsubsector All Securities Brokers	4N9X	DE000A0SM9R4	4N72	DE000A0SM6T6	Classic
DAXsubsector All Semiconductors	4N9Y	DE000A0SM9S2	4N73	DE000A0SM6U4	Tech
DAXsubsector All Software	4N9Z	DE000A0SM9T0	4N74	DE000A0SM6V2	Tech
DAXsubsector All Steel & Other Metals	4NAA	DE000A0SM9U8	4N75	DE000A0SM6W0	Classic
DAXsubsector All Telecommunication Services	4NAB	DE000A0SM9V6	4N76	DE000A0SM6X8	Tech
DAXsubsector All Transportation Services	4NAC	DE000A0SM9W4	4N77	DE000A0SM6Y6	Classic
DAXsubsector All Water	4NAD	DE000A0SM9X2	4N78	DE000A0SM6Z3	Classic
DAXsubsector All Wireless Telecommunication	4NAE	DE000A0SM9Y0	4N79	DE000A0SM700	Tech

### 4.3 Calendar of Publications

Event	Point in Time
Publication Equity Index Rankings	3rd trading day of the month before 9a.m.
Meeting Working Committee for Equity Indices	3rd trading day in March, June, September, December
Publication New Index Composition	3rd trading day in March, June, September, December after 10 p.m.
Publication Business Forecast	One trading day (before 9 a.m.) before chaining date in March, June, September, December

### 4.4 Your Direct Line to Deutsche Börse

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