Deutsche Börse AG
Consolidated financial statements and notes
as at 31 December 2016

Consolidated income statement

for the period 1 January to 31 December 2016

	Note	2016 €m	(restated) 2015[1] €m
Sales revenue	4	2,557.3	2,419.9
Net interest income from banking business	4	84.0	50.6
Other operating income	4	32.6	23.6
Total revenue		**2,673.9**	**2,494.1**
Volume-related costs	4	–285.2	–273.8
Net revenue (total revenue less volume-related costs)		**2,388.7**	**2,220.3**
Staff costs	5	–585.7	–599.7
Depreciation, amortisation and impairment losses	11, 12	–131.0	–119.0
Other operating expenses	6	–600.7	–564.5
Operating costs		**–1,317.4**	**–1,283.2**
Result from equity investments	8	36.9	–1.5
Earnings before interest and tax (EBIT)		**1,108.2**	**935.6**
Financial income	9	4.6	6.1
Financial expense	9	–79.2	–63.6
Earnings before tax (EBT)		**1,033.6**	**878.1**
Other tax		–1.5	–1.6
Income tax expense	10	–284.5	–227.5
Net profit for the period from continuing operations		**747.6**	**649.0**
Net profit for the period from discontinued operations	2	**550.6**	**52.2**
Net profit for the period		**1,298.2**	**701.2**
Net profit for the period attributable to Deutsche Börse AG shareholders		1,272.7	665.5
Net profit for the period attributable to non-controlling interests		25.5	35.7
Earnings per share (basic) (€)	34	**6.81**	**3.60**
from continuing operations		3.87	3.31
from discontinued operations		2.94	0.29
Earnings per share (diluted) (€)	34	**6.81**	**3.60**
from continuing operations		3.87	3.31
from discontinued operations		2.94	0.29

1) See note 2.

Consolidated statement of comprehensive income

for the period 1 January to 31 December 2016

	Note	2016 €m	(restated) 2015[1)] €m
Net profit for the period reported in consolidated income statement		**1,298.2**	**701.2**
Items that will not be reclassified to profit or loss:			
Changes from defined benefit obligations		–27.3	3.2
Deferred taxes	10, 20	7.8	–0.1
		–19.5	**3.1**
Items that may be reclassified subsequently to profit or loss:			
Exchange rate differences from continuing operations	20	–3.8	5.2
Other comprehensive income from investments using the equity method		–0.6	0.6
Exchange rate differences from discontinued operations	20	–200.7	124.2
Remeasurement of cash flow hedges		2.7	2.8
Remeasurement of other financial instruments		105.7	8.6
Deferred taxes from continuing operations	10, 20	–40.9	–3.4
Deferred taxes from discontinued operations	10, 20	147.2	–64.9
		9.6	**73.1**
Other comprehensive income after tax		**–9.9**	**76.2**
Total comprehensive income		**1,288.3**	**777.4**
thereof Deutsche Börse AG shareholders		1,263.4	741.3
thereof non-controlling interests		24.9	36.1
Total comprehensive income attributable to the shareholders of Deutsche Börse AG			
thereof continuing operations		766.3	629.8
thereof discontinuing operations		497.1	111.5

1) See note 2

Consolidated balance sheet

as at 31 December 2016

Assets

	Note	31 Dec 2016 €m	31 Dec 2015 €m
NON-CURRENT ASSETS			
Intangible assets	11		
Software		203.8	225.4
Goodwill		2,721.1	2,898.8
Payments on account and assets under development		188.9	152.5
Other intangible assets		859.9	1,356.3
		3,973.7	**4,633.0**
Property, plant and equipment	12		
Fixtures and fittings		35.9	40.3
Computer hardware, operating and office equipment		75.4	68.7
Payments on account and construction in progress		2.2	0.7
		113.5	**109.7**
Financial assets	13		
Investments in associates and joint ventures		34.3	38.5
Other equity investments		255.4	219.4
Receivables and securities from banking business		1,604.8	2,018.6
Other financial instruments		26.0	32.3
Other loans[1]		0.4	0.2
		1,920.9	**2,309.0**
Financial instruments held by central counterparties	15	5,856.6	7,175.2
Other non-current assets		13.2	11.7
Deferred tax assets	10	62.5	148.3
Total non-current assets		**11,940.4**	**14,386.9**
CURRENT ASSETS			
Receivables and other current assets			
Financial instruments held by central counterparties	15	107,909.6	126,289.6
Receivables and securities from banking business	16	13,465.5	10,142.9
Trade receivables	17	669.8	554.1
Receivables from related parties		2.0	4.7
Income tax assets[2]		107.6	94.2
Other current assets	18	514.2	1,022.3
		122,668.7	**138,107.8**
Restricted bank balances	19	27,777.6	26,870.0
Other cash and bank balances		1,458.1	711.1
Total current assets		**151,904.4**	**165,688.9**
Total assets		**163,844.8**	**180,075.8**

Equity and liabilities

	Note	31 Dec 2016 €m	31 Dec 2015 €m
EQUITY	20		
Subscribed capital		193.0	193.0
Share premium		1,327.8	1,326.0
Treasury shares		–311.4	–315.5
Revaluation surplus		41.5	–5.3
Accumulated profit		3,231.4	2,357.9
Shareholders' equity		**4,482.3**	**3,556.1**
Non-controlling interests		142.2	139.0
Total equity		**4,624.5**	**3,695.1**
NON-CURRENT LIABILITIES			
Provisions for pensions and other employee benefits	22	167.9	140.7
Other non-current provisions	23, 24	117.0	131.7
Deferred tax liabilities	10	235.7	581.3
Interest-bearing liabilities	25	2,284.7	2,546.5
Financial instruments held by central counterparties	15	5,856.6	7,175.2
Other non-current liabilities		7.9	10.0
Total non-current liabilities		**8,669.8**	**10,585.4**
CURRENT LIABILITIES			
Tax provisions[3]	26	274.3	316.7
Other current provisions	23, 27	178.3	174.5
Financial instruments held by central counterparties	15	107,479.4	126,006.5
Liabilities from banking business	28	13,840.3	11,681.4
Other bank loans and overdrafts		0.1	42.2
Trade payables		471.2	372.8
Liabilities to related parties		3.6	1.8
Cash deposits by market participants	29	27,777.6	26,869.0
Other current liabilities	30	525.7	330.4
Total current liabilities		**150,550.5**	**165,795.3**
Total liabilities		**159,220.3**	**176,380.7**
Total equity and liabilities		**163,844.8**	**180,075.8**

1) Thereof €0.4 million (31 December 2015: €0.1 million) receivable from related parties
2) Thereof €2.3 million (31 December 2015: €4.6 million) with a remaining maturity of more than one year from corporation tax credits in accordance with section 37 (5) of the Körperschaftsteuergesetz (KStG, the German Corporation Tax Act)
3) Thereof income tax expense: €231.9 million (2015: €290.5 million)

Consolidated cash flow statement

for the period 1 January to 31 December 2016

	Note	2016 €m	2015 €m
Net profit for the period		1,298.2	701.2
Depreciation, amortisation and impairment losses	11, 12	135.3	143.7
(Decrease)/increase in non-current provisions		–14.7	18.2
Deferred tax (income)/expense	10	–2.9	3.2
Other non-cash (income) / expense		–52.3	7.0
Changes in working capital, net of non-cash items:		56.0	–79.9
Increase in receivables and other assets		–223.4	–66.7
Increase / (decrease) in current liabilities		276.9	–7.7
Increase / (decrease) in non-current liabilities		2.5	–5.5
Net (gain) / loss on disposal of non-current assets		–563.0	3.2
Cash flows from operating activities excluding CCP positions		856.6	796.6
Changes in liabilities from CCP positions		**299.5**	**–371.9**
Changes in receivables from CCP positions		465.3	–414.6
Cash flows from operating activities	33	1,621.4	10.1
Payments to acquire intangible assets		–115.1	–112.2
Payments to acquire property, plant and equipment		–49.8	–42.3
Payments to acquire non-current financial instruments		–178.9	–815.5
Payments to acquire investments in associates and joint ventures		–5.0	–14.1
Payments to acquire subsidiaries, net of cash acquired		–3.9	–641.5
Effects of the disposal of (shares in) subsidiaries, net of cash disposed		917.4	–5.3
Proceeds from the disposal of shares in associates and joint ventures		0.3	0
Net increase in current receivables and securities from banking business with an original term greater than three months		–136.5	–169.7
Proceeds from disposals of available-for-sale non-current financial instruments		149.9	208.3
Proceeds from disposals of other non-current assets		0.1	0
Cash flows from investing activities	**33**	**578.5**	**–1,592.3**
Proceeds from sale of treasury shares		3.8	202.8
Payments to non-controlling interests		–15.9	–717.5
Proceeds from non-controlling interests		0	3.6
Repayment of long-term financing		–321.6	–150.5
Proceeds from long-term financing		0	1,089.5
Repayment of short-term financing		–495.0	–2,065.0
Proceeds from short-term financing		400.0	2,100.0
Dividends paid		–420.1	–386.8
Cash flows from financing activities	**33**	**–848.8**	**76.1**
Net change in cash and cash equivalents		**1,351.1**	**–1,506.1**

	Note	2016 €m	2015 €m
Net change in cash and cash equivalents (brought forward)		**1,351.1**	**–1,506.1**
Effect of exchange rate differences		81.4	–4.8
Cash and cash equivalents at beginning of period		–1,579.4	–68.5
Cash and cash equivalents at end of period	33	**–146.9**	**–1,579.4**
Additional information on cash inflows and outflows contained in cash flows from operating activities:			
Interest-similar income received		252.0	205.5
Dividends received		7.5	7.3
Interest paid		–257.5	–192.8
Income tax paid		–277.8	–207.7

Consolidated statement of changes in equity

for the period 1 January to 31 December 2016

	Note	2016 €m	2015 €m	thereof included in total comprehensive income 2016 €m	thereof included in total comprehensive income 2015 €m
Subscribed capital					
Balance as at 1 January		193.0	193.0		
Balance as at 31 December		**193.0**	**193.0**		
Share premium					
Balance as at 1 January		1,326.0	1,249.0		
Sale of treasury shares		1.8	77.0		
Balance as at 31 December		**1,327.8**	**1,326.0**		
Treasury shares					
Balance as at 1 January		–315.5	–443.0		
Placement of treasury shares		0	124.4		
Sales under the Group Share Plan		4.1	3.1		
Balance as at 31 December		**–311.4**	**–315.5**		
Revaluation surplus	20				
Balance as at 1 January		–5.3	–15.9		
Changes from defined benefit obligations	22	–27.3	3.2	–27.3	3.2
Remeasurement of other financial instruments		105.7	8.6	105.7	8.6
Remeasurement of cash flow hedges		2.7	2.8	2.7	2.8
Deferred taxes	10	–34.3	–4.0	–34.3	–4.0
Balance as at 31 December		**41.5**	**–5.3**		
Accumulated profit	20				
Balance as at 1 January		2,357.9	2,446.6		
Dividends paid	21	–420.1	–386.8	0	0
Acquisition of the interest of non-controlling shareholders in STOXX Ltd.		0	–428.0	0	0
Net profit for the period attributable to Deutsche Börse AG shareholders		1,272.7	665.5	1,272.7	665.5
Exchange rate differences and other adjustments		–127.5	125.0	–204.5	129.6
Deferred taxes	10	148.4	–64.4	148.4	–64.4
Balance as at 31 December		**3,231.4**	**2,357.9**		
Shareholders' equity as at 31 December		**4,482.3**	**3,556.1**	**1,263.4**	**741.3**

	Note	2016 €m	2015 €m	thereof included in total comprehensive income 2016 €m	2015 €m
Shareholders' equity (brought forward)		**4,482.3**	**3,556.1**	**1,263.4**	**741.3**
Non-controlling interests					
Balance as at 1 January		139.0	322.4		
Acquisition of the interest of non-controlling shareholders in STOXX Ltd.		0	–225.8	0	0
Changes due to capital increases/decreases		–21.6	6.3	0	0
Non-controlling interests in net income of subsidiaries for the period		25.5	35.7	25.5	35.7
Exchange rate differences and other adjustments		–0.7	0.4	–0.6	0.4
Total non-controlling interests as at 31 December		**142.2**	**139.0**	**24.9**	**36.1**
Total equity as at 31 December		**4,624.5**	**3,695.1**	**1,288.3**	**777.4**

Notes to the consolidated financial statements
Basis of preparation

1. General principles

Company information

Deutsche Börse AG ("the company") is incorporated as a German public limited company ("Kapitalgesellschaft") and is domiciled in Germany. The company's registered office is in Frankfurt/Main. Deutsche Börse AG is the parent company of Deutsche Börse Group. Deutsche Börse AG and its subsidiaries operate cash and derivatives markets. Its business areas range from pre-IPO and growth financing services, the admission of securities to listing, through trading, clearing and settlement, down to custody of securities. Furthermore, IT services are provided and market data distributed. For details regarding internal organisation and reporting see note 35.

Basis of reporting

The 2016 consolidated financial statements have been prepared in compliance with International Financial Reporting Standards (IFRS) and the related interpretations issued by the International Financial Reporting Standards Interpretations Committee (IFRIC), as adopted by the European Union in accordance with Regulation No. 1606/2002 of the European Parliament and of the Council on the application of international accounting standards.

The disclosures required in accordance with Handelsgesetzbuch (HGB, German Commercial Code) section 315a (1) have been presented in the notes to the consolidated financial statements and the remuneration report of the combined management report. The consolidated financial statements are also based on the interpretations issued by the Rechnungslegungs Interpretations Committee (RIC, Accounting Interpretations Committee) of the Deutsches Rechnungslegungs Standards Committee e.V. (Accounting Standards Committee of Germany), to the extent that these do not contradict the standards and interpretations issued by the IFRIC or the IASB.

New accounting standards – implemented in the year under review

The following standards and interpretations issued by the IASB and adopted by the European Commission were applied to Deutsche Börse Group for the first time in the 2016 reporting period:

Amendment to IFRS 11 "Joint Arrangements – Acquisitions of Interests in Joint Operations" (May 2014)
The amendment clarifies that acquisitions of interests or additional interests in a joint operation that constitutes a business within the meaning of IFRS 3 must be accounted for in accordance with the principles of business combinations accounting in IFRS 3 and other applicable IFRS, with the exception of those principles that conflict with the guidance in IFRS 11. The amendment must be applied for financial years beginning on or after 1 January 2016. The amendment has been adopted by the EU on 24 November 2015.

Amendments to IAS 16 "Property, Plant and Equipment" and IAS 38 "Intangible Assets – Clarification of Acceptable Methods of Depreciation and Amortisation" (May 2014)
The amendments clarify which methods are appropriate for depreciating property, plant and equipment and for amortising intangible assets. In particular, they clarify that revenue-based depreciation of property, plant and equipment is not appropriate at all, and that revenue-based amortisation of intangible assets is only permitted in defined exceptional circumstances. The amendments must be applied for financial years beginning on or after 1 January 2016. The amendments have been adopted by the EU on 2 December 2015.

Amendments resulting from the "Annual Improvements Project 2012–2014" (September 2014)
Amendments affecting the standards IFRS 5, IFRS 7, IAS 19 and IAS 34 are planned. The amendments must be applied for financial years beginning on or after 1 January 2016. The amendments have been adopted by the EU on 15 December 2015.

Amendment to IAS 1 "Presentation of Financial Statements – Disclosure Initiative" (December 2014)
The amendment to the standard IAS 1 is aimed at improving financial reporting disclosures in the notes. Among other things, they emphasise more clearly the concept of materiality, define new requirements for the calculation of subtotals, allow for greater flexibility in the order in which disclosures in the notes are presented, introduce clearer presentation guidance for accounting policies and add requirements for presenting an entity's share of other comprehensive income of associates and joint ventures in the statement of comprehensive income. The amendment must be applied for financial years beginning on or after 1 January 2016. The amendment has been adopted by the EU on 18 December 2015.

New accounting standards – not yet implemented

The following standards and interpretations, which are relevant to Deutsche Börse Group and which Deutsche Börse Group did not adopt in 2016 prior to the effective date, have been published by the IASB prior to the publication of this financial report and partially adopted by the European Commission.

Amendments to IFRS 2 "Classification and Measurement of Share-Based Payments" (June 2016)
The amendments affect the accounting for cash-settled share-based payment transactions. The most important amendment to IFRS 2 is the clarification on how to determine the fair value of liabilities for share-based payments. The amendments must be applied for financial years beginning on or after 1 January 2018. The amendments have not yet been adopted by the EU.

Amendments to IAS 7 "Statement of Cash Flows" Disclosure Initiative (January 2016)
The amendments follow the objective that entities shall provide disclosures allowing users of financial statements to evaluate changes in liabilities arising from financing activities. The amendments must be applied for financial years beginning on or after 1 January 2017. The amendments have not yet been adopted by the EU.

IFRS 9 "Financial Instruments" (July 2014)
IFRS 9 introduces new requirements for the recognition and measurement of financial instruments. The new standard was adopted by the EU on 22 November 2016, and must be applied for financial years beginning on or after 1 January 2018. The new requirements mainly apply to the classification and measurement of financial instruments, and introduce a new expected loss impairment model for financial assets as well as a new set of rules for hedge accounting. Deutsche Börse Group initiated its IFRS 9 implementation project in 2015. In line with the structure of the new standard, Deutsche Börse Group's project consists of three phases: Classification and Measurement (phase I), Impairment (phase II), and Hedge Accounting (phase III).

Our phase I analysis came to the conclusion that the majority of debt instruments are held within a business model whose objective is to hold debt instruments in order to collect contractual cash flows. As a consequence, the large majority of debt instruments currently held in the available-for-sale category will be measured at amortised cost going forward. Furthermore, we will no longer recognise debt instruments directly in equity at their fair value. Equity instruments in the available-for-sale category, so far recognised at their fair value directly in equity, will generally be classified as at fair value through profit or loss going forward. However, recognition at fair value directly in equity applied so far remains an option, which may be applied on a one-time basis to individual financial instruments. In the future, equity instruments currently recognised at historical cost will in any case be measured at fair value. Again, Deutsche Börse Group may decide (for individual instruments and on a one-time basis) to recognise fair value developments in other comprehensive income, or through profit or loss. Phase II addresses the revision of current impairment processes. The change from the incurred loss model to the expected loss model requires amendments to the Group-internal risk analysis and the calculation of expected losses. At the time this report was produced, Deutsche Börse Group was carrying out an analysis of the consequences on financial reporting. However, we expect only minor implications from phase III, given that Deutsche Börse Group's reporting on hedging relationships is very limited.

The amendments introduced with IFRS 9 require adjustments to our IT systems. The implementation requirements identified so far result mainly from project phase I, and particularly affect the SAP-CFM subledger.

Amendments to IAS 12 "Recognition of Deferred Tax Assets for Unrealised Losses" (January 2016)

Given the current diversity in accounting practice, the amendments to IAS 12 particularly aim to clarify the recognition of deferred tax assets for unrealised losses on assets measured at fair value. The amendments must be applied for financial years beginning on or after 1 January 2017. The amendments have not yet been adopted by the EU.

Amendments to IFRS 10 and IAS 28 "Sales or Contributions of Assets Between an Investor and its Associate/Joint Venture" (September 2014)

The amendments clarify that the extent to which gain or loss is recognised for transactions with an associate or joint venture depends on whether the assets sold or contributed constitute a business operation. The application date has been postponed indefinitely.

IFRS 15 "Revenue from Contracts with Customers" (May 2014)

IFRS 15 specifies the recognition of revenue from contracts with customers. In accordance with IFRS 15, revenue has to be recognised when the customer obtains control over the contractual goods and services, and can obtain benefits from these goods and services. Revenue shall be recognised in an amount that reflects the consideration to which the company expects to be entitled. The new IFRS 15 regulations supersede the currently applicable regulations set forth in IAS 11 and IAS 18. The standard has been adopted by the EU on 22 September 2016 and must be applied for financial years beginning on or after 1 January 2018; earlier application is permitted.

Deutsche Börse Group initiated its IFRS 15 implementation project in 2015. This project comprises three phases: phase I focuses on a detailed analysis of revenue from contracts with customers. Phase II assesses the implications of IFRS 15 regarding potential adjustment requirements to existing accounting methods as well as IT processes and systems. Phase III will be the implementation of the adjustment requirements identified during phase II. Phases I and II are currently work in progress, and will be continued throughout 2017. Phase III is scheduled to start in financial year 2017. Based on the current findings of the IFRS 15 analysis, Deutsche Börse Group expects adjustments as to the time at which revenue shall be recognised. Furthermore, we expect additional line items to be added to the consolidated balance sheet to recognise contract assets and liabilities.

Deutsche Börse Group did not exercise the early application option for IFRS 15, but will use the modified retrospective approach and disclose the cumulative effect from the first-time application of IFRS 15 for the financial year beginning on 1 January 2018.

IFRS 16 “Leases” (January 2016)
IFRS 16 introduced new rules for the recognition of leases. The new standard sets out the principles for the recognition, measurement, presentation and disclosure of all long-term leases on the lessee’s statement of financial position, whereby the right of use is recognised as an asset, and the payment obligation in the form of a financial liability. The standard must be applied for financial years beginning on or after 1 January 2019; earlier application is permitted only if that entity is also applying IFRS 15 at the same time. The standard has not yet been adopted by the EU.

Deutsche Börse Group’s internal project for the assessment of implications from IFRS 16 was initiated in the fourth quarter of 2016. The project has not yet delivered any detailed findings. However, we expect the right-of-use approach to have a significant effect on the balance sheet structure and the respective key figures.

Amendments to IAS 40 “Transfers of Investment Property” (December 2016)
The amendments clarify the conditions for transfers to, or from, investment property classification. More specifically, the question was whether a property under construction or development that was previously classified as inventory could be transferred to investment property when there was an evident change in use. The amendments must be applied for financial years beginning on or after 1 January 2018; earlier application is permitted. The amendments have not yet been adopted by the EU.

Amendments resulting from the “Annual Improvements Project 2014–2016” (December 2016)
Amendments affecting the standards IFRS 1, IFRS 12 and IAS 28. Amendments to IFRS 1 and IAS 28 must be applied for financial years beginning on or after 1 January 2018; amendments to IFRS 12 must be applied for financial years beginning on or after 1 January 2017. The amendments have not yet been adopted by the EU.

IFRIC 22 “Foreign Currency Transactions and Advance Consideration” (December 2016)
This interpretation aims to clarify the accounting for transactions that include the receipt or payment of advance consideration in a foreign currency. IFRIC 22 must be applied for financial years beginning on or after 1 January 2018; earlier application is permitted. This interpretation has not yet been adopted by the EU.

2. Basis of consolidation

Deutsche Börse AG's equity interests in subsidiaries, associates and joint ventures as at 31 December 2016 included in the consolidated financial statements are presented in the following tables. Unless otherwise stated, the financial information in these tables is presented in accordance with the generally accepted accounting principles in the companies' countries of domicile.

Fully consolidated subsidiaries (part 1)

Company	Domicile	Equity interest as at 31 Dec 2016 direct/(indirect) %
Assam SellerCo, Inc.[2]	New York, USA	100.00
Assam SellerCo Service, Inc.[3]	New York, USA	(100.00)
MNI Financial and Economic Information (Beijing) Co. Ltd.	Beijing, China	(100.00)
Need to Know News, LLC	Chicago, USA	(100.00)
Börse Frankfurt Zertifikate AG	Frankfurt/Main, Germany	100.00
Börse Frankfurt Zertifikate Holding S.A. in liquidation	Luxembourg, Luxembourg	100.00
Clearstream Holding AG	Frankfurt/Main, Germany	100.00
Clearstream International S.A.	Luxembourg, Luxembourg	(100.00)
Clearstream Banking S.A.	Luxembourg, Luxembourg	(100.00)
Clearstream Banking Japan, Ltd.	Tokyo, Japan	(100.00)
REGIS-TR S.A.	Luxembourg, Luxembourg	(50.00)
Clearstream Banking AG	Frankfurt/Main, Germany	(100.00)
Clearstream Global Securities Services Limited	Cork, Ireland	(100.00)
Clearstream Operations Prague s.r.o.	Prague, Czech Republic	(100.00)
Clearstream Services S.A.	Luxembourg, Luxembourg	(100.00)
Deutsche Boerse Asia Holding Pte. Ltd.	Singapore, Singapore	100.00
Eurex Clearing Asia Pte. Ltd.	Singapore, Singapore	(100.00)
Eurex Exchange Asia Pte. Ltd.	Singapore, Singapore	(100.00)
DB1 Ventures GmbH	Frankfurt/Main, Germany	100.00
Deutsche Boerse Market Data+Services Singapore Pte. Ltd.	Singapore, Singapore	100.00
Deutsche Boerse Systems Inc.	Chicago, USA	100.00
Deutsche Börse Photography Foundation gGmbH	Frankfurt/Main, Germany	100.00
Deutsche Börse Services s.r.o.	Prague, Czech Republic	100.00
Eurex Frankfurt AG	Frankfurt/Main, Germany	100.00
Eurex Clearing AG	Frankfurt/Main, Germany	(100.00)
Eurex Clearing Security Trustee GmbH	Frankfurt/Main, Germany	(100.00)
Eurex Bonds GmbH	Frankfurt/Main, Germany	(79.44)
Eurex Repo GmbH	Frankfurt/Main, Germany	(100.00)

1) Includes capital reserves and retained earnings, accumulated gains or losses and net profit or loss for the year and, if necessary, further components according to the respective local GAAP
2) Until 27 July 2016: Market News International Inc.
3) Assam SellerCo Service, Inc. is part of the Assam SellerCo, Inc. subgroup.
4) Before profit transfer or loss absorption
5) Preliminary figures

	Currency	Ordinary share capital thousand	Equity[1] thousand	Total assets thousand	Sales revenue 2016 thousand	Net profit/loss 2016 thousand	Initially consolidated
	US$	9,911	23,049	24,262	13,877	149	2009
	US$	n.a.	n.a.	n.a.	n.a.	n.a.	2009
	CNY	1,301	1,745	1,626	3,549	162	2011
	US$	0	2,098	2,098	0	0	2009
	€	140	13,168	17,182	19,004	3,972	2013
	€	50	171	265	0	–93	2013
	€	101,000	2,285,314	2,454,949	33	167,173[4]	2007
	€	25,000	1,103,930	1,180,353	66,915	188,005	2002
	€	92,000[5]	1,193,498[5]	14,686,261[5]	496,172[5] [6]	172,084[5]	2002
	JPY	49,000[5]	169,849[5]	205,909[5]	174,222[5]	20,041[5]	2009
	€	3,600[5]	6,129[5]	8,502[5]	8,872[5]	548[5]	2010
	€	25,000	346,133	1,513,678	286,195[6]	47,517	2002
	€	6,211	9,870	13,490	25,414	1,823	2014
	CZK	160,200[5]	195,113[5]	319,559[5]	472,760[5]	11,480[5]	2008
	€	30,000	110,557	168,771	232,902	5,910	2002
	€	20,000[5]	15,237[5]	16,124[5]	96[5]	–4,553[5]	2013
	€	10,000[5]	10,397[5]	10,433[5]	1,105[5]	176[5]	2013
	€	5,000[5]	472[5]	1,130[5]	0[5]	–2,060[5]	2013
	€	25	12	23	0	–13	16 Mar 2016
	S$	606[5]	479[5]	1,319[5]	3,004[5]	–942[5]	1 Jan 2015
	US$	400[5]	40,003[5]	236,974[5]	15,613[5]	7,020[5]	2000
	€	25	177	201	0	16	16 July 2015
	CZK	200[5]	259,326[5]	448,148[5]	1,023,377[5]	61,701[5]	2006
	€	6,000	1,635,692	1,876,080	24,805	512,630[7]	1998
	€	25,000	364,813	25,714,767	16,987[6]	2,209[4]	1998
	€	25	79	90	37	1	2013
	€	3,600	10,785	12,888	3,560	344	2001
	€	100	7,000	16,063	12,658	4,237[4]	2001

6) Consists of interest and commission results due to business operations
7) Thereof income from profit-pooling agreements with their subsidiaries amounting to €6,446 thousand (including €4,237 thousand for Eurex Repo GmbH and €2,209 thousand for Eurex Clearing AG)

Fully consolidated subsidiaries (part 2)

Company	Domicile	Equity interest as at 31 Dec 2016 direct/(indirect) %
Eurex Global Derivatives AG	Zurich, Switzerland	100.00
Eurex Zürich AG	Zurich, Switzerland	(100.00)[2]
European Energy Exchange AG	Leipzig, Germany	(62.91)[3]
Agricultural Commodity Exchange GmbH	Leipzig, Germany	(62.91)
APX Shipping B.V.	Amsterdam, Netherlands	(62.91)
Cleartrade Exchange Pte. Limited	Singapore, Singapore	(62.91)
EEX Link GmbH	Leipzig, Germany	(62.91)
European Commodity Clearing AG	Leipzig, Germany	(62.91)
European Commodity Clearing Luxembourg S.à r.l.	Luxembourg, Luxembourg	(62.91)
EEX Power Derivatives GmbH	Leipzig, Germany	(62.91)
Global Environmental Exchange GmbH	Leipzig, Germany	(62.91)
Power Exchange Central Europe a.s.	Prague, Czech Republic	(41.94)
Powernext SA	Paris, France	(55.19)
EPEX SPOT SE	Paris, France	(28.97)[6]
APX Commodities Ltd.	London, United Kingdom	(28.97)
EPEX Netherlands B.V.	Amsterdam, Netherlands	(28.97)
EPEX SPOT Belgium S.A.[8]	Brussels, Belgium	(28.97)
EPEX SPOT Schweiz AG	Bern, Switzerland	(28.97)
JV Epex-Soops B.V.	Amsterdam, Netherlands	(17.38)
Gaspoint Nordic A/S	Brøndby, Denmark	(55.19)
PEGAS CEGH Gas Exchange Services GmbH	Vienna, Austria	(28.14)
Eurex Services GmbH (dormant)	Frankfurt/Main, Germany	100.00
Finnovation S.A.	Luxembourg, Luxembourg	100.00
Impendium Systems Ltd	London, United Kingdom	100.00
STOXX Ltd.	Zurich, Switzerland	100.00
STOXX Australia Pty Limited	Sydney, Australia	(100.00)
Tradegate Exchange GmbH	Berlin, Germany	78.72[9]
360 Treasury Systems AG	Frankfurt/Main, Germany	100.00
360T Asia Pacific Pte. Ltd.	Singapore, Singapore	(100.00)
360 Trading Networks Inc.	New York, USA	(100.00)
360 Trading Networks LLC	Dubai, United Arab Emirates (UAE)	(100.00)
Finbird GmbH	Frankfurt/Main, Germany	(100.00)
Finbird Limited	Jerusalem, Israel	(100.00)
ThreeSixty Trading Networks (India) Pte. Ltd.	Mumbai, India	(100.00)

1) Includes capital reserves and retained earnings, accumulated gains or losses and net profit or loss for the year and, if necessary, further components according to the respective local GAAP
2) Thereof 50 per cent directly and 50 per cent indirectly held via Eurex Global Derivatives AG
3) Voting rights
4) Thereof income and expense from profit-pooling agreements with their subsidiaries amounting to a total of €71,474 thousand
5) Before profit transfer or loss absorption
6) Thereof 6.72 per cent indirectly and 22.21 per cent directly held via Powernext SA
7) Preliminary figures
8) Until 1 October 2016: Belpex SA
9) Thereof 3.72 per cent indirectly held via Tradegate AG Wertpapierhandelsbank
10) Numbers based on the divergent financial year from 1 April 2015 to 31 March 2016.

Currency	Ordinary share capital thousand	Equity[1] thousand	Total assets thousand	Sales revenue 2016 thousand	Net profit/loss 2016 thousand	Initially consolidated
€	83	496,809	522,414	127,051	62,898	2012
€	8,313	302,565	343,350	49,568	5,461	1998
€	40,050	129,282	153,941	28,424	66,132[4]	2014
€	100	2,046	2,093	200	–1,697[5]	2014
€	0	0	8	40	32	4 May 2015
US$	19,800	2,795	3,259	1,431	–1,702	2014
€	50	51	99	134	3	1 Jan 2016
€	1,015	73,935	3,078,937	82,407	48,195[5]	2014
€	13	82	334,234	30,434	68	2014
€	125	6,018	18,948	53,204	27,666[5]	2014
€	50	48	1,624	2,140	–2,690[5]	2014
CZK	30,000	34,215	45,389	42,834	3,947	31 May 2016
€	12,584	29,803	36,054	26,651	9,927	1 Jan 2015
€	6,168	65,135	93,635	67,127	22,845	1 Jan 2015
GBP	500	1,837	3,667	4,550	240	4 May 2015
€	0	0	2	0	0	1 Dec 2016
€	3,000	3,782	9,840	4,235	239	4 May 2015
CHF	100	157	178	331	22	1 Jan 2015
€	18	186	189	17	11	1 Jan 2015
DKK	2,000	5,104	6,290	11,914	5,112	1 July 2016
€	35	7,117	7,193	97	–367	2 Sep 2016
€	25	101	101	0	0	2007
€	156,400[7]	197,876[7]	230,728[7]	100,981[7]	45,072[7]	2008
GBP	7,804	495	801	1,895	–597	2014
CHF	673	125,976	147,578	118,869	56,661	2009
AU$	0	57	184	312	28	31 July 2015
€	500	1,537	2,163	2,542	526	2010
€	128	43,434	63,594	69,045	13,633	15 Oct 2015
S$	550	4,241	7,813	11,795	–112	15 Oct 2015
US$	300	6,782	8,074	6,855	122	15 Oct 2015
€	34	336	571	874	41	15 Oct 2015
€	25	1,424	1,583	352	0	15 Oct 2015
ILS	1	–1,273	830	4,408	–198	15 Oct 2015
INR	300[10]	64,340[10]	74,687[10]	34,691[10]	1,904[10]	15 Oct 2015

As at 31 December 2016, Deutsche Börse AG indirectly held 50 per cent of the voting rights in REGIS-TR S.A., Luxembourg. Since Deutsche Börse's subsidiary Clearstream Banking S.A., which holds 50 per cent of the voting rights, has the right to appoint the chairman of the board of directors, who in turn has a casting vote, there is a presumption of control.

Changes to consolidated subsidiaries

	Germany	Foreign	Total
As at 1 January 2016	21	54	75
Additions	2	5	7
Disposals	–3	–17	–20
As at 31 December 2016	**20**	**42**	**62**

360T Beteiligungs GmbH, Frankfurt/Main, Germany, and its wholly owned subsidiary, 360T Verwaltungs GmbH, Frankfurt/Main, Germany, were merged into 360 Treasury Systems AG, Frankfurt/Main, Germany, effective 1 January 2016. With Deutsche Börse AG as the sole shareholder, it is deemed to exercise control as defined in IFRS 10, and the entities are therefore still fully consolidated in Deutsche Börse Group's consolidated financial statements.

Effective 1 January 2016, Indexium AG, Zurich, Switzerland – in which Deutsche Börse AG held a 100 per cent interest – merged with STOXX Ltd., Zurich, Switzerland. Deutsche Börse AG holds an interest of 100 per cent in the latter company. According to the business combination agreement from 3 June 2016, all assets and liabilities of Indexium AG were passed on retroactively to STOXX Ltd. Following registration of the business combination, Indexium AG was deleted from the commercial register as at 24 June 2016.

During the 2016 financial year, EEX Link GmbH (EEX Link) – wholly owned by European Energy Exchange AG – commenced business operations. EEX Link provides services with the aim to bundle liquidity between regulated power/gas exchanges and less regulated markets, on which no Multilateral Trading Facility (MTF) is used. EEX Link has been fully consolidated since 1 January 2016.

Effective 25 February 2016, the Spanish stock exchange operator Bolsas y Mercados Españoles Sociedad Holding de Mercados y Sistemas Financieros, S.A., Madrid, Spain, (BME) acquired Deutsche Börse AG's 50 per cent share of Infobolsa S.A., Madrid, Spain. BME also assumed Deutsche Börse AG's interest in the wholly owned subsidiaries of Infobolsa S.A. as part of the transaction, including Difubolsa, Serviços de Difusão e Informação de Bolsa, S.A., Lisbon, Portugal; Infobolsa Deutschland GmbH, Frankfurt/Main, Germany; and Open Finance, S.L., Madrid, Spain. Until that time, Deutsche Börse AG and BME had each held an interest of 50 per cent in the shares of Infobolsa S.A. BME paid a purchase price of €8.2 million in cash to Deutsche Börse AG.

With the signature of the partnership agreement from 16 March 2016, Deutsche Börse AG founded DB1 Ventures GmbH, Frankfurt/Main, Germany, – which was recorded in the commercial register on 2 May 2016 – and took over 25,000 shares of a price of €1.00 per share. With Deutsche Börse AG as the sole shareholder, there is a presumption of control in accordance with IFRS 10. The subsidiary has been included in full in the consolidated financial statements since the first quarter of 2016.

Effective 31 May 2016, European Energy Exchange, Leipzig, Germany, (EEX) acquired another 47.78 per cent of the voting shares of Cleartrade Exchange Pte. Limited, Singapore, (CLTX) and thereby increased its interest in the company to 100 per cent. Deutsche Börse Group paid a consideration of £1.00 plus an earn-out component. The company continues to be included in full in the consolidated financial statements.

In order to expand the energy derivatives market in Central and Eastern Europe, EEX acquired a stake of 66.67 per cent in Power Exchange Central Europe a.s., Prague, Czech Republic, (PXE) for a purchase price of €4.4 million (effective 31 May 2016). After final approval from the Czech national bank on 16 June 2016, EEX gained control over PXE within the meaning of IFRS 10. Since then, the company has been fully included in the consolidated financial statements. The acquired goodwill of €1.7 million mainly reflects expected revenue synergies to be generated by facilitated cross-border trading.

Goodwill resulting from the business combination with Power Exchange Central Europe a.s.

	Preliminary goodwill calculation 31 May 2016 €m
Consideration transferred	
Purchase price	2.8
Acquired bank balances	–1.2
Total consideration	**1.6**
Acquired assets and liabilities	
Assets (without goodwill)	2.1
Liabilities	–0.6
Non-controlling interests	–1.6
Total assets and liabilities acquired	**–0.1**
Goodwill (not tax-deductible)	**1.7**

The full consolidation of PXE generated an increase of €0.8 million in sales revenue, whereas it did not materially affect earnings after tax following offsetting of non-controlling interests. Full consolidation as at 1 January 2016 would have led to a rise of €1.4 million in sales revenue and an increase of earnings after tax of €0.1 million.

In order to open up the Danish gas-trade market, EEX acquired another 50 per cent of the shares of Gaspoint Nordic A/S, Brøndby, Denmark, for a purchase price of €0.7 million, thereby increasing its interest in the company to 100 per cent, effective 1 July 2016. In July, the shares were transferred to Powernext SA, Paris, France. Since the effective date, Gaspoint Nordic A/S has been no longer recognised as an associate, but has been included in full in the consolidated financial statements as a wholly owned subsidiary of Powernext SA, in which Deutsche Börse AG indirectly holds a stake of 55.19 per cent. This transaction allows to exploit synergies through the concentration of gas trading on the PEGAS platform operated by Powernext SA.

The following assets and liabilities were identified as part of the purchase price allocation:

Goodwill resulting from the business combination with Gaspoint Nordic A/S

	Preliminary goodwill calculation 1 July 2016 €m
Consideration transferred	
Purchase price	0.9
Acquired bank balances	–1.2
Total consideration	**–0.3**
Acquired assets and liabilities	
Assets (without goodwill)	0.4
Liabilities	–0.4
Non-controlling interests	–0.4
Total assets and liabilities acquired	**–0.4**
Goodwill (not tax-deductible)	**0.1**

The full consolidation of Gaspoint Nordic A/S generated a rise of €0.7 million in sales revenue as well as an increase of €0.2 million in earnings after tax and offsetting of non-controlling interests. Full consolidation as at 1 January 2016 would have led to a rise of €1.5 million in sales revenue and an increase of €0.5 million in earnings after tax and offsetting of non-controlling interests.

Deutsche Börse AG transferred the business operations of Market News International, Inc., New York, USA, (MNI) onto Hawking LLC as part of an asset deal. The transaction was closed on 8 July 2016. This transaction also provides for the transfer of 100 per cent of the shares in MNI Financial and Economic Information (Beijing) Co. Ltd., Beijing, China, (MNI Beijing), which is however still subject to approval by the Chinese authorities. This transaction was made within the context of the asset deal, meaning that Deutsche Börse AG directly or indirectly retains its 100 per cent interest in in MNI and its subsidiaries, Market News International Services Inc., Need to Know News LLC and – until approval from Chinese authorities – MNI Beijing. Market News International, Inc. changed its company name to Assam SellerCo, Inc. as at 11 July 2016. Market News International Services Inc. changed its company name to Assam SellerCo Service Inc. on the same date.

Cleartrade Exchange (UK) Limited, London, United Kingdom, a wholly owned subsidiary of Cleartrade Exchange Pte. Limited, Singapore (CLTX), which is in turn a wholly owned subsidiary of EEX, was liquidated effective 3 January 2017, as part of CLTX's restructuring.

During the 2016 financial year, Powernext SA, together with Austrian Central European Gas Hub AG (CEGH), established a new subsidiary, PEGAS CEGH Gas Exchange Services GmbH (PCG). Powernext SA holds a 51 per cent stake in the capital of PCG. Since its establishment on 2 September 2016, PCG has been fully consolidated in the consolidated financial statements. In September 2016, PCG acquired the Austrian gas business from CEGH. With this transaction, Powernext profits from synergy effects generated from contract trading for the large European gas markets on the common PEGAS platform. Since the launch of its business operations on 1 December 2016, the new entity contributed €0.2 million to the Group's sales revenue, whereas it did not materially affect earnings, after offsetting non-controlling interests.

Goodwill resulting from the business combination with PEGAS CEGH Gas Exchange Services GmbH

	Preliminary goodwill calculation 30 Sep 2016 €m
Consideration transferred	**2.6**
Acquired assets and liabilities	
Assets (without goodwill)	4.3
Liabilities	–0.6
Non-controlling interests	–2.6
Total assets and liabilities acquired	**1.1**
Goodwill (not tax-deductible)	**1.5**

Effective 31 December 2016, several APX entities were merged into Group-internal EPEX SPOT SE, Paris, France. EPEX Netherlands BV, Amsterdam, the Netherlands, was established during 2016, as part of the ongoing reorganisation. It assumed the former employees of APX Holding BV, including their pension claims. The new entity has been fully consolidated since the launch of its business operations on 1 December 2016. In addition, APX Shipping BV was merged within the Group into European Energy Exchange AG.

Belpex SA, Brussels, Belgium, changed its company name to EPEX SPOT Belgium S.A. as at 31 December 2016.

The following table summarises the main financial information of associates and joint ventures; data comprise the totals of each company according to the respective local GAAP and not proportional values from the view of Deutsche Börse Group.

Associates and joint ventures

Company	Domicile	Segment	Equity interest as at 31 Dec 2016 direct/(indirect) %
Joint ventures			
Bondcube Limited in Administration	London, United Kingdom	Xetra	30.00
Associates			
BrainTrade Gesellschaft für Börsensysteme mbH	Frankfurt/Main, Germany	Xetra	(28.58)[2]
China Europe International Exchange AG	Frankfurt/Main, Germany	Eurex	40.00
Deutsche Börse Commodities GmbH	Frankfurt/Main, Germany	Xetra	16.20
Digital Vega FX Ltd	London, United Kingdom	Eurex	24.03
figo GmbH	Hamburg, Germany	MD+S	18.67
Global Markets Exchange Group International LLP	London, United Kingdom	Eurex	45.13
Index Marketing Solutions Limited	London, United Kingdom	Eurex	31.45
LuxCSD S.A.	Luxembourg, Luxembourg	Clearstream	(50.00)
PHINEO gAG	Berlin, Germany	Xetra	12.00[8]
R5FX Ltd	London, United Kingdom	Eurex	24.37
SEEPEX a.d.	Belgrade, Serbia	Eurex	(7.24)
Switex GmbH	Hamburg, Germany	Xetra	40.00
Tradegate AG Wertpapierhandelsbank[9]	Berlin, Germany	Xetra	14.86
ZDB Cloud Exchange GmbH in Liquidation[10] [11]	Eschborn, Germany	Eurex	49.90
Zimory GmbH in Liquidation	Berlin, Germany	Eurex	30.03[12]

1) Values up to the date of Administration on 21 July 2015
2) Thereof 14.29 per cent held directly and 14.29 per cent indirectly via Börse Frankfurt Zertifikate AG
3) Value of equity
4) The financials refer to the financial year from 1 December 2015 to 30 November 2016.
5) Figures as at 31 December 2014
6) The financials refer to the financial year from 1 February 2016 to 31 January 2017.
7) Figures as at 31 August 2015
8) In addition, Deutsche Börse AG holds an interest in Phineo Pool GbR, Berlin, Germany, which holds a 48 per cent stake in PHINEO gAG.
9) As at the reporting date, the fair value of the stake in the listed company amounted to €31.2 million.
10) Until 5 September 2016: Deutsche Börse Cloud Exchange AG
11) ZDB Cloud Exchange GmbH is part of the Zimory GmbH subgroup.
12) Voting rights

Following the admission of new partners and the reduction of the existing partners' interests in Global Markets Exchange Group International LLP, London, United Kingdom, (GMEX), Deutsche Börse AG's interest in GMEX increased by 13.42 per cent to 45.13 per cent. Since Deutsche Börse AG exercises significant influence within the meaning of IAS 28, GMEX continues to be classified as an associate and is accounted for using the equity method.

Effective 4 November 2016, Deutsche Börse AG acquired a 40 per cent stake in the capital of Switex GmbH, Frankfurt/Main, Germany. Since Deutsche Börse AG exercises significant influence within the meaning of IAS 28, Switex GmbH has been classified as an associate and has been accounted for using the equity method since that date.

Effective 4 November 2016, Deutsche Börse AG acquired 18.67 per cent of the voting shares in figo GmbH, Hamburg, Germany. Since Deutsche Börse AG exercises significant influence within the meaning of IAS 28.6 (a) by representation on the board of directors (Beirat), figo GmbH continues to be classified as an associate and is accounted for using the equity method.

	Currency	Ordinary share capital thousand	Assets thousand	Liabilities thousand	Sales revenue 2016 thousand	Net profit/loss 2016 thousand	Associate since
	GBP	2[1]	2,183[1]	2,548[1]	0[1]	–215[1]	2014
	€	1,400	4,545	2,931	4,554	214	2013
	€	27,000	22,987	1,090	82	–4,373	31 Oct 2015
	€	1,000	4,163,028	4,158,276	7,471	2,126	2007
	GBP	537[3,4]	1,384[4]	603[4]	548[4]	106[4]	2011
	€	75	6,787	105	531	–1,975	11 Nov 2016
	GBP	5,026[6]	801[6]	411[6]	0[6]	–147[6]	2013
	GBP	0[7]	59[7]	60[7]	0[7]	0[7]	2014
	€	6,000	7,139	1,392	2,450	425	30 June 2015
	€	50	4,372	725	1,195	783	2010
	GBP	2	764	625	130	–1,177	2014
	RSD	120,000	226,519	39,166	51,108	–30,056	14 July 2015
	€	25	25	0	0	0	4 Nov 2016
	€	24,403	133,575	90,938	53,486	12,644	2010
	€	50	237	79	38	–902	2013
	€	267	587	174	33	–525	2013

Effective 21 December 2016, Deutsche Börse AG exercised a call option according to the share purchase and acquisition agreement entered into with Berliner Effektengesellschaft AG, Berlin, Germany. Under the transaction, Deutsche Börse AG will acquire an additional 4.96 per cent stake in Tradegate AG Wertpapierhandelsbank, Berlin, Germany (Tradegate AG), which holds 25 per cent of the fully-consolidated Tradegate Exchange GmbH, Berlin, Germany. Hence, Deutsche Börse AG's interest will be 19.82 per cent after the transaction. The acquisition of the additional shares is however still subject to regulatory approval. Since Deutsche Börse AG exercises significant influence within the meaning of IAS 28, Tradegate AG continues to be classified as an associate and is accounted for using the equity method.

EMCC European Market Coupling GmbH i.L., Hamburg, Germany, was wound up by means of a partner resolution dated 15 June 2014. EEX held a stake of 20 per cent in this company, which was liquidated as at 8 December 2016 and is thus no longer included in the scope of consolidation.

Zimory GmbH, Berlin, Germany, and Deutsche Börse Cloud Exchange AG, Frankfurt/Main, Germany (DBCE), were wound up by means of a partner resolution dated 5 September 2016. Based on the partner resolution dated 5 September 2016, DBCE was transformed into ZDB Cloud Exchange GmbH, with registered office in Eschborn, Germany, by way of a change of company form.

Where Deutsche Börse Group's share of the voting rights in a company amounts to less than 20 per cent, Deutsche Börse Group's significant influence is exercised in accordance with IAS 28.6 (a) through the Group's representation on the supervisory board or the board of directors of the following companies as well as through corresponding monitoring systems:

- Deutsche Börse Commodities GmbH, Frankfurt/Main, Germany
- figo GmbH, Hamburg, Germany
- Index Marketing Solutions Limited, London, United Kingdom
- SEEPEX a.d., Belgrade, Serbia
- PHINEO gAG, Berlin, Germany

Discontinued operation

Effective 30 June 2016, Deutsche Börse AG sold International Securities Exchange Holdings, Inc., New York, USA, (ISE) and its parent company, U.S. Exchange Holdings, Inc., Chicago, USA, to Nasdaq, Inc. against a cash payment of US$1.1 billion. As part of the transaction, Nasdaq, Inc. also assumed Deutsche Börse AG's interests in the wholly owned subsidiaries of ISE – International Securities Exchange, LLC, New York, USA; ETC Acquisition Corp., New York, USA; ISE Gemini, LLC, New York, USA; Longitude LLC, New York, USA; and Longitude S.A., Luxembourg. Deutsche Börse AG held an interest of 100 per cent in the entities listed above.

The disposal of ISE as of 30 June 2016 is disclosed as a discontinued operation in accordance with IFRS 5. The following table shows the composition of net profit for the period from discontinued operation amounting to €550.6 million for 2016 (2015: €52.2 million), as well as the composition of total comprehensive income from discontinued operations amounting to €497.1 million (2015: €111.5 million):

Income from discontinued operations

	2016 €m	2015 €m
Sales revenue	149.3	302.9
Other operating income	568.9	0
Volume-related costs	–77.4	–155.8
Net revenue	**640.8**	**147.1**
Operating costs	–58.5	–92.4
Result from equity investments	0.6	2.3
Earnings before interest and tax (EBIT)	**582.9**	**57.0**
Financial income	–26.9	15.1
Earnings before tax (EBT)	**556.0**	**72.1**
Income tax expense	–5.4	–19.9
Net profit for the period from discontinued operations	**550.6**	**52.2**
Deferred taxes	147.2	–64.9
Exchange rate differences	–200.7	124.2
Other comprehensive income after tax from discontinued operations	**–53.5**	**59.3**
Total comprehensive income from discontinued operations	**497.1**	**111.5**

Net change in cash and cash equivalents from discontinued operations are comprised of the following items:

Cash flow statement from discontinued operations

	2016 €m	2015 €m
Cash flows from operating activities	–45.6	17.8
Cash flows from investing activities	889.2	–9.7
Cash flows from financing activities	0	0
Net change in cash and cash equivalents	843.6	8.1

The gain from the disposal was disclosed in net profit for the period from discontinued operations and was based on the following calculation:

Gain from disposal of ISE

	30 Jun 2016 €m
Proceeds from disposal	**989.6**
Hedging result and further adjustments	–60.4
Cash disposed	–13.0
Proceeds from disposal, net of cash disposed	**916.2**
Assets and liabilities disposed	
Goodwill	153.8
Miscellaneous intangible assets	486.0
Property, plant & equipment	7.8
Financial assets	45.4
Other non-current assets	63.5
Receivables and other current assets	148.6
Deferred tax liabilities	–184.2
Other non-current liabilities	–6.1
Current liabilities	–161.5
P&L effects from currency translation	–206.0
Total assets and liabilities disposed	**347.3**
Gain on disposal	**568.9**

Unless explicitly indicated otherwise, all disclosures made in the notes to the consolidated financial statements exclusively refer to Deutsche Börse Group's continuing operations. Prior-year figures have been adjusted accordingly.

3. Summary of key accounting policies

Deutsche Börse AG's consolidated financial statements have been prepared in euros, the functional currency of Deutsche Börse AG. Unless stated otherwise, all amounts are shown in millions of euros (€m). Due to rounding, the amounts may differ from unrounded figures.

The annual financial statements of subsidiaries included in the consolidated financial statements have been prepared on the basis of the Group-wide accounting policies based on IFRS that are described in the following. They were applied consistently to the periods shown.

Recognition of revenue and expenses

Trading, clearing and settlement fees are recognised at the trade date and billed on a monthly basis. Custody revenue and revenue for systems development and systems operation are generally recognised rateably and billed on a monthly basis. Sales of price information are billed on a monthly basis. Fees charged to trading participants in connection with expenses for supervision by the US Securities and Exchange Commission (SEC) were recognised at the settlement date.

As a rule, rebates are deducted from sales revenue.

The item "volume-related costs" comprises expenses that depend on the number of certain trade or settlement transactions, or on the custody volume, the Global Securities Financing volume, or the volume of market data acquired, or that result from revenue-sharing agreements or maker-taker pricing models. Volume-related costs are not incurred if the corresponding revenue is no longer generated.

Interest income and expense are recognised using the effective interest method over the respective financial instrument's term to maturity. Interest income is recognised when it is probable that the economic benefits associated with the transaction will flow to the entity and the income can be measured reliably. Interest expense is recognised in the period in which it is incurred. Interest income and expense from banking business are set off in the consolidated income statement and disclosed separately in note 4.

Dividends are recognised in net income from equity investments if the right to receive payment is based on legally assertable claims.

The consolidated income statement is structured using the nature of expense method.

Research and development costs

Research costs are expensed in the period in which they are incurred. The development costs of an asset are only capitalised if they can be reliably estimated, if all the definition criteria for an asset are met and if the future economic benefits resulting from capitalising the development costs can be demonstrated. These development costs include direct labour costs, costs of purchased services and workplace costs, including proportionate overheads that can be directly attributed to the preparation of the respective asset for use, such as costs for the software development environment. Development costs that do not meet the requirements for capitalisation are recognised as expenses in the consolidated income statement. Interest expense that cannot be allocated directly to one of the development projects is recognised in profit or loss in the reporting period and not included in capitalised development costs. If research and development costs cannot be separated, the expenditures are recognised as expenses in the period in which they are incurred.

All development costs (both primary costs and costs incurred subsequently) are allocated to projects. The projects are broken down into the following phases in order to decide which cost components must be capitalised and which cannot be capitalised:

Phases not eligible for capitalisation

1. Design
- Definition of product design
- Specification of the expected economic benefit
- Initial cost and revenue forecast

Phases eligible for capitalisation

2. Detailed specifications
- Compilation and review of precise specifications
- Troubleshooting process

3. Building and testing
- Software programming
- Product testing

Phases not eligible for capitalisation

4. Acceptance
- Planning and implementation of acceptance tests

5. Simulation
- Preparation and implementation of simulation
- Compilation and testing of simulation software packages
- Compilation and review of documents

6. Roll-out
- Planning of product launch
- Compilation and dispatch of production systems
- Compilation and review of documents

In accordance with IAS 38, only expenses attributable to the “detailed specifications” and “building and testing” phases are capitalised. All other phases of software development projects are expensed.

Intangible assets

Capitalised development costs are amortised from the date of first use of the software using the straight-line method over the asset’s expected useful life. The useful life of internally developed software is generally assumed to be five years; a useful life of seven years is used as the basis in the case of newly developed trading platforms and clearing or settlement systems, and for certain enhancements of these systems.

Purchased software is carried at cost and reduced by amortisation and, where necessary, impairment losses. Amortisation is charged using the straight-line method over the expected useful life or at most until the right of use has expired.

Useful life of software

Asset	Amortisation period
Standard software	3 to 10 years
Purchased custom software	3 to 6 years
Internally developed custom software	3 to 7 years

Intangible assets are derecognised on disposal or when no further economic benefits are expected to flow from them.

The amortisation period for intangible assets with finite useful lives is reviewed at a minimum at the end of each financial year. If the expected useful life of an asset differs from previous estimates, the amortisation period is adjusted accordingly.

Goodwill is recognised at cost and tested at least once a year for impairment.

The cost of the other intangible assets, which are almost only acquired in the course of business combinations, corresponds to the acquisition date fair value. Assets with a finite useful life are amortised using the straight-line method over their expected useful life. Assets with an indefinite useful life are tested for impairment at least once a year.

Useful life of other intangible assets classified by business combinations

	Exchange licences	Trade names	Member and customer relationships	Miscellaneous intangible assets
ISE[1]	indefinite	10 years	30 years	2 to 12 years
STOXX	–	indefinite	12 years	3 to 5 years
EEX	indefinite	indefinite	16 years	–
CGSS	–	–	20 years	8 years
360T	–	indefinite	23 years	–
Other	indefinite	5 years, indefinite	8 to 21 years	2 to 20 years

1) Taking effect 1 March 2016, ISE's other intangible assets were reclassified into the category "assets held for sale". Therefore, amortisation in line with the applicable useful life has only been recognised until 29 February 2016.

Since the exchange licences mentioned above have no time limit on their validity and, in addition, there is an intention to maintain the exchange licences disclosed as at 31 December 2016 as part of the general business strategy, an indefinite useful life is assumed. Moreover, it is assumed that the trade name of STOXX, certain trade names of 360T as well as certain registered trade names of EEX group have also an indefinite useful life. These umbrella brands benefit from strong brand awareness and are used in the course of operating activities, so there are no indications that their useful life is limited.

Property, plant and equipment

Depreciable items of property, plant and equipment are carried at cost less cumulative depreciation. The straight-line depreciation method is used. Costs of an item of property, plant and equipment comprise all costs directly attributable to the production process, as well as an appropriate proportion of production overheads. No borrowing costs were recognised in the reporting period as they could not be directly allocated to any particular development project.

Useful life of property, plant and equipment

Asset	Depreciation period
Computer hardware	3 to 5 years
Office equipment	5 to 25 years
Leasehold improvements	based on lease term

Repair and maintenance costs are expensed as incurred.

If it is probable that the future economic benefits associated with an item of property, plant and equipment will flow to the Group and the cost of the asset in question can be reliably determined, expenditure subsequent to acquisition is added to the carrying amount of the asset as incurred. The carrying amounts of any parts of an asset that have been replaced are derecognised.

Impairment losses on property, plant and equipment and intangible assets

Specific non-current non-financial assets are tested for impairment. At each reporting date, the Group assesses whether there are any indications that an asset may be impaired. If this is the case, the carrying amount is compared with the recoverable amount (the higher of value in use and fair value less costs of disposal) to determine the amount of any potential impairment.

Value in use is estimated on the basis of the discounted estimated future cash flows from continuing use of the asset and from its ultimate disposal, before taxes. For this purpose, discount rates are estimated based on the prevailing pre-tax weighted average cost of capital. If no recoverable amount can be determined for an asset, the recoverable amount of the cash-generating unit to which the asset can be allocated is determined.

Irrespective of any indications of impairment, intangible assets with indefinite useful lives and intangible assets not yet available for use must be tested for impairment at least once a year. If the estimated recoverable amount is lower than the carrying amount, an impairment loss is recognised and the net carrying amount of the asset is reduced to its estimated recoverable amount.

Goodwill is allocated to identifiable groups of assets (cash-generating units) or groups of cash-generating units that create synergies from the relevant acquisition. Irrespective of any indications of impairment, these items must be tested for impairment at least annually at the lowest level at which Deutsche Börse Group monitors the respective goodwill. An impairment loss is recognised if the carrying amount of the cash-generating unit to which goodwill is allocated (including the carrying amount of that goodwill) is higher than the recoverable amount of this group of assets. The impairment loss is first allocated to the goodwill, then to the other assets in proportion to their carrying amounts.

A review is conducted at every reporting date to establish whether there are any indications that an impairment loss recognised on non-current assets (excluding goodwill) in prior periods no longer applies. If this is the case, the carrying amount of the asset is increased and the difference is recognised in profit or loss. The maximum amount of this reversal is limited to the carrying amount that would have resulted if no impairment loss had been recognised in prior periods. Impairment losses on goodwill are not reversed.

Fair value measurement

The fair value of a financial instrument is measured using quoted market prices, if available. If no quoted market prices are available, observable market prices, for example for interest rates or exchange rates, are used. This observable market information is then used as inputs for financial valuation techniques, e.g. option pricing models or discounted cash flow models. In isolated instances, fair value is determined exclusively on the basis of internal valuation models.

Investments in associates and joint ventures

Investments in associates and joint ventures are measured at cost on initial recognition and accounted for using the equity method upon subsequent measurement.

Financial assets

For Deutsche Börse Group, financial assets are, in particular, other equity investments, receivables and securities from banking business, other financial instruments and other loans, financial instruments held by central counterparties, receivables and other assets as well as bank balances.

Recognition of financial assets
Financial assets are recognised when a Group company becomes a party to the contractual provisions of the instrument. They are generally recognised at the trade date. Loans and receivables from banking business, available-for-sale financial assets from banking business as well as purchases and sales of equities via the central counterparty (i.e. Eurex Clearing AG) are recognised at the settlement date.

Financial assets are initially measured at fair value; in the case of a financial asset that is not measured at fair value through profit or loss in subsequent periods, this includes transaction costs. If they are settled within one year, they are allocated to current assets. All other financial assets are allocated to non-current assets.

Subsequent measurement of financial assets
Subsequent measurement of financial instruments follows the categories which are described below. As in previous years, Deutsche Börse Group did not take advantage of the option to allocate financial assets to the "held-to-maturity investments" category in the reporting period. In addition, the Group did not exercise the "fair value option" to designate financial assets at fair value through profit and loss. The financial assets are allocated to the respective categories at initial recognition.

Assets held for trading
Derivatives that are not designated as hedging instruments as well as financial instruments held by central counterparties are measured at fair value through profit or loss.

If they result from banking business, realised and unrealised gains and losses are immediately recognised in the consolidated income statement as "other operating income", "other operating expenses" and "net interest income from banking business" or, if incurred outside the banking business, as "financial income" and "financial expenses".

Loans and receivables
Loans and receivables comprise in particular current and non-current receivables from banking business, trade receivables as well as other current receivables. They are recognised at amortised cost, taking into account any impairment losses, if applicable. Premiums and discounts are included in the amortised cost of the instrument concerned and are amortised using the effective interest method; they are contained in "net interest income from banking business" if they relate to banking business, or in "financial income" and "financial expense".

Cash and cash equivalents
Cash and cash equivalents comprise cash on hand and demand deposits as well as financial assets that are readily convertible to cash. They are subject to only minor changes in value. Cash and cash equivalents are measured at amortised cost.

Restricted bank balances mainly include cash deposits by market participants that are invested largely overnight, mainly at central banks or in the form of reverse repurchase agreements with banks.

Available-for-sale financial assets
Non-derivative financial assets are classified as "available-for-sale financial assets" if they cannot be allocated to the "loans and receivables" or "assets held for trading" categories. These assets comprise debt and equity investments recognised as "other equity investments" and "other financial instruments", as well as debt instruments recognised as current and non-current receivables and securities from banking business.

Available-for-sale financial assets are generally measured at the fair value observable in an active market. Unrealised gains and losses are recognised directly in equity in the revaluation surplus. Impairment losses and effects of exchange rates on monetary items are excluded from this general principle and are recognised in profit or loss.

Equity instruments for which no active market exists are measured on the basis of current comparable market transactions, if these are available. If an equity instrument is not traded in an active market and alternative valuation methods cannot be applied to that equity instrument, it is measured at cost, subject to an impairment test.

Realised gains and losses are generally recognised in “financial income” or “financial expense”. Interest income in connection with debt instruments in the banking business is recognised in the consolidated income statement in “net interest income from banking business” using the effective interest rate method. Other realised gains and losses are recognised in the consolidated income statement in “other operating income” and “other operating expenses”.

If debt instruments in the banking business are hedged items in fair value hedges, the changes in fair value resulting from the hedged risk are recognised in profit or loss.

Derecognition of financial assets
Financial assets are derecognised when the contractual rights to the cash flows expire or when substantially all the risks and rewards of ownership of the financial assets are transferred.

Clearstream Banking S.A. acts as a principal in securities borrowing and lending transactions in the context of the ASLplus securities lending system. Legally, it operates between the lender and the borrower without being an economic party to the transaction (transitory items). In these transactions, the securities borrowed and lent match each other. Consequently, these transactions are not recognised in the consolidated balance sheet.

Impairment of financial assets
Financial assets that are not measured at fair value through profit or loss are reviewed at each reporting date to establish whether there are any indications of impairment.

Deutsche Börse Group has laid down criteria for assessing whether there is evidence of impairment. These criteria primarily include significant financial difficulties on the part of the debtor and breaches of contract. In the case of equity instruments, the assessment also takes into account the duration and the amount of the impairment compared with cost. If the decline in value amounts to at least 20 per cent of cost or lasts for at least nine months, or if the decline is at least 15 per cent of cost and lasts for at least six months, Deutsche Börse Group takes this to be evidence of impairment. Impairment is assumed in the case of debt instruments if there is a significant decline in the issuer’s credit quality.

The amount of an impairment loss for a financial asset measured at amortised cost is the difference between the carrying amount and the present value of the estimated future cash flows, discounted at the original effective interest rate. A subsequent reversal is recognised at a maximum at the carrying amount that would have resulted if no impairment loss had been recognised.

The amount of an impairment loss for a financial asset measured at cost (unlisted equity instruments) is the difference between the carrying amount and the present value of the estimated future cash flows, discounted at a current market interest rate. Subsequent reversal is not permitted.

In the case of available-for-sale financial assets, the impairment loss is calculated as the difference between cost and fair value. Any reduction in fair value already recognised in equity is reclassified to profit or loss upon determination of the impairment loss. An impairment loss recognised on debt instruments may only be reversed in a subsequent period if the reason for the original impairment no longer applies.

Financial liabilities

Financial liabilities relate primarily to interest-bearing liabilities, other liabilities, liabilities from banking business, financial instruments held by central counterparties, cash deposits by market participants as well as trade payables. They are recognised when a Group company becomes a party to the instrument.

They are generally recognised at the trade date. Purchases and sales of equities via the central counterparty Eurex Clearing AG are recognised at the settlement date.

Offsetting financial assets and liabilities

Financial assets and liabilities are offset and only the net amount is presented in the consolidated balance sheet when a Group company currently has a legally enforceable right to set off the recognised amounts and intends either to settle on a net basis, or to realise the asset and settle the liability simultaneously.

Financial liabilities not measured at fair value through profit and loss

Financial liabilities not held for trading are carried at amortised cost. These liabilities comprise issued bonds. The borrowing costs associated with the placement of financial liabilities are included in the carrying amount and accounted for using the effective interest method, if they are directly attributable. Discounts reduce the carrying amount of liabilities and are amortised over the term of the liabilities.

Financial liabilities measured at fair value through profit and loss

A forward transaction with a non-controlling shareholder for the acquisition of non-controlling interests that is settled in cash or by delivering other financial assets is a financial liability recognised at fair value. It is subsequently measured at fair value through profit and loss. The equity interest attributable to a non-controlling shareholder underlying the transaction is accounted for as if it had already been acquired at the time of the transaction.

Derivatives and hedges

Derivatives are used to hedge interest rate risk or currency risk. All derivatives are carried at their fair values.

Hedge accounting is used for derivatives that are part of a hedging relationship determined to be highly effective and for which certain conditions are met. This relates in particular to the documentation of the hedging relationship and the risk strategy and to how reliably effectiveness can be measured.

Cash flow hedges
The portion of the gain or loss on the hedging instrument determined to be highly effective is recognised in other comprehensive income. This gain or loss ultimately adjusts the value of the hedged cash flow, i.e. the gain or loss on the hedging instrument is recognised in profit or loss when the hedged item is recognised in the balance sheet or in profit or loss. The ineffective portion of the gain or loss is recognised immediately in the consolidated income statement.

Fair value hedges
The gain or loss on the hedging instrument, together with the gain or loss on the hedged item (underlying) attributable to the hedged risk, is recognised immediately in the consolidated income statement. Any gain or loss on the hedged item adjusts its carrying amount.

Hedges of a net investment in a foreign operation
The effective portion of the gain or loss from a hedging transaction that is designated as a highly effective hedge is recognised in other comprehensive income. It is recognised in profit or loss when the foreign operation is sold. The ineffective portion of the gain or loss is recognised immediately in the consolidated income statement.

Derivatives that are not part of a hedging relationship
Gains or losses on derivative instruments that are not part of a highly effective hedging relationship are recognised immediately in the consolidated income statement.

Financial instruments held by central counterparties

European Commodity Clearing AG and Eurex Clearing AG act as central counterparties:

- European Commodity Clearing AG guarantees the settlement of spot and derivatives transactions at the trading venues of the EEX-group and the connected partner exchanges.
- Eurex Clearing AG guarantees the settlement of all transactions involving futures and options on the Eurex exchanges (Eurex Deutschland and Eurex Zürich AG). It also guarantees the settlement of all transactions for Eurex Bonds (bond trading platform) and Eurex Repo (repo trading platform), certain exchange transactions in equities on Frankfurter Wertpapierbörse (FWB, the Frankfurt Stock Exchange) and certain cash market transactions on the Irish Stock Exchange. Eurex Clearing AG also guarantees the settlement of off-order book trades entered for clearing in the trading systems of the Eurex exchanges, Eurex Bonds, Eurex Repo, the Frankfurt Stock Exchange and the Irish Stock Exchange. In addition, Eurex Clearing AG clears over-the-counter (OTC) interest rate derivatives and securities lending transactions, where these meet the specified novation criteria.

The transactions of the clearing houses are only executed between the respective clearing house and a clearing member.

In accordance with IAS 39, purchases and sales of equities and bonds via the Eurex Clearing AG central counterparty are recognised and simultaneously derecognised at the settlement date.

For products that are marked to market (futures, options on futures as well as OTC interest-rate derivatives), the clearing houses recognise gains and losses on open positions of clearing members on each exchange day. By means of the variation margin, profits and losses on open positions resulting from market price fluctuations are settled on a daily basis. The difference between this and other margin types is that the variation margin does not comprise collateral, but is a daily offsetting of profits and losses in cash. In accordance with IAS 39, futures and OTC interest rate derivatives are therefore not reported in the consolidated balance sheet. For future-style options, the option premium is not required to be paid in full until the end of the term or upon exercise. Option premiums are carried in the consolidated balance sheet as receivables and liabilities at their fair value on the trade date.

“Traditional” options, for which the buyer must pay the option premium in full upon purchase, are carried in the consolidated balance sheet at fair value. Fixed-income bond forwards are recognised as derivatives and carried at fair value until the settlement date. Receivables and liabilities from repo transactions and from cash-collateralised securities lending transactions are classified as held for trading and carried at fair value. Receivables and liabilities from variation margins and cash collateral that is determined on the reporting date and only paid on the following day are carried at their nominal amount.

“Financial instruments held by central counterparties” are reported as non-current if the remaining maturity of the underlying transactions exceeds twelve months at the reporting date.

The fair values recognised in the consolidated balance sheet are based on daily settlement prices. These are calculated and published by the clearinghouse in accordance with the rules set out in the contract specifications (see also the clearing conditions of the respective clearing house).

Cash or securities collateral held by central counterparties

As the clearing houses of the Deutsche Börse Group guarantee the settlement of all traded contracts, they have established multi-level collateral systems. The central pillar of the collateral systems is the determination of the overall risk per clearing member (margin) to be covered by cash or securities collateral. Losses calculated on the basis of current prices and potential future price risks are covered up to the date of the next collateral payment.

In addition to these daily collateral payments, each clearing member must make contributions to the respective clearing fund (for further details, see the risk report in the combined management report). Cash collateral is reported in the consolidated balance sheet under “cash deposits by market participants” and the corresponding amounts under “restricted bank balances”.

Securities collateral is generally not derecognised by the clearing member providing the collateral, as the opportunities and risks associated with the securities are not transferred to the secure party. Recognition at the secure party is only permissible if the clearing member providing the transfer is in default according to the underlying contract.

Treasury shares

The treasury shares held by Deutsche Börse AG at the reporting date are deducted directly from shareholders' equity. Gains or losses on treasury shares are recognised in other comprehensive income. The transaction costs directly attributable to the acquisition of treasury shares are accounted for as a deduction from shareholders' equity (net of any related income tax benefit).

Other current assets

Receivables and other assets are carried at their nominal amount. Adequate valuation allowances take account of identifiable risks.

Non-current assets held for sale, disposal groups and discontinued operations

Non-current assets that are available for immediate sale in their present condition, and whose sale is highly probable within a reasonable period of time, are classified as "non-current assets held for sale". A transaction is highly probable if measures for the sale have already been initiated and the relevant bodies have adopted the corresponding resolutions. Disposal groups may comprise current and non-current assets, and the corresponding liabilities, which fulfil the criteria provided above and which are to be sold and discontinued. Income and expenses from non-current assets held for sale are recognised within continuing operations, provided such items are not included in net profit from discontinued operations.

Discontinued operations exclusively comprise assets and liabilities which are to be sold, entirely or partly, as part of an individual plan, or are to be abandoned. Furthermore, discontinued operations are assets or liabilities of major lines of business or geographical areas of operations. Every line of business or geographical area of operation must be identifiable for operational and accounting purposes. Net profit from discontinued operations is recognised in the period in which it is incurred, and is disclosed separately in the consolidated income statement and the consolidated statement of comprehensive income. The corresponding cash flows are disclosed separately in the consolidated cash flow statement. Furthermore, the figures disclosed in the previous year's income statement and cash flow statement have been adjusted accordingly.

Pensions and other employee benefits

Pensions and other employee benefits relate to defined contribution and defined benefit pension plans.

Defined contribution plans

There are defined contribution plans as part of the occupational pension system using pension funds and similar pension institutions, as well as on the basis of 401(k) plans. In addition, contributions are paid to the statutory pension insurance scheme. The level of contributions is normally determined in relation to income. As a rule, no provisions are recognised for defined contribution plans. The contributions paid are reported as pension expenses in the year of payment.

There are defined contribution pension plans for employees in several countries. In addition, the employer pays contributions to employees' private pension funds.

Multi-employer plans

Several Deutsche Börse Group companies are, along with other financial institutions, member institutions of BVV Versicherungsverein des Bankgewerbes a.G. (BVV), a pension insurance provider with registered office in Berlin, Germany. Employees and employers make regular contributions, which are used to provide guaranteed pension plans and a potential surplus. The contributions to be made are calculated based on contribution rates applied to active employees' monthly gross salaries, taking into account specific financial thresholds. Member institutions are liable in the second degree regarding the fulfilment of BVV's agreed pension benefits. However, we consider the risk that said liability will actually be utilised as remote. Given that BVV membership is governed by a Works Council Agreement, membership termination is subject to certain conditions. Deutsche Börse Group considers BVV pension obligations as multi-employer defined benefit pension plans (leistungsorientierte Pläne). However, we currently lack information regarding the allocation of BVV assets to individual member institutions and the respective beneficiaries. Moreover, we do not know Deutsche Börse Group's actual share in BVV's total obligations. Hence, Deutsche Börse Group discloses this plan as a defined contribution plan (beitragsorientierter Plan). Based on its latest publications, BVV does not suffer any deficient cover with a potential impact on Deutsche Börse Group's future contributions.

EPEX Netherlands B.V. participates in the ABP pension fund within the EEX sub-group. Participation is mandatory for all employees. Employer contributions are calculated by ABP and adjusted, if necessary. This pension plan was reported as a defined contribution plan, given the limited information regarding the allocation of fund assets to member institutions and beneficiaries.

Defined benefit plans

Provisions for pension obligations are measured, separately for each pension plan, using the projected unit credit method on the basis of actuarial reports. The fair value of plan assets is deducted from the present value of pension obligations, reflecting the asset ceiling rules if there are any excess plan assets. This results in the net defined benefit liability or asset. Net interest expense for the financial year is calculated by applying the discount rate determined at the beginning of the financial year to the net defined benefit liability determined as at that date.

The relevant discount rate is determined by reference to the return on long-term corporate bonds with a rating of at least AA (Moody's Investors Service, Standard & Poor's, Fitch Ratings and Dominion Bond Rating Service) on the basis of the information provided by Bloomberg, and a maturity that corresponds approximately to the maturity of the pension obligations. Moreover, the bonds must be denominated in the same currency as the underlying pension obligation. Measurement of the pension obligations in euros is, on principal, based on a discount rate of 1.75 per cent, which is determined according to the Towers Watson "GlobalRate:Link" methodology updated in line with the current market trend.

Actuarial gains or losses resulting from changes in expectations with regard to life expectancy, pension trends, salary trends and the discount rate as compared with the estimate at the beginning of the period or compared with the actual development during the period are recognised directly in other comprehensive income. Actuarial gains and losses recognised in other comprehensive income may not be reclassified to profit or loss in subsequent periods. Similarly, differences between the (interest) income on plan assets determined at the beginning of the period and the return on plan assets actually recorded at the end of the period are also recognised directly in other comprehensive income. The actuarial gains or losses and the difference between the expected and the actual return or loss on plan assets are recognised in the revaluation surplus.

Other long-term benefits for employees and members of executive boards (total disability pension, transitional payments and surviving dependants' pensions) are also measured using the projected unit credit method. Actuarial gains and losses and past service cost are recognised immediately and in full through profit or loss.

Other provisions

Provisions are recognised if the Group has a present obligation from an event in the past, it is probable that there will be an outflow of resources embodying economic benefits to settle the obligation and the amount of this obligation can be estimated reliably. The amount of the provision corresponds to the best estimate of the expenditure required to settle the obligation at the reporting date.

A restructuring provision is only recognised when an entity has a detailed formal plan for the restructuring and has raised a valid expectation in those affected that the restructuring measures will be implemented, for example by starting to implement that plan or by announcing its main features to those affected by it.

Contingent liabilities are not recognised, but are rather disclosed unless the possibility of an outflow of resources embodying economic benefits is remote.

Share-based payment

Deutsche Börse Group operates the Group Share Plan (GSP), the Stock Bonus Plan (SBP), the Co-Performance Investment Plan (CPIP) and the Performance Share Plan (PSP) as well as the Long-term Sustainable Instrument (LSI) and the Restricted Stock Units (RSU), which provide share-based payment components for employees, senior executives and executive board members.

Group Share Plan (GSP)

Under the GSP, shares are generally granted at a discount to the market price to non-executive staff of Deutsche Börse AG and of participating subsidiaries who have been employed on a non-temporary basis since at least 31 March of the previous year. The expense of this discount is recognised in the income statement at the grant date.

Stock Bonus Plan (SBP)

The previous SBP for members of the Executive Board of Deutsche Börse AG was terminated prematurely on 31 December 2015. The SBP for senior executives of Deutsche Börse AG and of participating subsidiaries is being continued. It grants a long-term remuneration component in the form of so-called SBP shares. These are generally accounted for as share-based payments for which Deutsche Börse AG has a choice of settlement in cash or equity instruments for certain tranches. Tranches due in previous years were each settled in cash. Regarding the 2016 tranche, cash settlement has been agreed upon too. Under these circumstances, it is presently presumed in accordance with IFRS 2 that all SBP shares will be settled in cash. Accordingly, Deutsche Börse Group has measured the SBP shares as cash-settled share-based payment transactions. The cost of the options is estimated using an option pricing model (fair value measurement) and recognised in staff costs in the consolidated income statement. Any right to payment of a stock bonus only vests after the expiration of the service or performance period of four years on which the plan is based.

Co-Performance Investment Plan (CPIP)

Within the framework of the CPIP, the CEO of Deutsche Börse AG was offered a one-time participation in 2015. The appropriate number of phantom shares is calculated based on the number of shares granted and the increase of Deutsche Börse AG's consolidated net income, as well as on the relative performance of the total shareholder return (TSR) on Deutsche Börse AG's shares compared with the total shareholder return of the STOXX Europe 600 Financials Index constituents. The shares are subject to a performance period of five years. The subsequent payment of the stock bonus will be settled in cash.

Performance Share Plan (PSP)

The PSP was launched during the year under review; it replaces the previous SBP for members of the Executive Board of Deutsche Börse AG as well as selected senior executives and employees of Deutsche Börse AG and of participating subsidiaries. The number of phantom PSP shares to be allocated is calculated based on the number of shares granted and the increase of net profit for the period attributable to Deutsche Börse AG shareholders, as well as on the relative performance of the total shareholder return (TSR) on Deutsche Börse AG's shares compared with the total shareholder return of the STOXX Europe 600 Financials Index constituents. The shares are subject to a performance period of five years. The subsequent payment of the stock bonus will be settled in cash. For further details on this plan, please see the section "Measurement of target achievement for performance shares" in the Remuneration report.

Long-term Sustainable Instrument (LSI)

In order to meet regulatory requirements, the LSI for risk takers (employees whose professional activities have a material impact on the operations of institutions) was introduced in the financial year 2014 (see note 39). LSI shares are generally settled in cash. Regarding the 2014 tranche, the respective companies have the option to fulfil their obligations by delivering shares of Deutsche Börse AG. Regarding the 2015 and 2016 tranches, cash settlement has been agreed upon as mode of settlement. Deutsche Börse Group thus measures the LSI shares as cash-settled share-based payment transactions. The options are measured using an option pricing model (fair value measurement). Any right to payment of a stock bonus only vests after the expiration of the one-year service period on which the plan is based, taking certain waiting periods into account.

Restricted Stock Units (RSU)
In the 2016 financial year, a RSU tranche for so-called risk takers was launched in addition to another LSI tranche. The new RSU program fulfils the applicable regulatory requirements (see note 39). RSU shares are settled in cash; Deutsche Börse Group thus measures the RSU shares as cash-settled share-based payment transactions. The options are measured using an option pricing model (fair value measurement). Any right to payment of a stock bonus only vests after the expiration of the one-year service period on which the plan is based, taking a three-year retention period and a one-year waiting period into account.

Deferred tax assets and liabilities

Deferred tax assets and liabilities are computed using the balance sheet liability approach. The deferred tax calculation is based on temporary differences between the carrying amounts of assets and liabilities in the IFRS financial statements and their tax base that will lead to a future tax liability or benefit when assets are used or sold or liabilities are settled.

The deferred tax assets or liabilities are measured using the tax rates that are currently expected to apply when the temporary differences reverse, based on tax rates that have been enacted or substantively enacted by the reporting date. Deferred tax assets are recognised for the unused tax loss carryforwards only to the extent that it is probable that future taxable profit will be available. Deferred tax assets and deferred tax liabilities are offset where a legally enforceable right to set off current tax assets against current tax liabilities exists and the deferred tax assets and deferred tax liabilities relate to income taxes levied by the same taxation authority.

Leases

Leases are classified as operating leases or finance leases. A lease is classified as a finance lease if it transfers substantially all the risks and rewards incidental to ownership of the asset from the lessor to the lessee. All other leases are classified as operating leases.

Leased assets and the associated liabilities are recognised at the lower of the fair value and present value of the minimum lease payments if the criteria for classification as a finance lease are met. The leased asset is depreciated or amortised using the straight-line method over its useful life or the lease term, if shorter. In subsequent periods, the liability is measured using the effective interest method.

Expenses incurred in connection with operating leases are recognised as an expense on a straight-line basis over the lease term.

Consolidation

Deutsche Börse AG and all subsidiaries directly or indirectly controlled by Deutsche Börse AG are included in the consolidated financial statements. Deutsche Börse Group controls a company if it is exposed to variable returns resulting from its involvement with the company in question or has rights to such returns and is able to influence them by using its power over the company.

Initial consolidation of subsidiaries in the course of business combinations uses the purchase method. The acquiree's identifiable assets, liabilities and contingent liabilities are recognised at their acquisition date fair values. Any excess of cost over the acquirer's interest in the fair value of the subsidiary's net identifiable assets is recognised as goodwill. Goodwill is reported in subsequent periods at cost less accumulated impairment losses.

Intra-Group assets and liabilities are eliminated. Income arising from intragroup transactions is eliminated against the corresponding expenses. Profits or losses arising from deliveries of intragroup goods and services, as well as dividends distributed within the Group, are eliminated. Deferred taxes for consolidation adjustments are recognised where these are expected to reverse in subsequent years.

Interests in equity attributable to non-controlling interest shareholders are carried under "non-controlling interests" within equity. Where these are classified as "puttable instruments", they are reported under "liabilities".

Currency translation

Transactions denominated in a currency other than a company's functional currency are translated into the functional currency at the spot exchange rate applicable at the transaction date. At the reporting date, monetary balance sheet items in foreign currency are measured at the exchange rate at the reporting date, while non-monetary balance sheet items recognised at historical cost are measured at the exchange rate on the transaction date. Non-monetary balance sheet items measured at fair value are translated at the exchange rate prevailing at the valuation date. Exchange rate differences are recorded as other operating income or expense in the period in which they arise unless the underlying transactions are hedged. Gains and losses from a monetary item that forms part of a net investment in a foreign operation are recognised directly in "accumulated profit".

The annual financial statements of companies whose functional currency is not the euro are translated into the reporting currency as follows: assets and liabilities are translated into euros at the closing rate. The items in the consolidated income statement are translated at the average exchange rates for the reporting period. Resulting exchange differences are recognised directly in "accumulated profit".
When the relevant subsidiary is sold, these exchange rate differences are recognised in net profit for the period attributable to shareholders of the parent company in which the deconsolidation gain or loss is realised.

The following euro exchange rates of consequence to Deutsche Börse Group were applied:

Exchange rates

		Average rate 2016	Average rate 2015	Closing price as at 31 Dec 2016	Closing price as at 31 Dec 2015
Swiss francs	CHF	1.0904	1.0644	1.0732	1.0818
US dollars	USD (US$)	1.1029	1.1046	1.0522	1.0924
Czech koruna	CZK	27.0426	27.2792	27.0198	27.0250
Singapore dollar	SGD	1.5247	1.5220	1.5222	1.5430
British pound	GBP (£)	0.8223	0.7244	0.8561	0.7366

Any goodwill arising on the acquisition of a foreign operation and any fair value adjustments to the carrying amounts of assets and liabilities arising from initial consolidation are reported in the functional currency of the foreign operation and translated at the closing rate.

Key sources of estimation uncertainty and management judgements

The application of accounting policies, the presentation of assets and liabilities, and the recognition of income and expenses requires the Executive Board to make certain judgements and estimates. Adjustments in this context are taken into account in the period the change was made as well as in subsequent periods, where necessary.

Impairment
Deutsche Börse Group tests goodwill as well as intangible assets with indefinite useful lives for impairment and intangible assets not yet available for use at least once a year. Certain assumptions have to be made to determine the recoverable amount, which is calculated regularly using discounted cash flow models. This is based on the relevant business plans with a time horizon of normally three to five years. These plans in turn contain projections of the future financial performance of the assets and cash-generating units. If their actual financial performance fails to meet these expectations, corresponding adjustments may be necessary. For further information on the effects of changes in the discount rate and further assumptions, please see note 11.

Pensions and other employee benefits
Pensions and other employee benefits are measured using the projected unit credit method, which calculates the actuarial present value of the accumulated benefit obligation. Calculating the present value requires certain actuarial assumptions (such as the discount rate, staff turnover rate, salary and pension trends) to be made. The current service cost and the net interest expense or income for the subsequent period are calculated on the basis of these assumptions. Any departures from these assumptions, for example because of changes in the macroeconomic environment, are recognised in other comprehensive income in the following financial year. A sensitivity analysis of the key factors is presented in note 22.

Income taxes

Deutsche Börse Group is subject to the tax laws of those countries in which it operates and generates income. Considerable management judgement has to be exercised in determining the tax provisions. For a large number of transactions and calculations, no definitive tax-relevant information is available at the time these figures are determined. Deutsche Börse Group recognises corresponding provisions for risks expected from external tax audits. If the final results of these external audits differ from the estimates, the resulting effects on current and deferred taxes are recognised in the period in which they become known.

Legal risks

The companies of Deutsche Börse Group are subject to litigation. Such litigation may lead to orders to pay against the entities of the Group. If it is more likely than not that an outflow of resources will occur, a provision will be recognised based on an estimate of the most probable amount necessary to settle the obligation if such amount is reasonably estimable. Management judgement includes the determination whether there is a possible obligation from past events, the evaluation of the probability that an outflow will occur and the estimation of the potential amount. As the outcome of litigation is usually uncertain, the judgement is reviewed continuously. For further information on other risks please see note 37.

Group Share Plan, Stock Bonus Plan and Long-term Sustainable Instrument

Note 39 contains disclosures on the valuation model used for the stock options. Where the estimates of the valuation parameters originally applied differ from the actual values available when the options are exercised, adjustments are necessary; such adjustments are recognised in the consolidated income statement for the period if they relate to cash-settled share-based payment transactions.

Provisions

The probability of utilisation applied when recognising provisions for expected losses from rental agreements is estimated (see note 24). When recognising personnel-related restructuring provisions, certain assumptions were made, for example with regard to the fluctuation rate, the discount rate and salary trends. If the actual values were to deviate from these assumptions, adjustments may be necessary.

Consolidated income statement disclosures

4. Net revenue

Composition of net revenue

	Sales revenue		Net interest income from banking business	
	2016 €m	(restated) 2015 €m	2016 €m	2015 €m
Eurex				
Equity index derivatives	473.8	438.3	0	0
Interest rate derivatives	190.8	184.4	0	0
Equity derivatives	41.4	39.7	0	0
Commodities (EEX)	233.9	190.1	–0.1	–1.8
Foreign exchange (360T)[1]	64.1	15.8	0	0
Repo business	21.8	27.7	0	0
Other	23.9	18.7	21.5	18.3
	1,049.7	**914.7**	**21.4**	**16.5**
Xetra				
Trading	125.9	148.0	0	0
Central counterparty for equities	32.5	36.0	0	0
Listing	15.4	13.5	0	0
Other	13.0	13.6	0	0
	186.8	**211.1**	**0**	**0**
Clearstream				
International business (ICSD)	555.7	541.3	62.6	34.1
Domestic business (CSD)	127.9	132.8	0	0
Investment Funds Services	128.6	127.0	0	0
Global Securities Financing	113.0	100.0	0	0
	925.2	**901.1**	**62.6**	**34.1**
Market Data + Services				
Data Services	184.0	186.0	0	0
Index	127.2	114.0	0	0
Infrastructure Services	132.7	139.0	0	0
	443.9	**439.0**	**0**	**0**
Total	**2,605.6**	**2,465.9**	**84.0**	**50.6**
Consolidation of internal net revenue	**–48.3**	**–46.0**	**0**	**0**
Group	**2,557.3**	**2,419.9**	**84.0**	**50.6**

1) Revenue from FX derivatives consists of revenue from 360 Treasury Systems AG which was initially consolidated as at 15 October 2015.

	Other operating income		Volume-related costs		Net revenue	
	2016 €m	(restated) 2015 €m	2016 €m	(restated) 2015 €m	2016 €m	(restated) 2015 €m
	0.1	0	−37.4	−35.6	436.5	402.7
	0	0	−1.1	−1.1	189.7	183.3
	0	0	−3.5	−3.4	37.9	36.3
	2.9	2.7	−21.1	−15.7	215.6	175.3
	0.5	0	−0.4	−0.1	64.2	15.7
	0	0	0	0	21.8	27.7
	23.4	12.2	−2.3	−2.7	66.5	46.5
	26.9	**14.9**	**−65.8**	**−58.6**	**1,032.2**	**887.5**
	0	0.1	−20.1	−23.6	105.8	124.5
	0	0	−5.8	−6.3	26.7	29.7
	0	0.1	0	0	15.4	13.6
	6.6	6.5	−2.9	−3.1	16.7	17.0
	6.6	**6.7**	**−28.8**	**−33.0**	**164.6**	**184.8**
	3.2	7.0	−152.1	−152.1	469.4	430.3
	0	0	−12.7	−8.5	115.2	124.3
	0	0	−4.3	−2.9	124.3	124.1
	0	0.6	−40.0	−32.9	73.0	67.7
	3.2	**7.6**	**−209.1**	**−196.4**	**781.9**	**746.4**
	6.3	2.5	−28.1	−28.0	162.2	160.5
	1.5	1.0	−13.7	−11.9	115.0	103.1
	1.2	4.0	−1.1	−5.0	132.8	138.0
	9.0	**7.5**	**−42.9**	**−44.9**	**410.0**	**401.6**
	45.7	36.7	−346.6	−332.9	2,388.7	2,220.3
	−13.1	−13.1	61.4	59.1	0	0
	32.6	23.6	−285.2	−273.8	2,388.7	2,220.3

Composition of net interest income from banking business

	2016 €m	2015 €m
Interest income from positive interest yields	**75.1**	**33.7**
Loans and receivables	44.5	16.7
Available-for-sale financial assets	4.5	2.7
Financial assets or liabilities measured at fair value through profit or loss	26.1	14.3
Interest expenses from positive interest yields	**–21.4**	**–4.4**
Financial liabilities	–19.7	–6.4
Financial assets or liabilities measured at fair value through profit or loss	–1.7	2.0
Interest income from negative interest yields	**191.9**	**163.0**
Loans and receivables	185.4	163.0
Financial assets or liabilities measured at fair value through profit or loss	6.5	0
Interest expenses from negative interest yields	**– 161.6**	**– 141.7**
Financial liabilities	– 160.2	– 141.7
Financial assets or liabilities measured at fair value through profit or loss	–1.4	0
Total	**84.0**	**50.6**

Composition of other operating income

	2016 €m	(restated) 2015 €m
Income from exchange rate differences	6.4	1.9
Income from impaired receivables	1.3	2.7
Rental income from subleases	0.8	0.8
Income from agency agreements	0.6	0.4
Miscellaneous	23.5	17.8
Total	**32.6**	**23.6**

For details of rental income from subleases see note 38.

Miscellaneous other operating income includes income from cooperation agreements and from training as well as valuation adjustments.

Volume-related costs comprise partial or advance services that Deutsche Börse Group purchases from third parties, and which it markets as part of its own value chain. They indirectly depend on the development of volume trends and sales revenue.

5. Staff costs

Composition of staff costs

	2016 €m	(restated) 2015 €m
Wages and salaries	486.2	481.9
Social security contributions, retirement and other benefits	99.5	117.8
Total	**585.7**	**599.7**

Staff costs include costs of €12.7 million (2015: €59.1 million) recognised in connection with efficiency programmes as well as costs of €25.4 million (2015: €6.5 million) for 360T (which has been consolidated since 1 October 2015). The remaining increase is due to a rise in the number of employees (see also note 43), the remuneration of the Executive Board and higher pay-out of bonuses.

6. Other operating expenses

Composition of other operating expenses

	2016 €m	(restated) 2015 €m
Costs for IT services providers and other consulting services	264.9	250.5
IT costs	102.2	97.5
Premises expenses	70.3	66.6
Non-recoverable input tax	52.2	43.4
Travel, entertainment and corporate hospitality expenses	26.5	25.8
Advertising and marketing costs	15.8	19.9
Non-wage labour costs and voluntary social benefits	14.5	15.6
Insurance premiums, contributions and fees	13.9	17.0
Cost of exchange rate differences	4.1	3.5
Cost of agency agreements	3.4	4.0
Supervisory Board remuneration	2.6	4.8
Miscellaneous	30.3	15.9
Total	**600.7**	**564.5**

Costs for IT service providers and other consulting services relate mainly to expenses in conjunction with software development. An analysis of development costs is presented in note 7. These costs also contain costs of strategic and legal consulting services as well as of audit activities.

Composition of fees paid to the auditor

	2016 Total €m	2016 Germany €m	2015 Total €m	2015 Germany €m
Statutory audits	3.0[1]	2.0	3.2	1.6
Other assurance or valuation services	1.8[2]	1.8	1.3	0.8
Tax advisory services	0.9	0.3	1.1	0.6
Other services	0.2	0	0.6	0.5
Total	**5.9**	**4.1**	**6.2**	**3.5**

1) Thereof €0.2 million for 2015
2) Thereof €0.2 million for 2015

The "other assurance or valuation services" item includes an expense of €1.4 million arising from services in connection with the proposed business combination with London Stock Exchange Group plc.

7. Research and development costs

Own expenses capitalised relate solely to development costs of internally developed software, involving the following systems and projects in the individual segments:

Research and development costs

	Total expense for software development		of which capitalised	
	2016 €m	(restated) 2015 €m	2016 €m	(restated) 2015 €m
Eurex				
Trading platform T7 for Xetra/Eurex	6.5	5.4	3.6	3.2
Eurex Clearing Prisma	7.2	24.4	2.1	10.3
EEX software	9.6	6.9	5.2	3.6
EurexOTC Clear	16.3	33.6	8.3	15.0
360T	8.8	0.6	2.5	0.6
Other Eurex software	9.9	10.9	5.4	6.8
	58.3	**81.8**	**27.1**	**39.5**
Xetra				
Trading platform T7 for Xetra/Eurex	7.2	0.4	3.9	0.2
CCP releases	1.9	1.0	0	0
Other Xetra software	9.9	9.9	4.0	4.4
	19.0	**11.3**	**7.9**	**4.6**
Clearstream				
Collateral Management and Settlement	34.0	48.3	20.5	20.5
Custody	21.7	27.3	15.1	16.7
Connectivity	15.7	21.2	8.1	10.4
Investment funds	2.8	3.4	2.1	1.6
GSF	1.6	0	1.0	0
	75.8	**100.2**	**46.8**	**49.2**
Market Data + Services	**17.0**	**6.4**	**6.6**	**1.1**
Research expense	**0.9**	**2.5**	**0**	**0**
Total	**171.0**	**202.2**	**88.4**	**94.4**

8. Net income from equity investments

Composition of net income from equity investments

	2016 €m	(restated) 2015 €m
Equity method-accounted result of associates		
Tradegate AG Wertpapierhandelsbank	1.8	1.8
Deutsche Börse Commodities GmbH	0.3	0.3
LuxCSD S.A.	0.2	0.1
Digital Vega FX Ltd	0	0.2
Zimory GmbH in Liquidation	0	–3.2
ZDB Cloud Exchange GmbH in Liquidation	0	–3.1
figo GmbH	–0.1	0
BrainTrade Gesellschaft für Börsensysteme mbH	–0.4	0.3
R5FX Ltd	–1.1	–0.4
China Europe International Exchange AG	–1.3	–0.2
Global Markets Exchange Group International, LLP	–6.0	–0.6
Total income from equity method measurement[1]	**–6.6**	**–4.8**
Equity method-accounted result of joint ventures		
Bondcube Limited	0	–5.4
Total income from equity method measurement[1]	**0**	**–5.4**
Net income from associates and joint ventures	**–6.6**	**–10.2**
Net income due to the change of status of EPEX SPOT SE[2]	**0**	**5.3**
Net income from other equity investments	**43.5**	**3.4**
Net income from equity investments	**36.9**	**–1.5**

1) Including impairment losses
2) Change of status from an associate to a fully consolidated company effective 1 January 2015 (see also note 2 in the 2015 corporate report)

Net income from associates includes €6.7 million in impairment losses (2015: €2.6 million) attributable to the investments in Global Markets Exchange Group International, LLP and R5FX Ltd. The negative development of the Group's investments was due in particular to unsatisfactory economic development in the 2016 financial year and the correspondingly deteriorating economic outlook expected by Group companies. The recoverable amount was determined on the basis of fair value less costs of disposal. It was calculated using net asset values (level 3 inputs). The impairment losses were recognised in the result from associates and are allocated to the Eurex segment.

Net income from other investments includes in particular €38.4 million due to the disposal of the stake in BATS Global Markets, Inc. in the fourth quarter of 2016.

During the year under review, the company received dividends of €1.7 million (2015: €0.9 million) from investments in associates, and €5.1 million (2015: €3.3 million) from other investments.

9. Financial result

Composition of financial income

	2016 €m	(restated) 2015 €m
Other interest and similar income	2.6	1.6
Interest income on bank balances classified as "loans and receivables"	0.6	0.8
Interest income on tax refunds	0.5	0.8
Other interest income on receivables classified as "loans and receivables"	0.4	2.3
Income from available-for-sale securities	0.3	0.6
Income from valuation of derivatives	0.1	0
Interest income on non-current loans classified as "loans and receivables"	0.1	0
Total	**4.6**	**6.1**

Composition of financial expense

	2016 €m	(restated) 2015 €m
Interest expense on non-current loans[1]	56.3	49.6
Interest expense on taxes	11.9	6.3
Expenses from the unwinding of the discount on pension provisions	2.9	1.3
Interest-equivalent expenses for derivatives held as hedging instrument[1]	2.8	2.8
Transaction costs of non-current liabilities[1]	2.8	1.1
Interest expense from negative interests[1]	1.6	0.3
Interest expense on current liabilities[1]	0.6	0.3
Other interest expense[1]	0.3	1.9
Total	**79.2**	**63.6**

1) Measured at amortised cost

10. Income tax expense

Composition of income tax expense (main components)

	2016 €m	(restated) 2015 €m
Current income taxes:		
of the reporting period	293.2	227.6
from prior periods	0.4	–1.4
Deferred tax (income)/expense	–9.1	1.3
Total	**284.5**	**227.5**

The total actual tax expenses in the amount of €293.6 million include domestic tax expenses of €151.9 million and foreign tax expenses of €141.7 million (2015: domestic tax expenses €180.3 million, foreign tax expenses €45.9 million). The total deferred tax income in the amount of €–9.1 million includes domestic tax expenses of €10.4 million and foreign tax income of €–19.5 million (2015: domestic tax income €–8.8 million, foreign tax expenses €10.1 million).

Tax rates of 28 to 32 per cent (2015: 28 to 32 per cent) were used in the reporting period to calculate deferred taxes for the German companies. These reflect trade income tax at multipliers of 330 to 460 per cent (2015: 330 to 460 per cent) on the trade tax base amount of 3.5 per cent (2015: 3.5 per cent), corporation tax of 15 per cent (2015: 15 per cent) and the 5.5 per cent solidarity surcharge (2015: 5.5 per cent) on corporation tax.

A tax rate of 29.2 per cent (2015: 29.2 per cent) was used for the Luxembourg companies, reflecting trade income tax at a rate of 6.7 per cent (2015: 6.7 per cent) and corporation tax at 22.5 per cent (2015: 22.5 per cent).

Tax rates of 12.5 to 40.0 per cent (2015: 12.5 to 45.0 per cent) were applied to the companies in the remaining countries; see note 2.

The following table shows the carrying amounts of deferred tax assets and liabilities as well as the related tax expenses recognised in profit or loss or in other comprehensive income.

Composition of deferred taxes

	Deferred tax assets		Deferred tax liabilities		Exchange rate differences	Deferred tax expense/(income)		Tax expense/(income) recognised in other comprehensive income	
	2016	2015	2016	2015	2016	2016	(restated) 2015	2016	2015
	€m	€m	€m	€m	€m	€m	€m	€m	€m
Provisions for pensions and other employee benefits	60.9	56.8	0	0	0	–1.1	–3.1	–3.0[1]	0.1
Other provisions	5.8	25.7	0	0	0	1.9	–3.9	18.0[2]	0
Interest-bearing liabilities	0	9.1	–1.8	0	0	10.9	–6.2	0	0
Intangible assets	0	0	–34.6	–38.3	0	1.3	7.5	–5.0[2]	0
Intangible assets from purchase price allocation	0	0	–197.8[3]	–396.0	0	–4.7	–4.0	–192.4[2]	0
Non-current assets	9.7	8.8	0	0	0	–2.7	–2.2	1.8[2]	0
Investment securities	0	0	–20.8	–40.7	–1.7	–42.2	1.1	24.0[4]	3.3
Other non-current assets	3.5	1.7	0	0	0	–2.5	0	0.7[5]	0.6
Other liabilities	1.7	1.7	0	0	0	0	–0.2	0	0
Losses carried forward	1.3	87.7	0	0	0.2	30.0	12.3	56.2[6]	0
Exchange- rate differences	0	0	–1.1	–149.5	0	0	0	–148.4[7]	64.4
Gross amounts	**82.9**	**191.5**	**–256.1**	**–624.5**	**–1.5**	**–9.1**	**1.3**	**–248.1**	**68.4**
Deferred taxes set off	–20.4	–43.2	20.4	43.2	0	0	0	0	0
Total	**62.5**	**148.3**	**–235.7**	**–581.3**	**–1.5**	**–9.1**	**1.3**	**–248.1**	**68.4**

1) Thereof, –€7.8 million is disclosed separately in the consolidated statement of changes in equity under “revaluation surplus”, and disposal of €4.8 million relating to the deconsolidation of International Securities Exchange Holdings, Inc. (ISE)
2) Disposal relating to the deconsolidation of ISE
3) Thereof, –€1.1 million due to acquisitions from business combinations relating to the initial consolidation of companies within the EEX group
4) Thereof, €41.4 million is disclosed separately in the consolidated statement of changes in equity under “revaluation surplus”, and disposal of €–17.4 million relating to the deconsolidation of ISE
5) Separate disclosure in the consolidated statement of changes in equity under “revaluation surplus”
6) Disposal relating to the deconsolidation of U.S. Exchange Holdings, Inc.
7) Separate disclosure in the consolidated statement of changes in equity under “accumulated profit”; thereof €–147.2 million (2015: €64.9 million) from discontinued operations

Deferred tax liabilities have not been recognised in respect of the tax on future dividends that may be paid from retained earnings by subsidiaries and associated companies. In accordance with section 8b (5) of the Körperschaftsteuergesetz (KStG, the German Corporation Tax Act), 5 per cent of dividends and similar income received by German companies is treated as non-deductible expenses for tax purposes. There were no unrecognised deferred tax liabilities on future dividends of subsidiaries and associates as well as gains on the disposal of subsidiaries and associates in the reporting period (2015: nil).

Reconciliation from expected to reported tax expense

	2016 €m	(restated) 2015 €m
Expected income taxes derived from earnings before tax	279.1	228.3
Tax losses utilised and loss carryforwards not recognised for tax purposes	–0.7	0.7
Recognition of deferred taxes in respect of unrecognised tax loss carryforwards	–0.7	–0.5
Change in valuation allowance for deferred tax assets	–4.0	0
Tax increases due to other non-tax-deductible expenses	13.6	11.0
Effects of different tax rates	12.9	1.6
Effects from changes in tax rates	0.1	–0.1
Tax decreases due to dividends and income from the disposal of equity investments	–15.9	–13.7
Other	–0.3	1.6
Income tax expense arising from current year	**284.1**	**228.9**
Prior-period income taxes	0.4	–1.4
Income tax expense	**284.5**	**227.5**

To determine the expected tax expense, earnings before tax have been multiplied by the composite tax rate of 27 per cent assumed for 2016 (2015: 26 per cent).

At the end of the financial year, accumulated unused tax losses amounted to €21.3 million (2015: €60.6 million), for which no deferred tax assets were recognised. The unused tax losses are attributable to domestic losses totalling €2.6 million and to foreign tax losses totalling €18.7 million (2015: domestic tax losses €3.8 million, foreign tax losses €56.8 million). Tax losses of €1.1 million were utilised in 2016 (2015: €0.7 million).

The losses can be carried forward in Germany subject to the minimum taxation rules, and in Luxembourg indefinitely according to the current legal situation. Losses in other countries can be carried forward for periods of up to 20 years.

Consolidated balance sheet disclosures

11. Intangible assets

Intangible assets (part 1)

	Purchased software €m	Internally developed software €m	Goodwill €m	Payments on account and construction in progress[1] €m	Other intangible assets €m	Total €m
Historical cost as at 1 Jan 2015	**230.7**	**727.1**	**2,235.7**	**100.2**	**2,174.4**	**5,468.1**
Acquisitions from business combinations[2]	0.3	15.3	554.2	0.8	359.6	930.2
Additions	13.5	7.0	0	91.6	0	112.1
Disposals	–1.0	–1.1	0	0	0	–2.1
Reclassifications	1.0	37.7	0	–38.7	0	0
Exchange rate differences	0.8	4.8	119.6	0.2	181.3	306.7
Historical cost as at 31 Dec 2015	**245.3**	**790.8**	**2,909.5**	**154.1**	**2,715.3**	**6,815.0**
Acquisitions through business combinations[3]	0	0	3.3	0	4.3	7.6
Disposals from change in scope of consolidation[4]	–0.2	–2.5	–16.7	0	–0.2	–19.6
Reclassification into “assets held for sale”[5]	–5.5	–46.7	–153.8	–5.8	–1,741.2	–1,953.0
Additions	14.9	11.7	0	78.2	0.1	104.9
Disposals	0	–3.6	–0.1	–1.7	0	–5.4
Reclassifications	6.2	27.5	0	–33.8	0.1	0
Exchange rate differences	–0.1	–1.3	–21.1	–0.2	–46.9	–69.6
Historical cost as at 31 Dec 2016	**260.6**	**775.9**	**2,721.1**	**190.8**	**931.5**	**4,879.9**

1) Additions to payments on account and construction in progress in the year under review relate exclusively to internally developed software.
2) This relates primarily to additions within the scope of the business combination with 360 Treasury Systems AG and its subsidiaries, as well as within the scope of initial consolidation of Powernext SA, EPEX SPOT group and APX Holding group; see also note 2.
3) This relates primarily to additions within the scope of initial consolidation of Power Exchange Central Europe a.s., Gaspoint Nordic A/S and PEGAS CEGH Gas Exchange Services GmbH; see also note 2.
4) This relates to disposals made within the scope of the sale of shares held in Infobolsa S.A.; see also note 2.
5) This relates exclusively to disposals made within the scope of the sale of shares held in U.S. Exchange Holdings, Inc., as well as an asset deal regarding the disposal of the business operations of Market News International, Inc. and its two subsidiaries; see also note 2.

Intangible assets (part 2)

	Purchased software €m	Internally developed software €m	Goodwill €m	Payments on account and construction in progress[1] €m	Other intangible assets €m	Total €m
Historical cost as at 31 Dec 2016 brought forward	**260.6**	**775.9**	**2,721.1**	**190.8**	**931.5**	**4,879.9**
Amortisation and impairment losses as at 1 Jan 2015	**194.5**	**542.2**	**10.7**	**0**	**1,194.2**	**1,941.6**
Amortisation	16.3	52.7	0	0	33.3	102.3
Impairment losses	1.2	1.5	0	1.6	0	4.3
Disposals	–0.9	–0.8	0	0	0	–1.7
Exchange rate differences	0.4	3.6	0	0	131.5	135.5
Amortisation and impairment losses as at 31 Dec 2015	**211.5**	**599.2**	**10.7**	**1.6**	**1,359.0**	**2,182.0**
Amortisation	17.5	49.3	0	0	27.8	94.6
Impairment losses	0	3.6	0	0.3	0.3	4.2
Disposals from change in scope of consolidation[4]	–0.2	–2.5	–10.7	0	–0.1	–13.5
Reclassification into “assets held for sale”[5]	–5.0	–38.3	0	0	–1,281.0	–1,324.3
Disposals	0	–1.2	0	0	0	–1.2
Reclassifications	1.4	–1.4	0	0	0	0
Exchange rate differences	–0.1	–1.1	0	0	–34.4	–35.6
Amortisation and impairment losses as at 31 Dec 2016	**225.1**	**607.6**	**0**	**1.9**	**71.6**	**906.2**
Carrying amount as at 31 Dec 2015	33.8	191.6	2,898.8	152.5	1,356.3	4,633.0
Carrying amount as at 31 Dec 2016	**35.5**	**168.3**	**2,721.1**	**188.9**	**859.9**	**3,973.7**

Software, payments on account and construction in progress

Additions to and reclassifications of software largely concern the development of a pan-European securities settlement platform (TARGET2-Securities) within the Clearstream and Xetra segments as well as the development of the risk management and clearing system (Eurex Clearing Prisma) and the T7 derivatives trading platform within the Eurex segment.

Carrying amounts of material software and construction in progress as well as remaining amortisation periods of software

	Carrying amount as at		Remaining amortisation period as at	
	31 Dec 2016 €m	31 Dec 2015 €m	31 Dec 2016 years	31 Dec 2015 years
Eurex				
Derivatives trading platform T7	26.8	29.8	2.9 – 5.9	4.9 – 7.0
Eurex Clearing Prisma Release 1.0	23.2	29.0	4.0 – 5.0	2.3 – 6.5
360T trading platform	14.5	14.1	5.0 – 7.0	6.0 – 7.0
C7 Release 3.0	14.3	13.4	6.4	n.a.
Eurex Clearing Prisma Release 2.0	9.9	12.1	5.0 – 6.0	6.4 – 6.9
ISE trading platform including applications	7.5	20.7	2.0	2.0 – 5.0
Clearstream				
TARGET2-Securities	89.0	71.8	n.a.	n.a.
1CAS Custody & Portal	24.7	9.6	n.a.	n.a.
MALMO	17.8	20.8	4.9	5.0
Single Network	10.1	10.1	n.a.	n.a.
One CLS Settlement & Reporting (1 CSR)	11.6	5.1	n.a.	n.a.
Xetra				
TARGET2-Securities	10.0	6.5	n.a.	n.a.

In addition to event-driven impairment tests on all intangible assets, intangible assets not yet available for use are tested for impairment at least annually. Impairment losses of €3.9 million (2015: €4.3 million) needed to be recognised in 2016. It is disclosed in the "depreciation, amortisation and impairment losses" item and relates to the Xetra, Clearstream and Eurex segments. The recoverable amount was determined based on fair value less costs of disposal, using a discounted cash flow model (level 3 inputs).

Goodwill and other intangible assets from business combinations

Changes in goodwill and other intangible assets classified by business combinations

	Clearstream €m	ISE €m	360T €m	EEX €m	STOXX €m	Miscella-neous €m	Total €m
Goodwill							
Balance as at 1 Jan 2016	1,063.8	1,161.3	529.0	33.3	32.6	78.8	2,898.8
Acquisitions through business combinations	0	0	0	0	0	3.3	3.3
Reclassification into “assets held for sale”	0	–153.8	0	0	0	–6.0	–159.8
Exchange rate differences	0	–20.1	0	0	0	–1.1	–21.2
Balance as at 31 Dec 2016	**1,063.8**	**987.4**	**529.0**	**33.3**	**32.6**	**75.0**	**2,721.1**
Other intangible assets							
Balance as at 1 Jan 2016	0	474.5	250.1	67.2	438.5	126.0	1,356.3
Acquisitions through business combinations	0	0	0	0	0	4.3	4.3
Reclassification into “assets held for sale”	0	–459.3	0	0	0	–0.9	–460.2
Additions	0	0	0	0	0	0.1	0.1
Amortisation	0	–2.7	–10.1	–4.7	–3.1	–7.2	–27.8
Impairments	0	0	0	0	0	–0.3	–0.3
Exchange rate differences	0	–12.5	0	0	0	0	–12.5
Balance as at 31 Dec 2016	**0**	**0**	**240.0**	**62.5**	**435.4**	**122.0**	**859.9**

Other intangible assets are divided into the following categories:

Changes in other intangible assets by category

	Exchange licences €m	Trade names €m	Member and customer relationships €m	Miscellaneous intangible assets €m	Total €m
Balance as at 1 Jan 2016	**136.9**	**455.5**	**757.5**	**6.4**	**1,356.3**
Acquisitions through business combinations	0	0.4	3.8	0.1	4.3
Reclassification into “assets held for sale”	–132.7	–1.7	–324.6	–1.2	–460.2
Additions	0	0	0	0.1	0.1
Amortisation	0	–0.3	–26.6	–0.9	–27.8
Impairments	0	0	–0.3	0	–0.3
Exchange rate differences	–3.5	–0.1	–8.9	0	–12.5
Balance as at 31 Dec 2016	**0.7**	**453.8**	**400.9**	**4.5**	**859.9**

Due to the discontinuation of a business operation, a customer relationship amounting to €0.3 million was impaired within the Market Data + Services segment. The recoverable amount was determined based on the fair value less costs of disposal, using a disposal price of a highly probable transaction. Within the business combinations with Power Exchange Central Europe a.s., Gaspoint Nordic A/S and PEGAS CEGH Gas Exchange Services GmbH, Deutsche Börse Group also acquired other intangible assets besides goodwill in 2016. For details concerning their carrying amount at the time of acquisition as well as their useful lives, please refer to the tables in note 2 and note 3.

An impairment test is carried out, at least annually, concerning goodwill and certain other intangible assets with an indefinite useful life. Since these assets do not generate any cash inflows that are largely independent of those from other assets, the recoverable amount is determined for the cash-generating unit (CGU), or group of CGUs, that the respective asset is allocated to. The following table outlines the allocation of assets to the respective CGU:

Allocation of goodwill and other intangible assets with indefinite useful lifes to CGUs

Asset	(Group of) cash generating unit(s)			
	Clearstream Core €m	Eurex Core €m	360T €m	EEX €m
Goodwill				
Clearstream	1,063.8	0	0	0
International Securities Exchange	0	987.4	0	0
360T group	47.3	292.5	189.2	0
European Energy Exchange	0	0	0	33.3
STOXX	0	0	0	0
Powernext/EPEX SPOT group	0	0	0	18.4
Clearstream Global Securities Services	0	0	0	0
Impendium	0	0	0	0
Market News International	0	0	0	0
APX Holding group	0	0	0	6.6
Börse Frankfurt Zertifikate	0	0	0	0
Clearstream Fund Services	0	0	0	0
Need to Know News	0	0	0	0
Power Exchange Central Europe	0	0	0	1.7
PEGAS CEGH Gas Exchange Services	0	0	0	1.5
Kingsbury	0	0	0	0
Indexium	0	0	0	0
Gaspoint Nordic	0	0	0	0.1
Exchange licences				
European Energy Exchange	0	0	0	0.3
Börse Frankfurt Zertifikate	0	0	0	0
Powernext/EPEX SPOT group	0	0	0	0.1
APX Holding group	0	0	0	0.1
Trade names				
STOXX	0	0	0	0
360T group	0	0	19.9	0
Powernext/EPEX SPOT group	0	0	0	7.2
European Energy Exchange	0	0	0	5.8
Power Exchange Central Europe	0	0	0	0.3
PEGAS CEGH Gas Exchange Services	0	0	0	0.1

The recoverable amounts of the CGUs with allocated goodwill are based either on their values in use or on their fair value less costs of disposal, depending on the respective unit. The other value is calculated only in cases in which one of these values (value in use or fair value less costs of disposal) does not exceed the carrying amount. Since there is no active market for the CGUs, the discounted cash flow method is used to calculate both value in use and fair value less costs of disposal. The inputs used are Level 3 inputs in all cases.

	(Group) of cash generating unit(s)				
	MD+S segment €m	Fund Services €m	Börse Frankfurt Zertifikate €m	STOXX €m	Total €m
	0	0	0	0	1,063.8
	0	0	0	0	987.4
	0	0	0	0	529.0
	0	0	0	0	33.3
	32.6	0	0	0	32.6
	0	0	0	0	18.4
	0	15.6	0	0	15.6
	9.2	0	0	0	9.2
	8.9	0	0	0	8.9
	0	0	0	0	6.6
	0	0	4.6	0	4.6
	0	4.0	0	0	4.0
	3.7	0	0	0	3.7
	0	0	0	0	1.7
	0	0	0	0	1.5
	0.5	0	0	0	0.5
	0.2	0	0	0	0.2
	0	0	0	0	0.1
	0	0	0	0	0.3
	0	0	0.2	0	0.2
	0	0	0	0	0.1
	0	0	0	0	0.1
	0	0	0	420.0	420.0
	0	0	0	0	19.9
	0	0	0	0	7.2
	0	0	0	0	5.8
	0	0	0	0	0.3
	0	0	0	0	0.1

Key assumptions used to determine the recoverable amount depend upon the respective CGU, or group of CGUs. Individual costs of capital are determined for each CGU, or group of CGUs, for the purpose of discounting projected cash flows. These capital costs are based on data incorporating beta factors, borrowing costs, as well as the capital structure of the respective peer group. Pricing, trading volumes, assets under custody, market share assumptions or general business development assumptions are based on past experience or market research. Other key assumptions are mainly based on external factors and generally correspond to internal management planning. Significant macroeconomic indicators include equity index levels, volatility of equity indices, as well as interest rates, exchange rates, GDP growth, unemployment levels and government debt. When calculating value in use, the projections are adjusted for the effects of future restructurings and cash outflows to enhance the asset's performance investments, if appropriate.

The following tables indicate material assumptions used for impairment tests for the years 2016 and 2015:

Key assumptions used for impairment tests in 2016

(Group of) cash-generating unit(s)	Recoverable amount	Risk-free interest rate %	Market risk premium %	Discount rate %	Perpetuity growth rate %	CAGR[1] Net revenues %	CAGR[1] Operating costs[2] %
Clearstream Core	value in use	0.7	6.5	10.4[3]	1.0	3.5	3.2
Eurex Core	fair value less costs of disposal	0.7	6.5	8.5[4]	1.0	7.2	6.6
360T	fair value less costs of disposal	0.7	6.5	8.3[4]	2.5	10.3	1.6
EEX	fair value less costs of disposal	0.7	6.5	9.0[4]	1.0	1.3	4.3
MD+S segment	fair value less costs of disposal	0.2	6.5	7.7[4]	2.0	2.9	0.4
Fund Services	fair value less costs of disposal	0.7	6.5	12.3[4]	2.0	6.3	5.7
Börse Frankfurt Zertifikate	fair value less costs of disposal	0.2	6.5	11.5[4]	2.0	3.0	2.2
STOXX	fair value less costs of disposal	0.2	6.5	8.9[4]	2.0	6.8	5.5

1) CAGR = compound annual growth rate
2) Without depreciation, amortisation and impairment losses
3) Before tax
4) After tax

Key assumptions used for impairment tests in 2015

(Group of) cash-generating unit(s)	Recoverable amount	Risk-free interest rate %	Market risk premium %	Discount rate %	Perpetuity growth rate %	CAGR[1] Net revenues %	CAGR[1] Operating costs[2] %
Eurex Core + ISE	fair value less costs of disposal	1.2	6.5	9.3[4]	1.0	6.7	3.4
Clearstream Core	value in use	1.2	6.5	11.0[3]	1.5	3.0	4.3
Eurex Core	fair value less costs of disposal	1.2	6.5	9.3[4]	1.0	7.1	3.7
360T	fair value less costs of disposal	1.2	6.5	8.7[4]	2.5	18.9	17.5
EEX	fair value less costs of disposal	1.1	6.5	9.3[4]	1.0	2.8	1.6
MD+S segment	fair value less costs of disposal	1.1	6.5	8.5[4]	2.0	3.9	2.4
Fund Services	fair value less costs of disposal	1.2	6.5	12.7[4]	2.0	11.6	8.9
Börse Frankfurt Zertifikate	fair value less costs of disposal	1.1	6.5	12.8[4]	2.0	1.5	2.2
Infobolsa	fair value less costs of disposal	1.2	6.5	9.6[4]	2.5	3.1	1.9
ISE	value in use	2.8	6.5	14.1[3]	2.5	1.4	0.8
STOXX	fair value less costs of disposal	1.1	6.5	9.5[4]	2.0	10.3	3.7

1) CAGR = compound annual growth rate
2) Without depreciation, amortisation and impairment losses
3) Before tax
4) After tax

Even in case of a reasonably possible change of the parameters, none of the above-mentioned CGUs, or groups of CGUs, would be impaired.

12. Property, plant and equipment

Property, plant and equipment

	Fixtures and fittings €m	Computer hardware, operating and office equipment €m	Payments on account and construction in progress €m	Total €m
Historical costs as at 1 Jan 2015	**79.9**	**322.4**	**1.2**	**403.5**
Acquisitions through business combinations	0.8	2.3	2.0	5.1
Additions	8.1	32.0	2.2	42.3
Disposals	0	–11.3	–2.7	–14.0
Reclassifications	0.2	1.9	–2.1	0
Exchange rate differences	1.6	2.7	0.1	4.4
Historical costs as at 31 Dec 2015	**90.6**	**350.0**	**0.7**	**441.3**
Disposals from change in scope of consolidation	0	–2.0	0	–2.0
Reclassification into "assets held for sale"[1]	–11.5	–25.2	0	–36.7
Additions	4.6	40.9	4.2	49.7
Disposals	–5.0	–5.6	–0.7	–11.3
Reclassifications	1.7	0.4	–2.0	0.1
Exchange rate differences	–0.8	–0.7	0	–1.5
Historical costs as at 31 Dec 2016	**79.6**	**357.8**	**2.2**	**439.6**
Depreciation and impairment losses as at 1 Jan 2015	**42.5**	**260.1**	**0**	**302.6**
Amortisation	6.8	30.4	0	37.2
Disposals	0	–11.2	0	–11.2
Reclassifications	0	0	0	0
Exchange rate differences	1.0	2.0	0	3.0
Depreciation and impairment losses as at 31 Dec 2015	**50.3**	**281.3**	**0**	**331.6**
Amortisation	6.6	29.4	0	36.0
Impairment losses	0.4	0	0	0.4
Disposals from change in scope of consolidation	0	–1.8	0	–1.8
Reclassification into "assets held for sale"[1]	–8.4	–20.6	0	–29.0
Disposals	–4.6	–5.4	0	–10.0
Reclassifications	–0.1	0	0	–0.1
Exchange rate differences	–0.5	–0.5	0	–1.0
Depreciation and impairment losses as at 31 Dec 2016	**43.7**	**282.4**	**0**	**326.1**
Carrying amount as at 31 Dec 2015	40.3	68.7	0.7	109.7
Carrying amount as at 31 Dec 2016	**35.9**	**75.4**	**2.2**	**113.5**

1) This relates exclusively to the disposals in connection with the disposal of the interest in the ISE subgroup and with the asset deal regarding the sale of the business operations of Assam SellerCo, Inc. and its two subsidiaries, see note 2.

13. Financial investments

Financial assets

	Investments in associates and joint ventures €m	Other equity investments €m	Receivables and securities from banking business €m	Other financial instruments and loans €m
Historical cost as at 1 Jan 2015	**111.9**	**147.5**	**1,301.9**	**29.5**
Acquisition through business combinations	–67.7	0	0	–6.4
Additions	14.1	29.8	771.5	14.3
Disposals	–0.1	–17.9	0	–5.2
Addition/(reversal) premium/discount	0	0	–1.7	0
Reclassifications	–3.5	62.5	–62.2[1]	–0.3
Exchange rate differences	0.4	7.5	6.8	2.1
Historical cost as at 31 Dec 2015	**55.1**	**229.4**	**2,016.3**	**34.0**
Acquisitions from business combinations	–0.6	0	0	0
Reclass into “assets held for sale”	0	–32.3	0	–8.1
Additions	5.1	5.4	155.6	12.8
Disposals	–0.4	–40.2	0	–6.1
Addition/(reversal) premium/discount	0	0	–2.2	–0.1
Reclassifications	–1.0	0	–586.8[1]	1.0
Exchange rate differences	–0.2	3.4	14.7	–0.9
Historical cost as at 31 Dec 2016	**58.0**	**165.7**	**1,597.6**	**32.6**
Revaluation as at 1 Jan 2015	**–7.7**	**19.3**	**3.1**	**–3.3**
Acquisition through business combinations	–6.6	0	0	6.4
Disposals/(additions) of impairment losses	0	16.6	0	–3.2
Dividends	–0.9	0	0	0
Net income from equity method measurement	–1.3	0	0	0
Currency translation differences recognised in equity	0.3	4.4	0	0
Currency translation differences recognised in profit or loss	–0.3	0	0	–0.7
Other fair value changes recognised in equity	0	9.2	0	0
Other fair value changes recognised in profit or loss	5.3	–0.6	0	0
Market price changes recognised in other comprehensive income	0	0	–0.8	0.3
Market price changes recognised in profit or loss	–5.8	0	0	–1.0
Reclassifications	0.4	–58.9	0[1]	0
Revaluation as at 31 Dec 2015	**–16.6**	**–10.0**	**2.3**	**–1.5**
Acquisitions from business combinations	0	0	0	0
Reclass into “assets held for sale”	0	–0.8	0	0.2
Disposals/(additions) of impairment losses	0	0	0	–5.0
Dividends	–1.8	0	0	0
Net income from equity method measurement	0.4	0	0	0
Currency translation differences recognised in equity	–0.4	5.3	0	0
Currency translation differences recognised in profit or loss	0.3	0	–0.1	0.5
Other fair value changes recognised in equity	1.1	1.0	0	0
Other fair value changes recognised in profit or loss	0	–40.9	0	0
Market price changes recognised in other comprehensive income	0	135.1	6.2	0
Market price changes recognised in profit or loss	–6.7	0	0	–0.4
Reclassifications	0	0	–1.2	0
Revaluation as at 31 Dec 2016	**–23.7**	**89.7**	**7.2**	**–6.2**
Carrying amount as at 31 Dec 2015	38.5	219.4	2,018.6	32.5
Carrying amount as at 31 Dec 2016	**34.3**	**255.4**	**1,604.8**	**26.4**

1) Reclassified as current receivables and securities from banking business

The investments in associates and joint ventures include interests in associates with a carrying amount of €34.3 million (2015: €38.5 million) and interests in joint ventures with a carrying amount of nil (2015: nil). In financial year 2016, proportionate losses with an amount of nil (2015: nil) were not recognised for associates accounted for using the equity method.

As in the previous year,"other financial instruments and loans" include securities with a fair value of €5.0 million pledged to the Industrie- und Handelskammer (IHK, the Chamber of Commerce) Frankfurt.

For details on revaluations and market price changes recognised in other comprehensive income, see also note 20. Other equity investments include available-for-sale shares.

In the reporting period, impairment losses amounting to €6.7 million (2015: €5.8 million) were recognised for associates and joint ventures in the income statement. These impairment losses related to unlisted equity instruments. See note 8 for further details.

Composition of receivables and securities from banking business

	31 Dec 2016 €m	31 Dec 2015 €m
Fixed-income securities		
issued by regional or local public bodies	523.9	498.0
issued by other public bodies	650.5	955.4
issued by multilateral banks	352.9	487.3
issued by supranational issuers	77.5	77.9
Total	**1,604.8**	**2,018.6**

Securities from banking business include financial instruments listed on a stock exchange amounting to €1,604.8 million (2015: €2,018.6 million).

14. Derivatives and hedges

Deutsche Börse Group generally uses derivative financial instruments to hedge existing or highly probable forecast transactions. The derivatives are included in the items "other non-current assets", "other current assets" and "other non-current liabilities".

Derivatives (fair value)

	Note	Assets 31 Dec 2016 €m	Assets 31 Dec 2015 €m	Note	Liabilities 31 Dec 2016 €m	Liabilities 31 Dec 2015 €m
Fair value hedges						
long-term		0	0		0	0
short-term		0	0	28	0	0
Cash flow hedges						
long-term		0	0		0	0
short-term	16	0	0	30	–6.0	0
Derivatives held for trading						
long-term		0.1	0		–1.5	0
short-term	16	65.7	23.3	28, 30	–9.1	–18.6
Total		**65.8**	**23.3**		**–16.6**	**–18.6**

Fair value hedges

No financial instruments designated as fair value hedges were outstanding as at 31 December 2016 or 2015.

Cash flow hedges

In 2016, Deutsche Börse AG entered into a cash flow hedge to (partially) eliminate the foreign-exchange risk associated with a US$ loan amounting to a nominal value of US$170 million granted to a subsidiary with the functional currency US dollar. The forward transaction will be settled on 28 March 2017. On 31 December 2016, the fair value of the forward contract amounted to €–6.0 million. The changes in fair value have been recognised in revaluation surplus and released through profit or loss upon recognition of the foreign-exchange gain of the hedged instrument.

In 2015, Deutsche Börse AG entered into a cash flow hedge to eliminate the foreign-exchange risk associated with the purchase amount of CHF 650 million to be paid in order to acquire the outstanding interest in STOXX Ltd. and Indexium AG. The forward transaction was designated to hedge the foreign-exchange fluctuation after having successfully negotiated the main terms of the purchase contract. The forward transaction was settled on 31 July 2015; the purchase of shares in STOXX Ltd. and Indexium AG was also closed on this day.

Changes in cash flow hedges

	2016 €m	2015 €m
Cash flow hedges as at 1 January	0	0
Amount recognised in other comprehensive income during the year	–6.0	–8.9
Amount recognised in profit or loss during the year	6.0	0
Closed-out	0	8.9
Cash flow hedges as at 31 December	**0**	**0**

Hedges of a net investment

In connection with the private placements in the USA, the series A to C bonds were designated as hedges against foreign-exchange risk arising from the translation of the functional currency US dollar into euros in order to hedge the net investment in the ISE subgroup until the disposal of the subgroup on 30 June 2016. The series A bonds had matured in 2015, series B and C were paid back on 29 July 2016.

Until the termination of the hedge, effective exchange rate differences from the private placements were reported in the balance sheet item "accumulated profit", as are exchange rate differences from the translation of the functional currency of foreign subsidiaries. There was no ineffectiveness in the net investment hedges in 2016. A cumulative amount of €116.3 million (2015: €120.9 million) was recognised in other comprehensive income. In 2016, this amount was reclassified through profit or loss upon the disposal of the net investment in the ISE subgroup.

Derivatives held for trading

Currency swaps as at 31 December 2016 expiring in less than six months had a notional value of €3,073.8 million (2015: €2,621.4 million), as well as a negative fair value of €2.4 million and a positive fair value amounting to €65.4 million (2015: negative fair value of €12.4 million and a positive fair value amounting to €23.3 million). These swaps were entered into to convert foreign currencies resulting from the commercial paper programme into euros, and to economically hedge short-term foreign currency receivables and liabilities in euros. These are reported under "current receivables and securities from banking business" and "liabilities from banking business" in the balance sheet (see also notes 16 and 28).

Derivatives transactions: outstanding positions (currency swaps)

		Currency swaps	
		31 Dec 2016	31 Dec 2015
Quantity		45	60
Notional value	€m	3,073.8	2,621.4
Positive fair value	€m	65.4	23.3
Negative fair value	€m	–2.4	–12.4

Eurex Clearing AG and Eurex Frankfurt AG have made prepayments to some customers. The repayment of these amounts depends on the fulfillment of certain criteria. Eurex Clearing AG and Eurex Frankfurt AG recognise embedded derivatives separately from the host contract as they are not closely related to this contract: they amount to €4.9 million (2015: €6.2 million), are classified as held for trading and are shown under "other non-current liabilities" (€1.5 million) and "other current liabilities" (€3.4 million).

Furthermore, Deutsche Börse AG made prepayments as the relevant criteria were fulfilled. Accordingly, the embedded derivative is also recognised separately under "other current liabilities" (€3.3 million).

15. Financial instruments held by central counterparties

Composition of financial instruments held by central counterparties

	31 Dec 2016 €m	31 Dec 2015 €m
Repo transactions	87,508.7	111,919.0
Options	24,385.1	21,413.7
Others	1,872.4	132.1
Total	**113,766.2**	**133,464.8**
thereof non-current	5,856.6	7,175.2
thereof current	107,909.6	126,289.6

The aggregate financial instruments held by central counterparties are classified into current and non-current in the balance sheet. Receivables and liabilities that may be offset against a clearing member are reported on a net basis. Financial liabilities of €430.2 million (2015: €283.1 million) were eliminated because of intra-Group GC Pooling transactions.

The following table gives an overview of the effects of offsetting the financial instruments held by central counterparties:

Gross presentation of offset financial instruments held by central counterparties[1]

	Gross amount of financial instruments		Gross amount of offset financial instruments		Net amount of financial instruments	
	31 Dec 2016 €m	31 Dec 2015 €m	31 Dec 2016 €m	31 Dec 2015 €m	31 Dec 2016 €m	31 Dec 2015 €m
Financial assets from repo transactions	103,440.6	135,158.4	–15,931.9	–23,239.4	87,508.7	111,919.0
Financial liabilities from repo transactions	–103,010.4	–134,875.3	15,931.9	23,239.4	–87,078.5	–111,635.9
Financial assets from options	74,873.1	67,288.1	–50,488.0	–45,874.4	24,385.1	21,413.7
Financial liabilities from options	–74,873.1	–67,288.1	50,488.0	45,874.4	–24,385.1	–21,413.7

1) The collateral deposited by clearing members cannot be attributed directly to the individual transactions. For information on the composition of collateral, see note 36.

16. Current receivables and securities from banking business

In addition to non-current receivables and securities from banking business that are classified as non-current financial assets (see note 13), the following receivables and securities from banking business, attributable solely to the Clearstream subgroup, were classified as current assets as at 31 December 2016.

Composition of current receivables and securities from banking business

	31 Dec 2016 €m	31 Dec 2015 €m
Loans to banks and customers		
Reverse repurchase agreements	4,050.4	5,217.4
Balances on nostro accounts	1,128.0	736.8
Money market lendings	7,320.0	3,714.5
Margin calls	0.4	6.8
Overdrafts from settlement business	293.8	378.8
	12,792.6	**10,054.3**
Available-for-sale debt instruments	592.3	64.1
Interest receivables	15.2	1.2
Forward foreign-exchange transactions[1]	65.4	23.3
Total	**13,465.5**	**10,142.9**

1) See note 14.

Overdrafts from settlement business represent short-term loans of up to two days' duration that are usually secured by collateral. Potential concentrations of credit risk are monitored for counterparty credit limits (see note 36).

All of the securities held as at 31 December 2016 and 2015 were listed and issued by sovereign or sovereign-guaranteed issuers.

17. Changes in valuation allowance on trade receivables

As in the previous year, there were no trade receivables due after more than one year as at 31 December 2016.

Allowance account

	€m
Balance as at 1 Jan 2015	**7.6**
Additions	1.5
Acquisitions from business combinations	0.2
Utilisation	0
Reversal	–3.0
Balance as at 31 Dec 2015	**6.3**
Additions	1.6
Acquisitions from business combinations	0
Utilisation	–0.1
Reversal	–1.8
Balance as at 31 Dec 2016	**6.0**

Uncollectible receivables of €0.5 million (2015: €1.4 million) for which no valuation allowances had been recognised in prior periods were written off in the reporting period.

18. Other current assets

Composition of other current assets

	31 Dec 2016 €m	31 Dec 2015 €m
Other receivables from CCP transactions	404.7	889.3
Tax receivables (excluding income taxes)	43.2	64.1
Prepaid expenses	32.9	26.3
Interest receivable	21.7	25.8
Incentive programme	3.5	3.5
Guarantees and deposits	3.4	1.6
Creditors with debit balances	0.7	1.4
Derivatives	0.3	0
Claims against insurance companies	0	2.2
Miscellaneous	3.8	8.1
Total	**514.2**	**1,022.3**

19. Restricted bank balances

Amounts reported separately under liabilities as cash deposits by market participants are restricted. Such amounts are mainly invested via bilateral or triparty reverse repurchase agreements and in the form of overnight deposits at banks (restricted bank balances). Government or government-guaranteed bonds with an external rating of at least AA– are accepted as collateral for the reverse repurchase agreements. Reported restricted bank balances total €27,777.6 million (2015: €26,870.0 million).

20. Equity

Changes in equity are presented in the consolidated statement of changes in equity. As at 31 December 2016, the number of no-par value registered shares of Deutsche Börse AG in issue was 193,000,000 (31 December 2015: 193,000,000).

Subject to the agreement of the Supervisory Board, the Executive Board is authorised to increase the subscribed share capital by the following amounts:

Composition of authorised share capital

	Amount in €	Date of authorisation by the shareholders	Expiry date	Existing shareholders' pre-emptive rights may be disapplied for fractioning and/or may be disapplied if the share issue is:
Authorised share capital I[1]	13,300,000	11 May 2016	10 May 2021	n.a.
Authorised share capital II[1]	19,300,000	13 May 2015	12 May 2020	▪ for cash at an issue price not significantly lower than the stock exchange price, up to a maximum amount of 10 per cent of the nominal capital. ▪ against non-cash contributions for the purpose of acquiring companies, parts of companies, interests in companies, or other assets.
Authorised share capital III[1]	38,600,000	13 May 2015	12 May 2020	n.a.
Authorised share capital IV	6,000,000	16 May 2012	15 May 2017	▪ for the issuance of up to 900,000 new shares per year to Executive Board members and employees of the company, as well as to the management and employees of affiliated companies within the meaning of sections 15ff. of the Aktiengesetz (AktG, German Stock Corporation Act).

1) Shares may only be issued, excluding shareholders pre-emptive subscription rights, provided that the aggregate amount of new shares issued excluding shareholders' pre-emptive rights during the term of the authorisation (including under other authorisations) does not exceed 20 per cent of the issued share capital.

Contingent capital

In accordance with the resolution by the Annual General Meeting on 15 May 2014, the Executive Board was authorised, subject to the approval of the Supervisory Board, to issue on one or more occasions in the period up to 14 May 2019 convertible bonds and/or bonds with warrants or a combination of such instruments in a total nominal amount of up to €2,500,000,000 with or without maturity restrictions, and to grant the holders or creditors of these bonds conversion or option rights to new no-par value registered shares of Deutsche Börse AG with a proportionate interest in the share capital totalling up to €19,300,000, as specified in more detail in the terms and conditions of the convertible bonds or in the terms and conditions of the warrants attaching to the bonds with warrants.

The Executive Board is authorised, subject to the approval of the Supervisory Board, to disapply shareholders' pre-emptive rights to bonds with conversion or option rights to shares of Deutsche Börse AG in the following cases: (i) to eliminate fractions, (ii) if the issue price of a bond does not fall materially short of the theoretical fair value determined in accordance with recognised financial techniques and the total number of shares attributable to these bonds does not exceed 10 per cent of the share capital, (iii) to grant the holders of conversion or option rights to shares of Deutsche Börse AG options as compensation for dilutive effects to the same extent as they would be entitled to receive after exercising these rights.

The bonds may also be issued by companies based in Germany or abroad that are affiliated with Deutsche Börse AG within the meaning of sections 15ff. of the Aktiengesetz (AktG, German Stock Corporation Act). Accordingly, the share capital was contingently increased by up to €19,300,000 (contingent capital 2014). To date, the authorisation to issue convertible bonds and/or bonds with warrants has not been exercised.

There were no further rights to subscribe for shares as at 31 December 2016 or 31 December 2015.

Revaluation surplus

The revaluation surplus results from the revaluation of securities and other current and non-current financial instruments at their fair value net of deferred taxes. This item also includes reserves from an existing investment in an associated company; these reserves were recognised in connection with the acquisition of further shares, as the company was consolidated at that date. Actuarial gains and losses for defined benefit obligations are also directly recognised in revaluation surplus.

Revaluation surplus

	Recognition of hidden reserves from fair value measurement €m	Other equity investments (financial assets) €m	Securities from banking business (financial assets) €m
Balance as at 1 Jan 2015 (gross)	**103.7**	**1.7**	**3.5**
Changes from defined benefit obligations	0	0	0
Fair value measurement	0	9.1	–1.1
Reclassifications	0	0	0
Reversal to profit or loss	0	0	0
Balance as at 31 Dec 2015 (gross)	**103.7**	**10.8**	**2.4**
Changes from defined benefit obligations	0	0	0
Fair value measurement	0	141.4	6.2
Reclassifications	0	0	–1.2
Reversal to profit or loss	0	–40.8	–0.1
Balance as at 31 Dec 2016 (gross)	**103.7**	**111.4**	**7.3**
Deferred taxes			
Balance as at 1 Jan 2015	**0**	**–0.5**	**–1.3**
Additions	0	0	0.6
Reversals	0	–3.7	0
Balance as at 31 Dec 2015	**0**	**–4.2**	**–0.7**
Additions	0	16.2	0
Reversals	0	–56.2	–1.3
Balance as at 31 Dec 2016	**0**	**– 44.2**	**– 2.0**
Balance as at 1 Jan 2015 (net)	**103.7**	**1.2**	**2.2**
Balance as at 31 Dec 2015 (net)	**103.7**	**6.6**	**1.7**
Balance as at 31 Dec 2016 (net)	**103.7**	**67.2**	**5.3**

Accumulated profit

The “accumulated profit” item includes exchange rate differences amounting to €5.1 million (2015: €209.6 million). €412.3 million was withdrawn due to currency translation for foreign subsidiaries in the reporting period (2015: €–170.6 million) and €207.8 million was added relating to investment hedges that were used to hedge the net investment in ISE against currency risk (2015: €–41.0 million).

Regulatory capital requirements and regulatory capital ratios

As in the past, Clearstream Banking S.A., Clearstream Banking AG and Eurex Clearing AG, in their capacity as credit institutions, are subject to solvency supervision by the German or Luxembourg banking supervisory authorities (Bundesanstalt für Finanzdienstleistungsaufsicht, BaFin, and Commission de Surveillance du Secteur Financier, CSSF, respectively). The same applies to the Clearstream Holding group at the level of the supervisory group.

As in the previous year, Eurex Bonds GmbH and Eurex Repo GmbH are subject to specific provisions applicable to certain investment firms under BaFin solvency supervision.

	Other financial instruments (financial assets) €m	Current securities from banking business €m	Cash flow hedges €m	Defined benefit obligations €m	Total €m
	1.1	**–0.1**	**–9.0**	**–159.7**	**–58.8**
	0	0	0	3.2	3.2
	0.4	0.2	–8.9	0	–0.3
	0	0	8.9	0	8.9
	0	0	2.8	0	2.8
	1.5	**0.1**	**– 6.2**	**– 156.5**	**– 44.2**
	0	0	0	–27.3	–27.3
	0	–1.1	–6.0	0	140.5
	0	1.2	0	0	0
	0	0.1	8.7	0	–32.1
	1.5	**0.3**	**– 3.5**	**– 183.8**	**36.9**
	–0.3	**0**	**2.4**	**42.6**	**42.9**
	0	0	0	0	0.6
	–0.1	0	–0.7	–0.1	–4.6
	–0.4	**0**	**1.7**	**42.5**	**38.9**
	0	0	0	7.8	24.0
	0	–0.1	–0.7	0	–58.3
	– 0.4	**– 0.1**	**1.0**	**50.3**	**4.6**
	0.8	**–0.1**	**–6.6**	**–117.1**	**–15.9**
	1.1	**0.1**	**–4.5**	**–114.0**	**–5.3**
	1.1	**0.2**	**– 2.5**	**– 133.5**	**41.5**

With the admission as an “Authorised Clearing House” (ACH) by the Monetary Authority of Singapore (MAS) on 8 July 2015, Eurex Clearing Asia Pte. Ltd. has become subject to own funds requirements according to the Securities and Futures Act (Singapore) and other specific MAS requirements. However, the majority of these requirements will only become materially effective with the commencement of operations, which is currently scheduled for 2017. As a “Recognised Market Operator”, Cleartrade Exchange Pte. Limited is subject to MAS supervision as well, and has to fulfil the respective own funds requirements.

Since the authorisation of both Eurex Clearing AG and European Commodity Clearing AG as central counterparties under the provisions of Regulation (EU) No 648/2012 (European Market Infrastructure Regulation, EMIR) in 2014, these companies have been subject to the capital requirements under Article 16 of EMIR. These requirements apply to Eurex Clearing AG in parallel to the solvency supervision requirements applicable to credit institutions, and the higher requirement has to be met in each case. Irrespective of its status as a specialist credit institution according to German law, European Commodity Clearing AG is only subject to EMIR capital requirements.

REGIS-TR S.A., as trade repository according to Regulation (EU) No 648/2012/EU (EMIR), is subject to supervision exercised by the European Securities and Markets Authority (ESMA) pursuant to Article 21 (b) of Delegated Regulation (EU) No 150/2013.

Powernext SA is a regulated market in France, and is hence subject to supervision exercised by the Autorité des marchés financiers (AMF); furthermore, Powernext SA is obliged to fulfil the regulatory capital requirements set forth in the "Arrêté du 2 juillet 2007 relatif au capital minimum, aux fonds propres et au contrôle interne des entreprises de marché".

The EMIR capital requirements for central counterparties are in large part based on the EU own funds requirements for credit institutions (see below), but the detail differs both in relation to the capital components as well as the capital requirement components and capital deduction items. Moreover, EMIR does not specify any capital buffers such as those introduced by the EU Capital Requirements Directive 2013/36/EU (CRD IV) and the Regulation (EU) No 575/2013 (Capital Requirements Regulation, CRR) for banks.

Since 1 January 2014, the own funds requirements for credit institutions have been primarily subject to the EU-wide requirements of the CRR as well as the supplementary national regulations implementing CRD IV, which transposed the "Basel III" rules into European law.

All companies that are directly or indirectly (i.e. by means of EMIR requirements) subject to the CRR own funds requirements, are exempted from compliance with trading book requirements. Market risk exposures consist only of relatively small open foreign currency positions. The companies concerned uniformly apply the standardised approach for credit risk. As a result of the specific business of the credit institutions and central counterparties belonging to Deutsche Börse Group, their recognised assets are subject to sharp fluctuations. This leads to correspondingly volatile total capital ratios at the Clearstream companies. The volatility of the ratio is subject to major fluctuations on a day-to-day basis in the course of the year. Due to a high degree of collateralised or zero-weighted cash investments, the own funds requirements for credit and market risk exposures of Eurex Clearing AG and European Commodity Clearing AG are relatively stable despite volatile total assets in the course of the year.

To calculate operational risk, Eurex Clearing AG and European Commodity Clearing AG use the basic indicator approach, while the Clearstream companies apply the advanced measurement approach (AMA).

Due to the specific arrangements for the two investment firms, Eurex Repo GmbH and Eurex Bonds GmbH, no explicit own funds requirements for operational risk are determined in accordance with Article 95 of the CRR. Instead, the total own funds requirement is determined either as the own funds requirement amount for credit and market risk or as 25 per cent of fixed overhead costs, depending on which is higher. Since the credit and market risks are low, the relevant criterion for both companies is the own funds requirement on the basis of overhead costs.

None of the Group companies subject to solvency supervision has Tier 2 regulatory capital.

A minimum total capital ratio of 8 per cent generally applies to credit institutions subject to the CRR. None of the credit institutions or groups currently subject to CRR regulations (Clearstream Banking S.A., Clearstream Banking AG, Clearstream Holding group and Eurex Clearing AG) is currently designated as systemically important. CRD IV introduced various capital buffers, which the supervised (credit) institutions generally have to meet over and above the minimum total capital ratio of 8 per cent, although they may temporarily fall below these levels. The capital buffers are introduced in stages, depending on the economic environment and systemic risk components: since 2014, CSSF has imposed a standard capital conservation buffer of 2.5 per cent of Tier 1 capital on all Luxembourg credit institutions; this arrangement represents a departure from the general transitional provisions of CRD IV. This means that the minimum total capital ratio is 10.5 per cent. Besides the capital buffers imposed by CSSF for all Luxembourg credit institutions, an additional capital conservation buffer of 0.625 per cent was applied in 2016 to all other regulated Group companies subject to CRR regulations. Taking these effects into account, the minimum total capital ratio was 8.625 per cent.

The individual companies' capital resources sufficiently reflect the fluctuation in risk-weighted assets. Stress considerations are used to determine the capital required for expected peaks and additional reserves for unexpected events are added. In addition, buffers are taken into account that cover the recovery indicators specified in the recovery plans and thus prevent recovery scenarios from being triggered even for peak own funds and capital requirements. The own funds and capital requirements determined in this way will be met on the basis of medium-term capital planning. As the actual own funds and capital requirements are below the expected peaks – significantly so under normal circumstances – this may lead to a very high total capital ratio or EMIR capital cover, especially at the closing date.

The own funds requirements of the Clearstream companies remained almost stable in the reporting period. However, changes occurred regarding own funds requirements for operational risks as well as credit and market risks, both at single entity and Group level. As of September 2016, the Clearstream Holding group has applied a different method, the AMA, for the calculation of operational risk own funds requirements. Since then, the calculation has been made in agreement with the supervisory authorities, using the so-called DirectVaR. However, formal approval of the new calculation method is still pending. Due to these changes, and given additional risk scenarios for new products and processes (i.e. TARGET2-Securities), and for compliance and legal risks, as well as other model adjustments, own funds requirements at the level of the Clearstream Holding group and at Clearstream Banking S.A. declined slightly, while they increased for Clearstream Banking AG. The operational risk capital requirements take into account a temporary banking supervision premium for 2015 and 2016, which will no longer apply following the conclusion of supervisory reviews and the formal approval of the DirectVaR, expected during the first half of 2017. Regarding Clearstream Holding group, technical closing-date items related to open foreign currency positions incurred own funds requirements for market risk of about €20 million in 2016 (the corresponding open foreign currency positions were below the threshold value in 2015). These effects, combined with the usual fluctuations of own funds requirements for credit risk, resulted in a slight increase of own funds requirements for credit and market risk at the Clearstream Holding group. At Clearstream Banking S.A., requirements have increased due to closing-date items related to receivables as well as to higher own funds requirements in the securities lending business (matched principal broking principle). The non-recurrent nature of considerable technical closing-date items related to a settlement loan previously recognised at Clearstream Banking AG led to a marked decline in the entity's own funds requirements for credit and market risk.

The Clearstream Holding group already responded to the (expected) increased own funds requirements in the past by launching a programme to strengthen its capital base; this programme continued in 2016. Further measures are planned for the coming years in the context of medium-term capital planning. In the year under review, the Clearstream Holding group's capital base was boosted by retaining profits at different companies, as well as through contributions to capital reserves at Clearstream Banking S.A. and Clearstream Banking AG.

In the medium to long term, the Clearstream Holding group expects a moderate increase in own funds requirements to arise at supervisory group level for the following reasons:

- CRD IV capital buffers, which are being increased in stages
- the future applicability of own funds requirements based on the Central Securities Depositories Regulation (CSDR)
- establishment of own funds requirements resulting from the introduction of minimum requirements for equity and eligible liabilities (MREL) as a result of Directive 2014/59/EU
- implementation of the so-called CRR II package and other amendments under Basel III (presumably applicable not before 2019)

Eurex Clearing AG's own funds requirements declined compared with the previous year. Given the increase in revenue, own funds requirements for operational risk rose slightly according to our model, while own funds requirements for credit and market risk declined due to the non-recurrent nature of considerable technical closing-date items related to outstanding receivables recognised in 2015. For simplicity reasons, Eurex Clearing AG generally does not recognise existing collateralisation for outstanding settlement receivables in the calculation of own funds requirements. However, regarding the outstanding receivables recognised at year-end 2015, collateralisation was applied retroactively. The previous year's figures were adjusted accordingly.

The own funds requirements calculated with Eurex Clearing AG's internal risk model are higher than the own funds requirements derived from the basic indicator approach, which follows regulatory stipulations and is based on the balance sheet. Hence, Eurex Clearing AG always applies additional capital buffers for such risks, surpassing regulatory minimum requirements. Against this background, banking supervisors requested in 2011 that Eurex Clearing AG increased the basis for the calculation of regulatory own funds requirements by considering an appropriate share of clearing-related fees received for the account of operating entities. The own funds requirements for operational risk are calculated once a year on the basis of three-year average historical income, including the assumed clearing fees, and are therefore not subject to daily fluctuations. Compliance with the minimum supervisory ratio is maintained at all times due to the sufficient capital buffer for uncollateralised cash investments.

Eurex Clearing AG's capital requirements according to EMIR are currently significantly above CRD IV capital buffer requirements. For this reason, Eurex Clearing AG does not currently expect the CRD IV capital buffers to have any material impact on its capital requirements. Independently of this, the capital resources of Eurex Clearing AG are reviewed on an ongoing basis and monitored as part of medium-term capital planning. In 2016, Eurex Clearing AG received a €50.0 million contribution to its capital reserve from parent company Eurex Frankfurt AG. An additional contribution of €100.0 million was made in January 2017. Further contributions are scheduled for the coming years, in order to continuously strengthen Eurex Clearing AG's capital base.

Composition of own funds requirements

	Own funds requirements for operational risk		Own funds requirements for credit and market risk		Total capital requirements	
	31 Dec 2016 €m	31 Dec 2015 €m	31 Dec 2016 €m	31 Dec 2015 €m	31 Dec 2016 €m	31 Dec 2015 €m
Clearstream Holding group	387.1	396.1	76.4	64.3	463.5	460.4
Clearstream Banking S.A.	283.3	302.2	88.1	51.3	371.4	353.5
Clearstream Banking AG	103.8	93.9	7.2	19.7	111.0	113.6
Eurex Clearing AG	66.7	65.8	14.5	19.5	81.2	85.3
European Commodity Clearing AG	6.0	4.5	1.3	3.0	7.3	7.5

Regulatory capital ratios

	Own funds requirements		Regulatory equity		Total capital ratio	
	31 Dec 2016 €m	31 Dec 2015 €m	31 Dec 2016 €m	31 Dec 2015 €m	31 Dec 2016 %	31 Dec 2015 %
Clearstream Holding group	463.5	460.4	1,260.3	1,197.3	21.8	20.8
Clearstream Banking S.A.	371.4	353.5	1,042.4	998.1	22.5	22.6
Clearstream Banking AG	111.0	113.6	297.9	278.7	21.5	19.6
Eurex Clearing AG	81.2	85.3	364.8	314.8	36.0	29.5

The capital requirements under Article 16 of EMIR do not stipulate a specific ratio. Instead, the total amount of share capital, retained earnings and reserves, less certain items (including the central counterparty's own contribution to the default fund), is compared with the capital requirements. This total has to be at least equal to these requirements. In other words, EMIR requires a capital cover of at least 100 per cent. A reporting requirement to the competent authority – in this case BaFin – is triggered when this ratio falls below 110 per cent. The €50.0 million contribution made to the capital reserve of Eurex Clearing AG was entirely added to Eurex Clearing AG's own contribution to the default fund in 2016. Another increase in Eurex Clearing AG's contribution to the default fund, in the amount of €50.0 million, is scheduled for 2017.

The capital resources of European Commodity Clearing AG are currently well above the regulatory requirements. As at the reporting date, total equity as disclosed in the consolidated statement of financial position was not fully available to cover the risks according to Article 16 of EMIR, given that parts of this equity do not fulfil the required liquidity standards. The capital base of other entities is consistently monitored. Against this background, equity was increased in 2016 by means of a contribution to the capital reserve in the amount of €25.0 million. Given the increase in the regulatory minimum requirements for contributions to the clearing fund, European Commodity Clearing AG's default fund contribution was increased by €1.5 million. Considering the increase, European Commodity Clearing AG's total default fund contribution amounted to €7.1 million, and thus exceeded regulatory minimum requirements. Similar to the other companies, its capital resources are reviewed on an ongoing basis. Depending on future business performance, and in particular on changes in the regulatory framework, the capital resources will be adjusted as needed; however, this is not expected at present.

Capital adequacy requirements under EMIR

	Eurex Clearing AG		European Commodity Clearing AG	
	31 Dec 2016 €m	31 Dec 2015 €m	31 Dec 2016 €m	31 Dec 2015 €m
Own funds requirement for operational, credit and market risk	81.2	89.0	7.3	7.5
Other EMIR capital requirements	74.6	71.1	19.6	15.0
Total EMIR capital requirements under Article 16 of EMIR	**155.8**	**160.1**	**26.9**	**22.5**
Equity	364.8	314.8	73.9	48.5
EMIR deductions	0	0	–13.0	0
Own contribution to default fund	–100.0	–50.0	–7.5	–6.0
EMIR capital adequacy ratio	**264.8**	**264.8**	**53.4**	**42.5**

The capitalisation of Eurex Bonds GmbH significantly exceeded the CRR requirements. Due to the profits expected to be retained in future, the capital resources of Eurex Bonds GmbH will increase gradually in the coming years. However, if costs remain more or less stable and the own funds requirements for credit and market risk are low, the capital requirements are expected to remain virtually unchanged.

Eurex Repo GmbH transfers its earnings to Eurex Frankfurt AG based on a profit and loss transfer agreement. Eurex Repo GmbH increased its capital base as part of the CRR first-time application and the requirements set forth in a delegated regulation of the EU, which defines profit transfers as overheads and thus requires their inclusion in the basis for own funds requirement calculations. Due to the company's decelerating business activities – resulting from current market conditions (low interest rates, ECB policies) – Eurex Repo GmbH's earnings declined, with negative effects on the profits to be transferred. Hence, the own funds requirements declined compared with the previous year. Depending on the future business performance as well as changes to the regulatory requirements, further contributions to capital may be necessary to a limited extent; however, they are currently not expected for the medium term.

Composition of own funds/capital requirements

	Own funds requirements for credit and market risk		Own funds requirements on the basis of fixed overheads		Own funds requirements to be met	
	31 Dec 2016 €m	31 Dec 2015 €m	31 Dec 2016 €m	31 Dec 2015 €m	31 Dec 2016 €m	31 Dec 2015 €m
Eurex Bonds GmbH	0.2	0.2	0.8	0.8	0.8	0.8
Eurex Repo GmbH	0.4	0.4	4.6	5.6	4.6	5.6

Compliance with own funds requirements

	Own funds requirements		Regulatory equity		Equity ratio	
	31 Dec 2016 €m	31 Dec 2015 €m	31 Dec 2016 €m	31 Dec 2015 €m	31 Dec 2016 %	31 Dec 2015 %
Eurex Bonds GmbH	0.8	0.8	10.4	9.5	1,300.0	1,264.7
Eurex Repo GmbH	4.6	5.6	7.0	7.0	152.2	124.0

According to Delegated Regulation (EU) No 150/2013, REGIS-TR S.A. is required to maintain equity in the amount of at least 50 per cent of annual operating costs.

According to the MAS, Eurex Clearing Asia Pte. Ltd. is required to provide own funds to fulfil “operational risk requirements”, “investment risk requirements” as well as “general counterparty risk requirements”. Given the current business activities, own funds requirements are based exclusively on “operational risk requirements”. Furthermore, Eurex Clearing Asia Pte. Ltd. is required to notify MAS without undue delay if the capital cover falls below 120 per cent of own funds requirements.

According to the MAS, Cleartrade Exchange Pte. Limited is required to maintain own funds at the rate of either 18 per cent of annual operating revenue or 50 per cent of annual operating costs, depending on which is higher. Powernext SA is obliged to maintain own funds in the amount of operating costs for the next six months. Regarding the anticipated upswing in the business development of Powernext SA and Cleartrade Exchange Pte. Limited, we expect slightly increasing own funds requirements for both entities going forward. While the capital base of Powernext SA is considered appropriate for the anticipated upswing, Cleartrade Exchange Pte. Limited’s capital base will be adjusted, if required.

Compliance with own funds requirements

	Own funds requirements		Regulatory equity	
	31 Dec 2016 €m	31 Dec 2015 €m	31 Dec 2016 €m	31 Dec 2015 €m
REGIS-TR S.A.	3.9	3.4	6.4	6.4
Eurex Clearing Asia Pte. Ltd.	0.6	0.6	10.2	10.1
Cleartrade Exchange Pte. Limited	1.4	2.2	2.1	3.7
Powernext SA	10.8	12.3	39.9	26.4

The regulatory minimum requirements were complied with at all times by all companies during the reporting period and in the period up to the preparation of the consolidated financial statements.

21. Shareholders' equity and appropriation of net profit of Deutsche Börse AG

The annual financial statements of the parent company Deutsche Börse AG, prepared as at 31 December 2016 in accordance with the provisions of the Handelsgesetzbuch (HGB, the German Commercial Code), report net profit for the period of €553.2 million (2015: €315.9 million) and shareholders' equity of €2,643.0 million (2015: €2,504.0 million). In 2016, Deutsche Börse AG distributed €420.1 million (€2.25 per eligible share) from the unappropriated surplus of the previous year.

Net profit for the period 2016 is higher than last year.

Proposal on the appropriation of the unappropriated surplus

	31 Dec 2016 €m
Net profit for the period	553.2
Appropriation to other retained earnings in the annual financial statements	–108.2
Unappropriated surplus	**445.0**
Proposal by the Executive Board:	
Distribution of a regular dividend to the shareholders of €2.35 per share for 186,805,015 no-par value shares carrying dividend rights	439.0
Appropriation to retained earnings	6.0

No-par value shares carrying dividend rights

	Number
Number of shares issued as at 31 December 2016	**193,000,000**
Number of treasury shares	–6,194,985
Number of shares outstanding as at 31 December 2016	**186,805,015**

The proposal on the appropriation of the unappropriated surplus reflects treasury shares held directly or indirectly by the company that do not carry dividend rights under section 71b of the Aktiengesetz (AktG, the German Stock Corporation Act). The number of shares carrying dividend rights can change until the Annual General Meeting through the repurchase or sale of further treasury shares. In this case, with a dividend of €2.35 per eligible share, an amended resolution for the appropriation of the unappropriated surplus will be proposed to the Annual General Meeting.

22. Provisions for pensions and other employee benefits

Defined benefit pension plans

The defined benefit obligations of the companies of Deutsche Börse Group relate primarily to final salary arrangements and pension plans based on capital components, which guarantee employees a choice of either lifelong pensions or capital payments on the basis of the final salary paid. In Switzerland, there are guaranteed defined contribution plans. Deutsche Börse Group uses external trust solutions to cover some of its pension obligations.

Net liability of defined benefit obligations

	Germany €m	Luxembourg €m	Other €m	Total 31 Dec 2016 €m	Total 31 Dec 2015 €m
Present value of defined benefit obligations that are at least partially funded	405.1	62.6	21.0	488.7	439.5
Fair value of plan assets	–262.5	–45.5	–16.7	–324.7	–302.0
Funded status	**142.6**	**17.1**	**4.3**	**164.0**	**137.5**
Present value of unfunded defined benefit obligations	3.1	0.7	0.1	3.9	3.2
Net liability of defined benefit obligations	**145.7**	**17.8**	**4.4**	**167.9**	**140.7**
Impact of minimum funding requirement/asset ceiling	0	0	0	0	0
Amount recognised in the balance sheet	**145.7**	**17.8**	**4.4**	**167.9**	**140.7**

The defined benefit plans comprise a total of 2,713 (2015: 2,686, adjusted for changes to the basis of consolidation 2015: 2,646) beneficiaries. The present value of defined benefit obligations can be allocated to the beneficiaries as follows:

Breakdown of beneficiaries

	Germany €m	Luxembourg €m	Other €m	Total 31 Dec 2016 €m	Total 31 Dec 2015 €m
Eligible current employees	179.7	62.0	20.8	262.5	237.0
Former employees with vested entitlements	130.7	0.6	0.3	131.6	124.6
Pensioners or surviving dependants	97.8	0.7	0	98.5	81.1
	408.2	**63.3**	**21.1**	**492.6**	**442.7**

Essentially, the retirement benefits encompass the following retirement benefit plans:

Executive boards of Group companies (Germany and Luxembourg)
Individual commitment plans exist for executive board members of certain Group companies; they are based on the plan for executives described in the next but one paragraph, i.e. in each calendar year the company provides an annual contribution to a capital component calculated in accordance with actuarial principles. The benefit assets equal the total of the acquired capital components of the individual years and are converted into a lifelong pension once the benefits fall due. In addition, retirement benefit agreements are in place with members of the executive boards of Group companies, under which they are entitled to pension benefits on reaching the age of 63 and following reappointment. When the term of office began, the replacement rate was 30 per cent of individual pensionable income. It rose by five percentage points with each reappointment, up to a maximum of 50 per cent of pensionable income. Details of the pension commitments for members of Deutsche Börse AG's Executive Board can be found in the remuneration report.

Germany
There has been an employee-funded deferred compensation plan for employees of certain Deutsche Börse Group companies in Germany since 1 July 1999. This plan gives employees the opportunity to convert parts of their future remuneration entitlements into benefit assets of equal value. The benefits consist of a capital payment on reaching the age of 65 or earlier, if applicable, in the case of disability or death; when due, the payment is made in equal annual payments over a period of three years. The benefit assets earn interest at a rate of 6 per cent p.a. As a rule, new commitments are entered into on the basis of this deferred compensation plan; employees with pension commitments under retirement benefit arrangements in force before 1 July 1999 were given an option to participate in the deferred compensation plan by converting their existing pension rights.

In the period from 1 January 2004 to 30 June 2006, executives in Germany were offered the opportunity to participate in the following pension system based on capital components: the benefit is based on annual income received, composed of fixed annual salary and the variable remuneration. Every year, participating Group companies provide for an amount that corresponds to a certain percentage of the pensionable income. This amount is multiplied by a capitalisation factor depending on age, resulting in the "annual capital component". The benefit assets equal the total of the acquired capital components of the individual years and are converted into a lifelong pension once the benefits fall due. This benefit plan was closed to new staff on 30 June 2006; the executives who were employed in the above period can continue to earn capital components.

As part of adjustments to the remuneration systems to bring them into line with supervisory requirements (see note 39 for detailed information) contracts were adjusted in 2016 and 2015 for some executives. For senior executives affected, whose contracts only provided for the inclusion of income received and variable remuneration over and above the upper limit of the contribution assessment (Beitragsbemessungsgrenze) of the statutory pension insurance provisions as pensionable income to date, pensionable income has now been fixed on the basis of annual income received in 2013 and will henceforth be adjusted annually, to reflect the increase in the cost of living, based on the consumer price index for Germany published by the German Federal Statistical Office. For executives affected, whose capital components were calculated on the basis of income received, without observing the upper limit of the contribution assessment, an amount has been fixed which will be reviewed annually, and adjusted if necessary, by the Supervisory Board, taking changed circumstances in terms of income and purchasing power in account.

Luxembourg

The Clearstream subgroup and Finnovation S.A., both based in Luxembourg, still operate separate defined benefit plans. The only defined benefit pension plan still in operation in favour of Luxembourg employees of Clearstream International S.A., Clearstream Banking S.A. and Clearstream Services S.A. is funded by means of cash contributions to an “association d’épargne pension” (ASSEP) organised in accordance with Luxembourg law. The benefits consist of a one-off capital payment, which is generally paid on reaching the age of 65. The benefit plan does not cover disability or death in service. Contributions to the ASSEP are funded in full by the participating companies. The contributions are determined annually on the basis of actuarial reports and the amount of the obligation is calculated in accordance with Luxembourg law.

For employees of Finnovation S.A. and REGIS-TR S.A. a group plan has been entered into with Swiss Life (Luxembourg) S.A.; it covers pensions as well as disability and death. The contributions are paid annually by the employer. Benefits depend on the length of employment at the Group company and consist of quarterly payments starting upon the employee reaching the age of 65. In the case of disability or death, differing provisions apply. The contributions are determined annually on the basis of actuarial reports.

Switzerland

There have been a separate pension plan (basic pension plan) and a supplementary benefits plan (bonus plan) for employees of STOXX Ltd. (since 2015), of Eurex Zürich AG (since 2012) and of Eurex Global Derivatives AG (since 2012); both plans are based on insurance policies and, in addition to retirement benefits, comprise disability benefits and dependants’ pensions. The contributions to the basic pension plan are paid by the employee and the employer, based on progressive percentages of the insured wage (annual wage less coordination deduction). For the bonus plan, the contributions are determined as a percentage of the bonus; it is also funded by contributions from employees and the employer. The retirement age is 65. The beneficiaries can choose between pension payments and a one-off payment.

The present value of defined benefit obligations can be reconciled as follows with the provisions reported in the consolidated balance sheet:

Changes in net defined benefit obligations

	Present value of obligations €m	Fair value of plan assets €m	Total €m
Balance as at 1 Jan 2015	**430.0**	**–284.4**	**145.6**
Acquisitions from business combinations	3.0	–1.4	1.6
Current service cost	21.7	–	21.7
Interest expense/(income)	8.9	–6.1	2.8
Past service cost and gains and losses on settlements	–0.6	–	–0.6
	30.0	**–6.1**	**23.9**
Remeasurements			
Return on plan assets, excluding amounts already recognised in interest income	–	7.7	7.7
Acquisitions from business combinations	–	1.9	1.9
Losses from changes in financial assumptions	–7.0	–	–7.0
Experience gains	–6.1	–	–6.1
	–13.1	**9.6**	**–3.5**[1)]
Effect of exchange rate differences	2.3	–1.8	0.5
Contributions:			
Employers	–	–32.0	–32.0
Plan participants	1.0	–1.0	0
Benefit payments	–9.7	9.6	–0.1
Withdrawal of plan assets	–	4.7	4.7
Tax and administration costs	–0.8	0.8	0
Balance as at 31 Dec 2015	**442.7**	**–302.0**	**140.7**
Acquisitions from business combinations	–0.3	0.3	0
Current service cost	24.0	–	24.0
Interest expense/(income)	9.3	–6.4	2.9
	33.3	**–6.4**	**26.9**
Remeasurements			
Return on plan assets, excluding amounts already recognised in interest income	–	–2.9	–2.9
Losses from changes in demographic assumptions	–0.8	–	–0.8
Losses from changes in financial assumptions	31.5	–	31.5
Experience gains	–0.4	–	–0.4
	30.3	**–2.9**	**27.4**[1)]
Effect of exchange rate differences	0.2	–0.2	0
Contributions:			
Employers	–	–29.2	–29.2
Plan participants	0.9	–0.9	0
Benefit payments	–13.7	13.7	0
Tax and administration costs	–0.8	2.9	2.1
Balance as at 31 Dec 2016	**492.6**	**–324.7**	**167.9**

1) Thereof €0.1 million (2015: €0.3 million) in the offsetting item for non-controlling interests

In financial year 2016, employees converted a total of €5.3 million (2015: €2.6 million) of their variable remuneration into deferred compensation benefits.

Assumptions

Provisions for pension plans and other employee benefits are measured annually at the reporting date using actuarial techniques. The assumptions for determining the actuarial obligations for the pension plans differ according to the individual conditions in the countries concerned and shown in the following table:

Actuarial assumptions

	31 Dec 2016			31 Dec 2015		
	Germany %	Luxembourg %	Switzerland %	Germany %	Luxembourg %	Switzerland %
Discount rate	1.75	1.75	0.60	2.20	2.20	0.80
Salary growth	3.50	3.00	1.00	3.50	3.50	1.00
Pension growth	2.00	1.50	0	2.00	1.80–2.00	0
Staff turnover rate	2.00[1)]	2.00[1)]	n.a.[2)]	2.00[1)]	2.00[1)]	n.a.[2)]

1) Up to the age of 50, afterwards 0 per cent
2) Staff turnover rate in accordance with the Bundesgesetz über die berufliche Alters-, Hinterlassenen- und Invalidenvorsorge (BVG, Swiss Federal Occupational Retirement, Survivors' and Disability Pension Plans Act)

In Germany, the "2005 G" mortality tables (generation tables) developed by Prof Klaus Heubeck are used in a modified version. For Luxembourg, generation tables of the Institut national de la statistique et des études économiques du Grand-Duché du Luxembourg are used. For Switzerland, the BVG 2010 generation tables are used.

Sensitivity analysis

The sensitivity analysis presented in the following considers the change in one assumption at a time, leaving the other assumptions unchanged from the original calculation, i.e. possible correlation effects between the individual assumptions are not taken into account.

Sensitivity analysis of defined benefit obligation

	Change in actuarial assumption	Effect on defined benefit obligation		Effect on defined benefit obligation	
		2016 defined benefit obligation €m	Change %	2015 defined benefit obligation €m	Change %
Present value of the obligation[1]		492.6	–	442.7	–
Discount rate	Increase by 1.0 percentage point	418.8	–15.0	377.4	–14.8
	Reduction by 1.0 percentage point	587.5	19.3	525.9	18.8
Salary growth	Increase by 0.5 percentage points	505.0	2.5	455.4	2.9
	Reduction by 0.5 percentage points	482.6	–2.0	432.6	–2.3
Pension growth	Increase by 0.5 percentage points	504.9	2.5	461.6	4.3
	Reduction by 0.5 percentage points	481.4	–2.3	432.3	–2.3
Life expectancy	Increase by one year	505.4	2.6	453.4	2.4
	Reduction by one year	479.7	–2.6	431.7	–2.5

1) Present value of the obligations using assumptions in accordance with the table “actuarial assumptions”

Composition of plan assets

Germany

In Germany, the plan assets are held by a trustee in safekeeping for individual companies of Deutsche Börse Group and for the beneficiaries: at the company’s instruction, the trustee uses the funds transferred to acquire securities, without any consulting on the part of the trustee. The contributions are invested in accordance with an investment policy, which may be amended by the companies represented in the investment committee in agreement with the other members. The trustee may refuse to carry out instructions if they are in conflict with the fund’s allocation rules or the payment provisions. In accordance with the investment policy, a value preservation mechanism is applied; investments can be made in different asset classes.

Luxembourg

In Luxembourg, the Board of Directors of the Clearstream Pension Fund is responsible for determining the investment strategy, with the aim of maximising returns in relation to a benchmark. Up to 75 per cent of this benchmark is derived from the return on five-year German federal government bonds and up to 25 per cent from the return on the EURO STOXX 50 Index. According to the investment policy, the fund may only invest in fixed-income and variable-rate securities, as well as listed investment fund units, and it may hold cash, including in the form of money market funds.

Switzerland

The assets of the pension funds of STOXX Ltd. (since 2015), of Eurex Zürich AG (since 2012) and Eurex Global Derivatives AG (since 2012) have been invested with AXA Stiftung Berufliche Vorsorge and are therefore reported under “qualifying insurance policies”.

Composition of plan assets

	31 Dec 2016		31 Dec 2015	
	€m	%	€m	%
Bonds	**270.7**	**83.4**	**253.8**	**84.0**
Government bonds	229.8		248.2	
Multilateral development banks	2.6		2.6	
Corporate bonds	38.3		3.0	
Derivatives	**0.8**	**0.2**	**1.1**	**0.4**
Equity index futures	0.6		1.0	
Interest rate futures	0.2		0.1	
Investment funds	**13.9**	**4.3**	**9.8**	**3.2**
Total listed	**285.4**	**87.9**	**264.7**	**87.6**
Qualifying insurance policies	16.7	5.1	18.0	6.0
Cash	22.6	7.0	19.3	6.4
Total not listed	**39.3**	**12.1**	**37.3**	**12.4**
Total plan assets	**324.7**	**100.0**	**302.0**	**100.0**

As at 31 December 2016, plan assets did not include any financial instruments held by the Group (2015: nil), nor did they include any property occupied or other assets used by the Group.

Risks

In addition to the general actuarial risks, the risks associated with the defined benefit obligations relate especially to financial risks in connection with the plan assets, including in particular counterparty credit and market risks.

Market risk

The return on plan assets is assumed to be the discount rate determined on the basis of corporate bonds with an AA rating. If the actual rate of return on plan assets is lower than the discount rate used, the net defined benefit liability increases accordingly. If volatility is lower, the actual return is further expected to exceed the return on corporate bonds with a good rating in the medium to long term.

Deutsche Börse Group considers the price risk resulting from the proportion of listed securities in the plan assets to be appropriate. The company bases its assessment on the expectation that the overall volume of payments from the pension plans will be manageable in the next few years, that the total amount of the obligations will also be manageable and that it will be able to meet these payments in full from operating cash flows. Any amendments to the investment policy take into account the duration of the pension obligation as well as the expected payments over a period of ten years.

Moreover, the level of the net liability is influenced by the discount rates in particular, whereby the current low interest rates contribute to a relatively high net liability. A continued decline in returns on corporate bonds will lead to a further increase in defined benefit obligations, which can be only partially offset by the positive development of the fair values of the assets included in the plan assets.

Inflation risk

Possible inflation risks that could lead to an increase in defined benefit obligations exist because some pension plans are final salary plans or the annual capital components are directly related to salaries, i.e. a significant increase in salaries would lead to an increase in the benefit obligation from these plans. In Germany, however, there are no contractual arrangements with regard to inflation risk for these pension plans. An interest rate of 6 per cent p.a. has been agreed for the employee-financed deferred compensation plan; the plan does not include any arrangements for inflation, so that it has to be assumed that there will be little incentive for employees to contribute to the deferred compensation plan in times of rising inflation.

In Luxembourg, salaries are adjusted for the effects of inflation on the basis of a consumer price index no more than once a year; this adjustment leads to a corresponding increase in the benefit obligation from the pension plan. Since the obligation will be met in the form of a capital payment, there will be no inflation-linked effects once the beneficiary reaches retirement age.

In Switzerland, the benefit plan at AXA Stiftung Berufliche Vorsorge includes the provision that the board of this foundation decides annually whether the retirement pensions will be adjusted to reflect price trends. The decision takes into account in particular the financial capability of the foundation. There are no arrangements for automatic adjustments to price increases over and above the legal requirements that apply to certain surviving dependants' and disability pensions.

Duration and expected maturities of the pension obligations

The weighted duration of the pension obligations was 17.3 years as at 31 December 2016.

Expected maturities of undiscounted pension payments

	Expected pension payments[1] 31 Dec 2016 €m	Expected pension payments[1] 31 Dec 2015 €m
Less than 1 year	12.4	11.4
Between 1 and 2 years	12.6	13.3
Between 2 and 5 years	39.4	43.1
More than 5 years up to 10 years	83.7	85.7
Total	**148.1**	**153.5**

1) The expected payments in CHF were translated into euros at the relevant closing rate on 31 December.

The expected costs of defined benefit plans amount to approximately €17.1 million for the 2017 financial year, including net interest expense.

Defined contribution pension plans and multi-employer plans

During the reporting period, the costs associated with defined contribution plans, and designated multi-employer plans, amounted to €35.3 million (2015: €34.2 million).

In 2017, Deutsche Börse Group expects to make contributions to multi-employer plans amounting to around €9.5 million.

23. Changes in other provisions

Changes in other provisions

	Recourse and litigation risks €m	Restructuring and efficiency measures €m	Interest on taxes €m	Stock bonus plans €m
Balance as at 1 Jan 2016	**5.0**	**111.9**	**35.4**	**31.0**
Changes to the basis of consolidation	0	0	–0.1	0
Reclassification[2)]	0.4	0	0.1	–0.4
Utilisation	–2.8	–32.1	0	–18.9
Reversal	–0.1	–14.2	0	–1.0
Additions	1.0	10.0	12.1	14.8
Currency translation	0	–0.1	0	0
Interest	0	2.8	0	0
Balance as at 31 Dec 2016	**3.5**	**78.3**	**47.5**	**25.5**

1) IHK = Industrie- und Handelskammer Frankfurt am Main (the Frankfurt/Main Chamber of Industry and Commerce)
2) Relates primarily to reclassifications to the employee-funded deferred compensation plan (see note 22) as well as to reclassifications from liabilities.

The “other personnel provisions” item as at 31 December 2016 includes personnel-related provisions of €5.7 million (2015: €5.8 million) for jubilees, €2.5 million (2015: €1.2 million) for other personnel costs and €0.5 million (2015: €0.6 million) for early retirement benefits. The “miscellaneous” item includes provisions for anticipated losses of €7.0 million (2015: €6.5 million) and provisions for rent and service costs of €1.3 million (2015: €2.1 million).

	Bonuses €m	Operational claims €m	Pension obligations to IHK[1] €m	Other personnel provisions €m	Miscellaneous €m	Total €m
	85.4	6.5	9.6	7.6	13.8	306.2
	–8.0	0	0	0	0	–8.1
	–9.4	0.2	0	1.0	1.9	–6.2
	–62.3	–2.5	0	–0.6	–1.8	–121.0
	–6.7	–1.3	–0.1	–0.8	–1.4	–25.6
	102.7	0.2	0.1	1.2	5.1	147.2
	–0.1	0	0	0	0	–0.2
	0.1	0	–0.2	0.3	0	3.0
	101.7	3.1	9.4	8.7	17.6	295.3

24. Other non-current provisions

Other non-current provisions have more than one year to maturity.

Composition of other non-current provisions

	31 Dec 2016 €m	31 Dec 2015 €m
Restructuring and efficiency measures	68.1	87.2
Stock bonus plans	18.2	11.7
Pension obligations to IHK[1]	9.4	9.6
Anticipated losses	6.5	5.9
Jubilees	5.7	5.8
Bonuses	5.4	9.1
Early retirement	0.5	0.6
Other	3.2	1.8
Total	**117.0**	**131.7**
thereof with remaining maturity of between 1 and 5 years	95.0	103.2
thereof with remaining maturity of more than 5 years	22.0	28.5

1) IHK = Industrie- und Handelskammer Frankfurt am Main (the Frankfurt/Main Chamber of Industry and Commerce)

Provisions for restructuring and efficiency measures include provisions amounting to €1.7 million (2015: €3.3 million) for the restructuring and efficiency programme resolved in September 2007, €14.7 million (2015: €18.7 million) for the programme resolved in 2010 to increase operational performance and €31.5 million (2015: €37.7 million) for the programme resolved in 2013 to improve the cost structures and operational processes in order to adapt to a permanently changed business environment as well as €20.2 million (2015: €27.5 million) for the growth programme resolved in 2015. For more details on the restructuring and efficiency programmes see “Internal management – management systems” section in the combined management report.

For details on the Stock Bonus Plans, see note 39.

25. Liabilities

The bonds issued by Deutsche Börse Group have a carrying amount of €2,284.7 million (2015: €2,546.5 million) and a fair value of €2,457.7 million (2015: €2,679.9 million).

The decrease in interest-bearing liabilities is largely attributable to the repayment of all US dollar bonds during 2016. For details, see the “Capital management” section of the combined management report.

The financial liabilities recognised in the balance sheet were not secured by liens or similar rights, either as at 31 December 2016 or as at 31 December 2015.

26. Tax provisions

Composition of tax provisions

	Income taxes: reporting period €m	Income taxes: prior periods €m	Other taxes €m	Total €m
Balance as at 1 Jan 2016	0	290.5	26.2	316.7
Changes in the basis of consolidation	0	–66.3	0	–66.3
Reclassification	0.3	0	–2.9	–2.6
Utilisation	–19.8	–23.8	–0.4	–44.0
Reversal	–0.1	–47.6	0	–47.7
Additions	56.3	42.3	19.2	117.8
Currency translation	0.1	0	0.3	0.4
Interest	0	0	0	0
Balance as at 31 Dec 2016	**36.8**	**195.1**	**42.4**	**274.3**

Tax provisions of €173.4 million (2015: €166.3 million) have an estimated remaining maturity of more than one year.

27. Other current provisions

Composition of other current provisions

	31 Dec 2016 €m	31 Dec 2015 €m
Bonuses	96.3	76.3
Interest on taxes	47.5	35.4
Restructuring and efficiency measures	10.2	24.7
Stock bonus plans	7.3	19.3
Recourse and litigation risks	3.5	5.0
Operational claims	3.1	6.5
Personnel costs	2.5	1.2
Rent and incidental rental costs	1.3	2.1
Anticipated losses	0.5	0.6
Miscellaneous	6.1	3.4
Total	**178.3**	**174.5**

Restructuring and efficiency measures include provisions amounting to €0.1 million (2015: €0.1 million) for the restructuring and efficiency programme resolved in 2007, and €0.3 million (2015: €0.5 million) for the programme resolved in 2013 to improve the cost structures and operational processes in order to adapt to a permanently changed business environment, as well as €9.3 million (2015: €23.7 million) for the growth programme resolved in 2015. For details see the “Internal management” section of the combined management report.

For details on share-based payments, see note 39.

28. Liabilities from banking business

The liabilities from banking business are attributable solely to the Clearstream subgroup.

Composition of liabilities from banking business

	31 Dec 2016 €m	31 Dec 2015 €m
Customer deposits from securities settlement business	13,024.8	10,867.3
Issued commercial paper	349.5	286.5
Overdrafts on nostro accounts	321.9	498.1
Margin deposits	125.7	17.1
Money market lending	15.5	0
Forward foreign-exchange transactions – held for trading	2.4	12.4
Interest liabilities	0.5	0
Total	**13,840.3**	**11,681.4**

29. Cash deposits by market participants

Composition of cash deposits by market participants

	31 Dec 2016 €m	31 Dec 2015 €m
Liabilities from margin payments to Eurex Clearing AG by clearing members	24,798.2	25,540.2
Liabilities from margin payments to European Commodity Clearing AG by clearing members	2,973.8	1,321.1
Liabilities from cash deposits by market participants in equity trading	5.6	7.7
Total	**27,777.6**	**26,869.0**

30. Other current liabilities

Composition of other current liabilities

	31 Dec 2016 €m	31 Dec 2015 €m
Liabilities from CCP positions	386.4	89.3
Tax liabilities (excluding income taxes)	30.5	22.7
Interest payable	28.7	29.3
Vacation entitlements, flexitime and overtime credits	20.5	22.3
Deferred income	18.1	3.2
Derivatives	12.7	6.2
Social security liabilities	7.8	6.2
Special payments and bonuses	4.9	13.5
Liabilities to supervisory bodies	2.9	2.6
Debtors with credit balances	2.7	1.9
Issued commercial paper	0	95.0
Miscellaneous	10.5	38.2
Total	**525.7**	**330.4**

31. Maturity analysis of financial instruments

Underlying contractual maturities of the financial instruments at the reporting date

	Contractual maturity					
	Sight		Not more than 3 months		More than 3 months but not more than 1 year	
	2016 €m	2015 €m	2016 €m	2015 €m	2016 €m	2015 €m
Non-derivative financial liabilities						
Interest-bearing liabilities	0	0	23.3	15.0	22.4	38.0
Other non-current financial liabilities	0	0	0	0	0	0
Non-derivative liabilities from banking business	13,487.9	11,387.8	98.7	214.9	251.9	82.4
Trade payables, payables to related parties and other current liabilities	380.1	80.6	513.9	515.1	0	4.5
Cash deposits by market participants	24,803.9	26,869.0	2,973.7	0	0	0
Other bank loans and overdrafts	0.1	42.2	0	0	0	0
Total non-derivative financial liabilities (gross)	**38,672.0**	**38,379.6**	**3,609.6**	**745.0**	**274.3**	**124.9**
Derivatives and financial instruments held by central counterparties						
Financial liabilities and derivatives held by central counterparties	20,717.7	36,495.9	68,646.2	69,521.2	18,146.9	19,989.3
less financial assets and derivatives held by central counterparties	–20,717.7	–36,495.9	–69,076.4	–69,804.3	–18,146.9	–19,989.3
Cash inflow – derivatives and hedges						
Cash flow hedges	0	0	154.3	0	0	0
Fair value hedges	0	0	0	0	0	0
Derivatives held for trading	1,331.8	1,009.9	409.3	1,633.7	1,407.3	0
Cash outflow – derivatives and hedges						
Cash flow hedges	0	0	–160.2	0	0	0
Fair value hedges	0	0	0	0	0	0
Derivatives held for trading	–1,332.3	–1,008.9	–400.4	–1,620.5	–1,341.7	0
Total derivatives and hedges	**–0.5**	**1.0**	**–427.2**	**–269.9**	**65.6**	**0**
Financial guarantee contracts	0	0	0	977.9	0	0

	Contractual maturity				Reconciliation to carrying amount		Carrying amount	
	More than 1 year but not more than 5 years		Over 5 years					
	2016 €m	2015 €m	2016 €m	2015 €m	2016 €m	2015 €m	2016 €m	2015 €m
	1,362.3	1,051.6	1,146.8	1,785.6	– 270.1	– 343.7	2,284.7	2,546.5
	0.2	4.3	0	0	7.7	5.7	7.9	10.0
	0	0	0	0	– 0.6	– 16.0	13,837.9	11,669.1
	0	0	0	0	100.4	104.8	994.4	705.0
	0	0	0	0	0	0	27,777.6	26,869.0
	0	0	0	0	0	0	0.1	42.2
	1,362.5	**1,055.9**	**1,146.8**	**1,785.6**	**– 162.6**	**– 249.2**	**44,902.6**	**41,841.8**
	4,384.6	5,633.1	1,440.6	1,542.2	0	0	113,336.0	133,181.7
	– 4,384.6	– 5,633.1	– 1,440.6	– 1,542.2	0	0	– 113,766.2	– 133,464.8
	0	0	0	0				
	0	0	0	0				
	0	0	0	0				
	0	0	0	0				
	0	0	0	0				
	0	0	0	0				
	0	**0**	**0**	**0**				
	0	0	0	0				

32. Classification of financial instruments under IAS 39

The following table shows an analysis of the financial instruments in the balance sheet in accordance with their classification under IAS 39 as well as the corresponding carrying amounts:

Classification of financial instruments (part 1)

Consolidated balance sheet item (classification)	Note	Category	Measured at	Carrying amount 31 Dec 2016 €m	Carrying amount 31 Dec 2015 €m
Other equity investments	13	AFS[1]	Historical cost	58.0	85.3
		AFS[1]	Fair value	197.4	134.1
Non-current receivables and securities from banking business	13	AFS[1]	Fair value	1,604.8	2,018.6
Other financial instruments	13	AFS[1]	Historical cost	0	0.9
		AFS[1]	Fair value	26.0	31.4
Other loans	13	Loans and receivables	Amortised cost	0.4	0.2
Non-current financial instruments held by central counterparties	15	Held for trading	Fair value	5,856.6	7,175.2
Other non-current assets		Held for trading	Fair value	0.1	0
		Loans and receivables	Amortised cost	8.3	7.4
Current financial instruments held by central counterparties	15	Held for trading	Fair value	107,679.7	126,241.3
		Loans and receivables	Amortised cost	229.9	48.3
Current receivables and securities from banking business	14, 16	AFS[1]	Fair value	592.3	64.1
		Loans and receivables	Amortised cost	12,807.8	10,054.3
		Held for trading	Fair value	65.4	23.3
Trade receivables	17	Loans and receivables	Amortised cost	669.8	554.1
Receivables from related parties		Loans and receivables	Amortised cost	2.0	4.7
Other current assets	18	Loans and receivables	Amortised cost	441.8	924.9
		Held for trading	Fair value	0.3	0
Restricted bank balances	19	Loans and receivables	Amortised cost	27,777.6	26,870.0
Other cash and bank balances	33	Loans and receivables	Amortised cost	1,458.1	711.1

1) Available-for-sale (AFS) financial assets
2) This relates to the private placements which were designated as hedging instruments of a net investment hedge (see note 14).

Classification of financial instruments (part 2)

Consolidated balance sheet item (classification)	Note	Category	Measured at	Carrying amount 31 Dec 2016 €m	Carrying amount 31 Dec 2015 €m
Interest-bearing liabilities (excluding finance leases)	14, 25	Liabilities at amortised cost	Amortised cost	2,284.7	2,281.0
		Net investment hedge[2)]	Amortised cost	0	265.5
Non-current financial instruments held by central counterparties	15	Held for trading	Fair value	5,856.6	7,175.2
Other non-current liabilities	14	Held for trading	Fair value	1.7	4.3
Current financial instruments held by central counterparties	15	Held for trading	Fair value	107,249.5	125,958.2
		Liabilities at amortised cost	Amortised cost	229.9	48.3
Liabilities from banking business	14, 28	Liabilities at amortised cost	Amortised cost	13,837.9	11,669.0
		Held for trading	Fair value	2.4	12.4
Other bank loans and overdrafts	33	Liabilities at amortised cost	Amortised cost	0.1	42.2
Trade payables		Liabilities at amortised cost	Amortised cost	471.2	372.8
Liabilities to related parties		Liabilities at amortised cost	Amortised cost	3.6	1.8
Cash deposits by market participants	29	Liabilities at amortised cost	Amortised cost	27,777.6	26,869.0
Other current liabilities	14, 30	Liabilities at amortised cost	Amortised cost	419.1	223.7
		Cash flow hedge	Fair value	6.0	0
		Derivatives held for trading	Fair value	6.7	6.2

The financial assets and liabilities that are measured at fair value are required to be allocated to the following three hierarchy levels: financial assets and liabilities are allocated to level 1 if there is a quoted price for identical assets and liabilities in an active market that can be accessed by the entity. They are allocated to level 2 if the inputs on which fair value measurement is based are observable either directly or indirectly; these inputs must be based on market expectations. Financial assets and liabilities are allocated to level 3 if fair value is determined on the basis of unobservable inputs.

As at 31 December 2016, the financial assets and liabilities measured at fair value were allocated to the following levels of the fair value hierarchy:

Fair value hierarchy

	Fair value as at 31 Dec 2016	thereof attributable to:		
		Level 1	Level 2	Level 3
	€m	€m	€m	€m
Recurring fair value measurements				
ASSETS				
Financial assets held for trading				
Derivatives				
Non-current financial instruments held by central counterparties	5,856.6	0	5,856.6	0
Current financial instruments held by central counterparties	107,679.7	0	107,679.7	0
Current receivables and securities from banking business	65.4	0	65.4	0
Other non-current assets	0.1	0	0	0.1
Other current assets	0.3	0	0	0.3
Total	**113,602.1**	**0**	**113,601.7**	**0.4**
Available-for-sale financial assets				
Equity instruments				
Other equity investments	197.4	190.9	0	6.5
Total	**197.4**	**190.9**	**0**	**6.5**
Debt instruments				
Other financial instruments	26.0	26.0	0	0
Non-current receivables and securities from banking business	1,604.8	1,604.8	0	0
Current receivables and securities from banking business	592.3	592.3	0	0
Total	**2,223.1**	**2,223.1**	**0**	**0**
Total assets	**116,022.6**	**2,414.0**	**113,601.7**	**6.9**
LIABILITIES				
Financial liabilities held for trading				
Derivatives				
Non-current financial instruments held by central counterparties	–5,856.6	0	–5,856.6	0
Current financial instruments held by central counterparties	–107,249.5	0	–107,249.5	0
Liabilities from banking business	–2.4	0	–2.4	0
Other non-current liabilities	–1.5	0	0	–1.5
Other current liabilities	–12.7	0	–6.0	–6.7
Contingent purchase price components				
Other non-current liabilities	–0.2	0	0	–0.2
Total liabilities	**–113,122.9**	**0**	**–113,114.5**	**–8.4**

By comparison, the financial assets and liabilities measured at fair value as at 31 December 2015 were allocated as follows to the hierarchy levels:

Fair value hierarchy

	Fair value as at 31 Dec 2015	thereof attributable to:		
		Level 1	Level 2	Level 3
	€m	€m	€m	€m
Recurring fair value measurements				
ASSETS				
Financial assets held for trading				
Derivatives				
Non-current financial instruments held by central counterparties	7,175.2	0	7,175.2	0
Current financial instruments held by central counterparties	126,241.3	0	126,241.3	0
Current receivables and securities from banking business	23.3	0	23.3	0
Other non-current assets	0	0	0	0
Other current assets	0	0	0	0
Total	**133,439.8**	**0**	**133,439.8**	**0**
Available-for-sale financial assets				
Equity instruments				
Other equity investments	134.1	0	128.0	6.1
Total	**134.1**	**0**	**128.0**	**6.1**
Debt instruments				
Other financial instruments	31.4	31.4	0	0
Non-current receivables and securities from banking business	2,018.6	2,018.6	0	0
Current receivables and securities from banking business	62.3	62.3	0	0
Other current assets	0	0	0	0
Total	**2,112.3**	**2,112.3**	**0**	**0**
Total assets	**135,686.2**	**2,112.3**	**133,567.8**	**6.1**
LIABILITIES				
Financial liabilities held for trading				
Derivatives				
Non-current financial instruments held by central counterparties	7,175.2	0	7,175.2	0
Current financial instruments held by central counterparties	125,958.2	0	125,958.2	0
Liabilities from banking business	0	0	0	0
Other current liabilities	6.2	0	0	6.2
Contingent purchase price components				
Other non-current liabilities	4.3	0	0	4.3
Total liabilities	**133,143.9**	**0**	**133,133.4**	**10.5**

During the reporting period, the investments in Bats Global Markets, Inc., were reallocated from level 2 to level 1. Given the entity's IPO in the second quarter of 2016, quoted prices in an active market have been available since that date.

Financial assets and financial liabilities listed in levels 2 and 3 as at 31 December 2016 are measured as follows:

- The derivatives listed in level 2 comprise forward forgein exchange transactions. The fair value of the forward foreign-exchange transactions is determined on the basis of the forward exchange rates for the remaining period to maturity as at the reporting date. They are based on observable market prices.
- The equity investments allocated to level 2 were measured on the basis of current, comparable market transactions as at 31 December 2015. No investments have been allocated to level 2 as at 31 December 2016.
- The fair value of the financial instruments held by central counterparties allocated to level 2 is determined by market transactions for identical or similar asstes in markets that are not active and by option pricing models based on observable market prices.

At the reporting date, the items allocated to level 3 and their measurements were as follows:

Changes in level 3 financial instruments

	Assets			Liabilities		Total
	Other equity investments €m	Other non-current €m	Other current €m	Other non-current liabilities €m	Other current €m	€m
Balance as at 1 Jan 2015	**5.6**	**0**	**0**	**–9.1**	**–5.9**	**–9.4**
Additions	1.7	0	0	0	0	1.7
Disposals	–1.3	0	0	0	0	–1.3
Realised capital gains/(losses)	0	0	0	1.8	0	1.8
Financial result	0	0	0	–0.2	0	–0.2
Other operating income	0	0	0	2.0	0	2.0
Unrealised capital gains/(losses) recognised in income	0	0	0	3.0	–0.3	2.7
Other operating expenses	0	0	0	0	–0.5	–0.5
Other operating income	0	0	0	3.0	0.2	3.2
Changes recognised in the revaluation surplus	0.1	0	0	0	0	0.1
Balance as at 1 Jan 2016	**6.1**	**0**	**0**	**–4.3**	**–6.2**	**–4.4**
Additions	0	0.1	0.3	–2.5	–3.3	–5.4
Disposals	–0.7	0	0	0	0	–0.7
Reclassification	0	0	0	4.3	–4.3	0
Realised capital gains/(losses)	0	0	0	0	4.3	4.3
Other operating income	0	0	0	0	4.3	4.3
Unrealised capital gains/(losses) recognised in profit or loss	0	0	0	0.8	2.8	3.6
Other operating expenses	0	0	0	0	–0.3	–0.3
Other operating income	0	0	0	0.8	3.1	3.9
Changes recognised in the revaluation surplus	1.1	0	0	0	0	1.1
Balance as at 31 Dec 2016	**6.5**	**0.1**	**0.3**	**–1.7**	**–6.7**	**–1.5**

The value of an equity investment listed in level 3 is reviewed annually by the issuer, who may initiate transactions. During the period under review, fair value measurement resulted in positive effects of €1.0 million recognised directly in equity.

Furthermore, this item includes an equity fund, the fair value of which is calculated on the basis of the net asset value determined by the issuer. Deutsche Börse Group decreased its investment in the equity fund in 2016, resulting in a disposal of €0.7 million. The fair value measurement of this item resulted in positive effects of €0.1 million recognised directly in equity.

The “other non-current assets” item increased by €0.1 million due to a call option. The option’s fair value was derived from a Black Scholes model based on unobservable market data.

The “other current assets” item increased by €0.3 million due to a forward purchase of additional shares in an associated entity. The measurement of the forward transaction was based on a discounted cash flow method, using unobservable market data.

“Other non-current liabilities” increased by €1.0 million in connection with contingent purchase price components. During the period under review, the reassessment of the probability that such components would be utilised resulted in other operating income of €0.8 million. Another contingent purchase price component expired as at year-end 2016. The reversal of the obligations resulted in other operating income of €4.3 million. These two purchase price components are measured on the basis of internal discounted cash flow models, which discount the expected future payment obligations to the measurement date using interest rates that are appropriate to the risk.

Derivative financial instruments from an incentive programme of Eurex Frankfurt AG with a carrying amount of €1.5 million were allocated to “other non-current liabilities” during the reporting period. The item “other current liabilities” also includes derivative financial instruments from an incentive programme of Eurex Clearing AG, with a carrying amount of €6.2 million. At the end of the financial year, the total carrying amount of the derivative financial instruments was €3.4 million. In the course of the reporting period, the subsequent measurement of these financial instruments led to gains of €3.1 million and expenses of €0.4 million; these amounts are reported under “other operating income” and “other operating expenses”. The financial instruments are regularly measured at fair value through profit and loss using an internal model at the quarterly reporting dates. The model takes into account the criteria underlying the conditional repayment of the grant made by Eurex Clearing AG, and Eurex Frankfurt AG. The criteria include, in particular, non-financial indicators such as the expected number of customers in a specific market segment as well as expected trading volumes. They are continuously monitored, while taking into account possible adjustments. In order to do this, customer information is also used. Since this is an internal model, the parameters can differ from those of the settlement date. However, the derivative financial instrument will not exceed an amount of €1.5 million, and €7.0 million, respectively. This amount arises if the beneficiaries of the incentive programme fulfil the conditions and a repayment of the contribution is not taken into consideration.

The “other current liabilities” item comprises another derivative financial instrument related to contingent repayment claims in connection with advance payments made in the amount of €3.3 million. The measurement of the derivative is based on an internal model, taking into account the contingent repayment criteria for the payments made by Deutsche Börse AG. Since this is an internal model, the parameters can differ from those of the settlement date.

The fair value of other financial assets and liabilities not measured at fair value is determined as follows:

Debt instruments issued by Deutsche Börse Group have a fair value of €2,457.7 million (31 December 2015: €2,679.9 million) and are reported under interest-bearing liabilities. The fair value of such instruments is based on the debt instruments' quoted prices. Hence, debt instruments were allocated to level 2.

The carrying amounts of the following items represent a reasonable approximation of their fair value:

- unlisted equity instruments whose fair value generally cannot be reliably determined on a continuous basis and that are reported under the "financial assets" item; these are carried at cost less any impairment losses
- other loans, which are reported under "financial assets"
- other receivables and other assets as well as current receivables from banking business, to the extent that these are measured at amortised cost
- restricted bank balances
- other cash and bank balances
- cash deposits by market participants
- other current liabilities

Other disclosures

33. Consolidated cash flow statement disclosures

Cash flows from operating activities

After adjustments to net profit for the period for non-cash items, cash flows from operating activities excluding CCP positions amounted to €856.6 million (2015: €796.6 million). After adjustment for the change in CCP positions cash flow from operating activities amounted to €1,621.4 million (2015: €10.1 million). For details on the adjustments see the “Financial position” section of the combined management report.

The other non-cash income (or expenses in the previous year) consists (consisted) of the following items:

Composition of other non-cash income/(expenses)

	2016 €m	2015 €m
Impairment of financial instruments	5.0	12.1
Equity method measurement	8.9	–3.2
Reversal of discount and transaction costs from long-term financing	3.7	2.2
Subsequent measurement of derivatives	4.7	0.3
Reversal of the revaluation surplus for cash flow hedges	2.7	2.7
Subsequent measurement of non-derivative financial instruments	–17.6	–5.1
Gains on the disposal of subsidiaries and equity investments	–59.6	0
Miscellaneous	–0.1	–2.0
Total	**–52.3**	**7.0**

Cash flows from investing activities

In the 2016 financial year, cash flows from investing activities amounting to €578.5 million reflected the disposal of shares in ISE group in particular. This transaction involved a cash inflow of €916.3 million (adjusted for €13.0 million in cash disposed). Furthermore, the disposal of the shares in Infobolsa S.A. resulted in a cash inflow of €1.1 million (adjusted for €7.1 million in cash disposed).

In the previous financial year net cash used for investing activities of €1,592.3 million reflected acquisitions in particular: The full acquisition of 360T group involved a cash outflow of €676.6 million (adjusted for €27.7 million in cash acquired). Full consolidation of Powernext SA and EPEX SPOT SE as at 1 January 2015 increased cash by €40.1 million.

Investments in intangible assets and property, plant and equipment amounted to €164.9 million (2015: €154.5 million), thereof €12.3 million (2015: €6.7 million) attributable to the discontinued operation. Among the investments in intangible assets and property, plant and equipment, the measures under-taken under the strategic growth initiatives and infrastructure projects are classified as expansion investments, while all remaining investments are reported as replacement investments. The investments in intangible assets and property, plant and equipment are broken down by segment as follows:

Payment to acquire intangible assets and property, plant and equipment[1)]

	31 Dec 2016 €m	31 Dec 2015 €m
Expansion investments		
Eurex	14.4	29.3
Xetra	3.4	4.9
Clearstream	45.3	43.4
Market Data + Services	5.1	0
	68.2	**77.6**
Replacement investments		
Eurex	39.0	30.6
Xetra	10.2	2.1
Clearstream	18.3	30.0
Market Data + Services	16.9	7.5
	84.4	**70.2**
Total investments according to segment reporting	**152.6**	**147.8**

1) Not taking into account discontinued operations

Investments in long-term financial instruments totalling €178.9 million (2015: €815.5 million) included €155.6 million (2015: €771.5 million) for the purchase of floating-rate notes in the banking business. In addition, equity investments were acquired or increased in a total amount of €5.4 million (2015: €29.8 million).

Securities and other non-current receivables in the amount of €149.9 million (2015: €208.3 million) matured or were sold in the financial year 2016. The disposal of shares in BATS Global Markets Inc. resulted in a cash inflow of €80.3 million.

Cash flows from financing activities

Cash outflows from financing activities totalled €848.8 million (2015: cash inflows of €76.1 million).

In the 2016 financial year, Series B and C of the private placements (US$290.0 million) were repaid early; Series A (US$ 170.0 million) had already matured in the previous year.

Moreover, the company placed commercial paper of €400.0 million (2015: €2,100.0 million), and paid out €495.0 million (2015: €2,065.0 million) due to maturing commercial paper issued.

As part of financing the acquisition of shares in 360T Beteiligungs GmbH, the company placed €200.0 million in treasury shares in the 2015 financial year, and also placed debt securities with a nominal amount of €500.0 million.

The acquisition of the remaining 49.9 per cent stake in STOXX Ltd. led to a cash outflow totalling €653.8 million. Moreover, €63.7 million was paid to non-controlling shareholders, through dividend payments and/or purchases of shares in subsidiaries which were already fully consolidated. The acquisition of the shares in STOXX Ltd. was financed by issuing debt securities with a nominal amount of €600.0 million.

Deutsche Börse AG paid dividends totalling €420.1 million for the 2015 financial year (dividend for the 2014 financial year: €386.8 million).

Reconciliation to cash and cash equivalents

Reconciliation to cash and cash equivalents

	31 Dec 2016 €m	31 Dec 2015 €m
Restricted bank balances	27,777.6	26,870.0
Other cash and bank balances	1,458.1	711.1
Net position of financial instruments held by central counterparties	430.2	–42.2
less bank loans and overdrafts	–0.1	283.1
	29,665.8	**27,822.0**
Reconciliation to cash and cash equivalents		
Current receivables and securities from banking business	13,465.5	10,142.9
less loans to banks and customers with an original maturity of more than 3 months	–1,068.1	–931.6
less available-for-sale debt instruments	–592.2	–62.3
Current liabilities from banking business	–13,840.3	–11,681.4
Current liabilities from cash deposits by market participants	–27,777.6	–26,869.0
	–29,812.7	**–29,401.4**
Cash and cash equivalents	**–146.9**	**–1,579.4**

34. Earnings per share

Under IAS 33, earnings per share are calculated by dividing the net profit for the period attributable to Deutsche Börse AG shareholders (net income) by the weighted average number of shares outstanding.

In order to determine diluted earnings per share, potentially dilutive ordinary shares that may be acquired under the share-based payment programme (see also note 39) were added to the average number of shares. In order to calculate the number of potentially dilutive ordinary shares, the exercise prices were adjusted by the fair value of the services still to be provided.

In order to determine diluted earnings per share, all SBP and Long-term Sustainable Instrument (LSI) tranches for which cash settlement has not been resolved are assumed to be settled with equity instruments – regardless of actual accounting in accordance with IFRS 2.

The following potentially dilutive rights to purchase shares were outstanding as at 31 December 2016:

Calculation of the number of potentially dilutive ordinary shares

Tranche	Exercise price €	Adjustment of the exercise price according to IAS 33[1)] €	Average number of outstanding options 31 Dec 2016	Average price for the period[2)] €	Number of potentially dilutive ordinary shares 31 Dec 2016
2014[3)]	0	7.95	51,636	74.89	46,157
Total					**46,157**

1) According to IAS 33.47 (a), the issue price and the exercise price for stock options and other share-based payment arrangements must include the fair value of any goods or services to be supplied to the entity in the future under the stock option or other share-based payment arrangement.
2) Volume-weighted average price of Deutsche Börse AG shares on Xetra for the period 1 January to 31 December 2016
3) This relates to share subscription rights within the scope of the long-term sustainability plan for senior executives. The quantity of subscription rights under the 2014 tranche may still change from the quantity reported as at the reporting date, since subscription rights will only be granted in future financial years.

As the volume-weighted average share price was higher than the adjusted exercise price for the 2014 tranche, these stock options are considered to be dilutive under IAS 33 as at 31 December 2016.

Calculation of earnings per share (basic and diluted)

	2016	(restated) 2015
Number of shares outstanding as at beginning of period	186,723,986	184,186,855
Number of shares outstanding as at end of period	186,805,015	186,723,986
Weighted average number of shares outstanding	186,764,058	184,997,923
Number of potentially dilutive ordinary shares	46,157	25,043
Weighted average number of shares used to compute diluted earnings per share	186,810,215	185,022,966
Net income for the period (€m)	1,272.7	665.5
from continued operations (€m)	722.1	613.3
from non-continued operations (€m)	550.6	52.2
Earnings per share (basic) (€)	6.81	3.60
from continued operations (€)	3.87	3.31
from discontinued operations (€)	2.94	0.29
Earnings per share (diluted) (€)	6.81	3.60
from continued operations (€)	3.87	3.31
from discontinued operations (€)	2.94	0.29

As at 31 December 2016, 66,909 subscription rights were excluded from the calculation of the weighted average of potentially dilutive shares as these shares do not have a dilutive effect during the financial year ending on the reporting date.

35. Segment reporting

Segment reporting is governed by the internal organisational and reporting structure, which is broken down by markets into the following four segments:

Internal organisational and reporting structure

Segment	Business areas
Eurex	▪ Electronic trading of European derivatives (Eurex Exchange), commodities (EEX group) and foreign exchange (360T) ▪ Eurex Repo over-the-counter (OTC) trading platform ▪ Electronic clearing architecture C7 ▪ Central counterparty for on- and off-exchange derivatives and repo transactions
Xetra	▪ Cash market with the Xetra, Börse Frankfurt and Tradegate trading venues ▪ Eurex Bonds OTC trading platform ▪ Central counterparty for equities and bonds ▪ Admission of securities (listing)
Clearstream	▪ Custody and settlement services for domestic and international securities ▪ Global securities financing services and collateral management ▪ Investment funds and hedge funds services
Market Data + Services	▪ Distribution of licences for trading and market signals ▪ Development and sales of indices (STOXX) ▪ Technology and reporting solutions for external customers ▪ Trading participant connectivity

In accordance with IFRS 8, information on the segments is presented on the basis of internal reporting (management approach).

Sales revenue is presented separately by external sales revenue and internal (inter-segment) sales revenue. Inter-segment services are charged on the basis of measured quantities or at fixed prices (e.g. the provision of data by Eurex to Market Data + Services).

Due to their insignificance to segment reporting, the “financial income” and “financial expense” items have been combined to produce the “financial result”.

Segment reporting

	Eurex		Xetra		Clearstream	
	2016 €m	(restated) 2015 €m	2016 €m	(restated) 2015 €m	2016 €m	(restated) 2015 €m
External sales revenue	**1,049.7**	**914.7**	**186.8**	**211.1**	**917.0**	**893.2**
Internal sales revenue	0	0	0	0	8.2	7.9
Total sales revenue	1,049.7	914.7	186.8	211.1	925.2	901.1
Net interest income from banking business	21.4	16.5	0	0	62.6	34.1
Other operating income	26.9	14.9	6.6	6.8	3.2	7.6
Total revenue	**1,098.0**	**946.1**	**193.4**	**217.9**	**991.0**	**942.8**
Volume-related costs	–65.8	–58.6	–28.8	–33.1	–209.1	–196.4
Net revenue (total revenue less volume-related costs)	**1,032.2**	**887.5**	**164.6**	**184.8**	**781.9**	**746.4**
Staff costs	–221.7	–214.9	–50.0	–42.1	–229.2	–243.6
Depreciation, amortisation and impairment losses	–73.5	–56.7	–5.4	–4.9	–40.3	–44.4
Other operating expenses	–254.5	–235.8	–47.0	–37.9	–177.2	–169.7
Operating costs	**–549.7**	**–507.4**	**–102.4**	**–84.9**	**–446.7**	**–457.7**
Net income from equity investments	35.1	1.6[2)]	1.6	–3.2	0.2	0.1
Earnings before interest and tax (EBIT)	**517.6**	**381.7**	**63.8**	**96.7**	**335.4**	**288.8**
Financial result	–56.4	–48.4	–0.7	–0.6	–4.2	–2.1
Earnings before tax (EBT)	**461.2**	**333.3**	**63.1**	**96.1**	**331.2**	**286.7**
Investments in intangible assets and property, plant and equipment[3)]	53.4	59.9	13.6	7.0	63.6	73.4
Employees (as at 31 December)	1,851	1,651	323	326	2,443	2,397
EBIT margin (%)[4)]	**50**	**43**	**39**	**52**	**43**	**39**

1) The consolidation of internal net revenue column shows the elimination of intra-Group sales revenue and profits.
2) Including revenue in connection with the partial disposal of Direct Edge Holdings, LLC amounting to €38.4 million
3) Excluding goodwill
4) The EBIT margin is calculated as EBIT divided by net revenue.

	Market Data + Services		Total of all segments		Consolidation of internal net revenue[1]		Group	
	2016 €m	(restated) 2015 €m	2016 €m	(restated) 2015 €m	2016 €m	(restated) 2015 €m	2016 €m	(restated) 2015 €m
	403.8	**400.9**	**2,557.3**	**2,419.9**	**0**	**0**	**2,557.3**	**2,419.9**
	40.1	38.1	48.3	46.0	–48.3	–46.0	0	0
	443.9	439.0	2,605.6	2,465.9	–48.3	–46.0	2,557.3	2,419.9
	0	0	84.0	50.6	0	0	84.0	50.6
	9.0	7.5	45.7	36.7	–13.1	–13.1	32.6	23.6
	452.9	**446.5**	**2,735.3**	**2,553.2**	**–61.4**	**–59.1**	**2,673.9**	**2,494.1**
	–42.9	–44.9	–346.6	–332.9	61.4	59.1	–285.2	–273.8
	410.0	**401.6**	**2,388.7**	**2,220.3**	**0**	**0**	**2,388.7**	**2,220.3**
	–84.8	–99.1	–585.7	–599.7	0	0	–585.7	–599.7
	–11.8	–13.0	–131.0	–119.0	0	0	–131.0	–119.0
	–122.0	–121.1	–600.7	–564.5	0	0	–600.7	–564.5
	–218.6	**–233.2**	**–1,317.4**	**–1,283.2**	**0**	**0**	**–1,317.4**	**–1,283.2**
	0	0	36.9	–1.5	0	0	36.9	–1.5
	191.4	**168.4**	**1,108.2**	**935.6**	**0**	**0**	**1,108.2**	**935.6**
	–13.3	–6.4	–74.6	–57.5	0	0	–74.6	–57.5
	178.1	**162.0**	**1,033.6**	**878.1**	**0**	**0**	**1,033.6**	**878.1**
	22.0	7.4	152.6	147.7	0	0	152.6	147.7
	559	726	5,176	5,100	0	0	5,176	5,100
	47	42	46	42	n.a.	n.a.	46	42

In the year under review there was an extraordinary impairment loss of €5.8 million (2014: €3.9 million, see note 8).

Non-cash valuation allowances and bad debt losses resulted from the following segments:

Breakdown of non-cash valuation allowances and bad debt losses

	2016 €m	2015 €m
Eurex	0.2	0
Xetra	0.4	0.3
Clearstream	0.1	–0.1
Market Data + Services	0.3	–0.1
Total	**1.0**	**0.1**

Deutsche Börse Group's business model – and that of its segments – is focused on an internationally operating participant base and pricing does not differ depending on the customer's location. From a price, margin and risk perspective, this means that it is not decisive whether sales revenue is generated from German or non-German participants.

The risks and returns from the activities of the subsidiaries operating within the economic environment of the European Monetary Union (EMU) do not differ significantly from each other on the basis of the factors to be considered in identifying information on geographical regions under IFRS 8. As a result, Deutsche Börse Group has identified the following information on geographical regions: the euro zone, the rest of Europe, America and Asia-Pacific.

Sales revenue is allocated to the individual regions according to the customer's domicile, while investments and non-current assets are allocated according to the company's domicile and employees according to their location.

As described above, the analysis of sales is based on the direct customer's billing address. This means e.g. that sales to an American investor trading a product with an Asian underlying via a European clearing member are classified as European sales. Thus, in addition to sales to customers based in the Asia Pacific region, Deutsche Börse Group also reports sales of products based on Asia Pacific underlyings. These include, for example, trading of the South Korean KOSPI index on Eurex, settlement and custody services for securities issued by Asian entities, global securities financing from and with Asian customers, and index products such as the STOXX China Total Market indices. Furthermore, the Group earns net interest income on Asian customer balances. In total, this Asia-Pacific-driven business amounted to an additional €49.1 million in 2016 (2015: €50.1 million).

Information on geographical regions

	Sales revenue[1)]		Investments[2)]		Non-current assets[3)]		Number of employees	
	2016 €m	2015 €m	2016 €m	2015 €m	2016 €m	2015 €m	2016	2015
Eurozone	1,328.1	1,305.3	145.7	146.2	3,617.4	2,618.9	3,843	3,828
Rest of Europe	992.3	907.1	6.4	0	488.4	488.3	1,035	919
America	144.9	132.5	0.5	0.5	11.9	1,670.1	99	146
Asia-Pacific	140.3	121.0	0	1.0	3.9	3.8	199	207
Total of all regions	**2,605.6**	**2,465.9**	**152.6**	**147.7**	**4,121.6**	**4,781.1**	**5,176**	**5,100**
Consolidation of internal net revenue	–48.3	–46.0						
Group	**2,557.3**	**2,419.9**	**152.6**	**147.7**	**4,121.6**	**4,781.1**	**5,176**	**5,100**

1) Including countries in which more than 10 per cent of sales revenue was generated: UK (2016: €759.0 million; 2015: €695.7 million) and Germany (2016: €640.9 million; 2015: €649.9 million).
2) Excluding goodwill
3) Including countries in which more than 10 per cent of non-current assets are held: Germany (2016: €3,327.7 million; 2015: €2,317.0 million) and Switzerland (2016: €471.1 million; 2015: €471.9 million). The non-current assets for 2015 have not been adjusted for non-current assets attributable to ISE.

36. Financial risk management

Deutsche Börse Group presents the qualitative disclosures required by IFRS 7 in detail in the combined management report (see explanations in the risk report, which is part of the combined management report), such as the nature and extent of risks arising from financial instruments, as well as the objectives, strategies and methods used to manage risk.

Financial risks arise at Deutsche Börse Group mainly in the form of credit risk. To a smaller extent, the Group is exposed to market risk. Financial risks are quantified using the economic capital concept (please refer to the risk report for detailed disclosures). Economic capital is assessed on a 99.98 per cent confidence level for a one-year holding period. The economic capital is compared with the Group's liable equity capital adjusted by intangible assets so as to test the Group's ability to absorb extreme and unexpected losses. The economic capital for financial risk is calculated at the end of each month and amounted to €474.0 million as at 31 December 2016, whereby €407.0 million stem from credit risk and €67.0 million stem from market risk.

The Group evaluates its financial risk situation on an ongoing basis. In the view of the Executive Board, no threat to the continued existence of the Group can be identified at this time.

Credit risk

Credit risk arises in Deutsche Börse Group from the following items:

Credit risk of financial instruments

	Segment	Note	Carrying amounts – maximum risk exposure		Collateral	
			Amount at 31 Dec 2016 €m	Amount at 31 Dec 2015 €m	Amount at 31 Dec 2016 €m	Amount at 31 Dec 2015 €m
Collateralised cash investments						
Reverse repurchase agreements	Eurex[1]		289.5	0	291.4[2]	0
	Clearstream	16	4,050.4	5,217.4	4,079.8[3] [4]	5,231.0[3] [4]
	Group[1]		660.0	0	662.5	0
			4,999.9	**5,217.4**	**5,033.7**	**5,231.0**
Uncollateralised cash investments						
Money market lendings – central banks	Eurex[1]		24,910.6	25,972.1	0	0
Money market lendings – other counterparties	Eurex[1]		0	2.2	0	0
	Clearstream	16	7,320.0	3,714.5	0	0
Balances on nostro accounts	Clearstream	16	1,128.0	736.8	0	0
	Group[1]		3,375.6	1,606.8	0	0
Other fixed-income securities	Clearstream	13, 16	302.3[5]	281.0[5]	0	0
Floating rate notes	Eurex	13	9.6	5.0	0	0
	Clearstream	13, 16	1,894.8[5]	1,801.7	0	0
	Group	13	5.0[6]	5.1[6]	0	0
Fund assets	Eurex	13	0	11.9	0	0
	Group	13	11.4	9.5	0	0
			38,957.3	**34,146.6**	**0**	**0**
Loans for settling securities transactions						
Technical overdraft facilities	Clearstream	16	293.8	378.8	n.a.[7]	n.a.[7]
Automated Securities Fails Financing[8]	Clearstream		1,403.2[9]	927.1[9]	1,858.3	868.5
ASLplus securities lending[8]	Clearstream		44,777.8	48,602.8	47,068.1	50,409.4
			46,474.8	**49,908.7**	**48,926.4**	**51,277.9**
Total			**90,432.0**	**89,272.7**	**53,960.1**	**56,508.9**

	Segment	Note	Carrying amounts – maximum risk exposure		Collateral	
			Amount at 31 Dec 2016 €m	Amount at 31 Dec 2015 €m	Amount at 31 Dec 2016 €m	Amount at 31 Dec 2015 €m
Balance brought forward			90,432.0	89,272.7	53,960.1	56,508.9
Other receivables						
Other loans	Group		0.4	0.2	0	0
Other assets	Group	32	450.2	932.3	0	0
Trade receivables	Group		669.8	554.1	0	0
Receivables from related parties	Group		2.0	4.7	0	0
Interest receivables	Clearstream	16	15.2	1.2	0	0
Margin requirements	Clearstream	16	0.4	6.8	0	0
			1,138.0	1,499.3	0	0
Financial instruments held by central counterparties			44,228.2[10]	49,538.6[10]	57,172.8[11]	63,273.7[11]
Derivatives		14	65.8	23.3	0	0
Financial guarantee contracts[8]			0	50.8	0	0
Total			135,864.0	140,384.7	111,132.9	119,782.6

1) Presented in the items "restricted bank balances" and "other cash and bank balances"
2) Thereof none repledged to central banks (2015: nil)
3) Thereof none transferred via transfer of title to central banks (2015: €3,114.5 million)
4) Total of fair value of cash (€41.0 million; 2015: €4.3 million) and securities collateral (€4,038.8 million; 2015: €5.266.7 million) received under reverse repurchase agreements
5) Thereof €1,818.5 million transferred to central banks (2015: €1,863.4 million)
6) The amount includes collateral totalling €5.0 million (2015: €5.1 million).
7) The portfolio of deposited collateral is not directly attributed to any utilisation, but is determined by the scope of the entire business relationship and the limits granted.
8) Off-balance-sheet items
9) Meets the IAS 39 criteria for a financial guarantee contract
10) Net value of all margin requirements resulting from executed trades at the reporting date as well as clearing fund requirements: This figure represents the risk-oriented view of Eurex Clearing AG and European Commodity Clearing AG, while the carrying amount of the "financial instruments held by central counterparties" item in the balance sheet shows the gross amount of the open trades according to IAS 32.
11) Collateral value of cash and securities collateral deposited for margins, covering the net value of all margin and clearing fund requirements

Cash investments
Deutsche Börse Group is exposed to credit risk in connection with the investment of cash funds. The Group mitigates such risks by investing short-term funds either – to the extent possible – on a collateralised basis, e.g. via reverse repurchase agreements or by deposits with central banks.

According to the treasury policy, mainly highly liquid financial instruments with a minimum rating of AA– (Standard & Poor's/Fitch) resp. Aa3 (Moody's) issued or guaranteed by governments or supranational institutions are eligible as collateral.

Uncollateralised cash investments are permitted only for counterparties with sound creditworthiness within the framework of defined counterparty credit limits. Counterparty credit risk is monitored on the basis of an internal rating system.

The fair value of securities received under reverse repurchase agreements (Clearstream subgroup, Eurex Clearing AG and Deutsche Börse AG) was €4,992.7 million (2015: €5,226.7 million). The Clearstream subgroup and Eurex Clearing AG are entitled to repledge the securities received to their central banks to regain liquidity.

As at 31 December 2016, Deutsche Börse Group (including the Clearstream subgroup, Eurex Clearing and Deutsche Börse AG) has not repledged any securities to central banks (2015: €3,114.5 million repledged by Clearsteam subgroup).

A portion of the available-for-sale fixed-income financial instruments and floating-rate notes held by Clearstream is transferred via transfer of title to central banks to collateralise the settlement facilities obtained. The fair value of transferred securities was €1,818.5 million as at 31 December 2016 (2015: €1,863.4 million).

Clearstream receives cash deposits from its customers in various currencies, and places these cash deposits in money market instruments. If negative interest rates apply to these cash investments, the interest expense is charged to the respective customers. This recharging policy was initiated in early 2015; at that time, it was limited to deposits in euro whose balances exceeded €7.5 million. It has now been extended to all currencies bearing a negative interest without any consideration of their long balances.

Eurex Clearing AG receives cash collateral from its clearing members mainly in its clearing currencies euro and Swiss francs. Negative interest rates resulting from reinvestments on this cash collateral are passed on to the clearing members after deducting an additional margin.

Loans for settling securities transactions
Clearstream grants customers technical overdraft facilities to maximise settlement efficiency. These settlement facilities are subject to internal credit review procedures. They are revocable at the option of the Clearstream subgroup and are largely collateralised. Technical overdraft facilities amounted to €123.8 billion as at 31 December 2016 (2015: €108.6 billion). Of this amount, €3.3 billion (2015: €3.4 billion) is unsecured, whereby a large proportion relates to credit lines granted to central banks and other government-backed institutions. Actual outstandings at the end of each business day generally represent a small fraction of the facilities and amounted to €293.8 million as at 31 December 2016 (2015: €378.8 million); see note 16.

Clearstream also guarantees the risk resulting from the Automated Securities Fails Financing programme it offers to its customers. This risk is collateralised. Guarantees given under this programme amounted to €1,403.2 million as at 31 December 2016 (2015: €927.1 million). Collateral received by Clearstream Banking S.A. in connection with these loans amounted to €1,858.3 million (2015: €868.5 million).

Under the ASLplus securities lending programme, Clearstream Banking S.A. had securities borrowings from various counterparties totalling €44,777.8 million as at 31 December 2016 (2015: €48,602.8 million). These securities were fully lent to other counterparties. Collateral received by Clearstream Banking S.A. in connection with these loans amounted to €47,068.1 million (2015: €50,409.4 million).

In 2015 and 2016, no losses from credit transactions occurred in relation to any of the transaction types described.

Financial instruments of the central counterparties

To safeguard the Group's central counterparties against the risk of default by a clearing member, the clearing conditions require the clearing members to deposit margins in the form of cash or securities on a daily basis or an intraday basis in the amount stipulated by the respective clearing house. Additional safety mechanisms of the Group's central counterparties are described in detail in the risk report.

The aggregate margin calls based on the executed transactions and clearing fund requirements after haircuts was €44,228.2 million at the reporting date (2015: €49,538.6 million). In fact, collateral totalling €57,172.8 million (2015: €63,273.8 million) was deposited.

Composition of collateral held by central counterparties

	Collateral value at 31 Dec 2016 €m	Collateral value at 31 Dec 2015 €m
Cash collateral (cash deposits)[1]	27,772.0	26,861.3
Securities and book-entry securities collateral[2] [3]	29,400.8	36,412.5
Total	**57,172.8**	**63,273.8**

1) The amount includes the clearing fund totalling €2,529.3 million (2015: €2,399.7 million).
2) The amount includes the clearing fund totalling €1,714.8 million (2015: €2,160.3 million).
3) The collateral value is determined on the basis of the fair value less a haircut.

Other receivables

Trading, settlement and custody fees are generally collected without delay by direct debit. Fees for other services, such as the provision of data and information, are settled mainly by transfer. As a result of default by customers, receivables of €2.1 million (2015: €3.1 million) relating to fees for trading and provision of data and IT services are not expected to be collectible.

In contrast to the risk-oriented net analysis of the transactions via the central counterparties, the gross amounts are reported in the balance sheet, as the offsetting rules defined in IAS 32 cannot be met. For a detailed explanation of this balance sheet item, see "Financial instruments held by central counterparties" section in note 3 or note 15. For an analysis of the carrying amount, see note 15.

Credit risk concentrations
Deutsche Börse Group's business model and the resulting business relationships mean that, as a rule, credit risk is concentrated on the financial services sector. Potential concentrations of credit risk on individual counterparties are limited by application of counterparty credit limits.

The regulatory requirements on concentration risks and so-called large exposures, such as those arising from articles 387–410 of regulation (EU) 575/2013 (Capital Requirements Regulation, CRR) and article 47 paragraph 8 of regulation (EU) 648/2012 (European Market Infrastructure Regulation, EMIR), are complied with. See also note 20 for an explanation of regulatory capital requirements.

The required economic capital (VaR with a 99.98 per cent confidence level) for credit risk is calculated for each business day and amounted to €407.0 million as at 31 December 2016 (2015: €409.0 million).

Deutsche Börse Group also applies additional methods in order to detect credit concentration risks. In 2016, no significant credit concentrations were assessed.

Market risk

As part of the annual planning, Deutsche Börse Group's treasury policy requires any net earnings exposure from currencies to be hedged using forward foreign-exchange transactions if the unhedged exposure of an individual currency exceeds 10 per cent of consolidated EBIT. Foreign-exchange exposures below 10 per cent of consolidated EBIT may also be hedged.

On an intraperiod basis, the risk exposure described above is monitored against the latest EBIT forecast.

In addition, the policy stipulates that intraperiod open net foreign-exchange positions are closed out when they exceed €15.0 million. This policy was complied with, as in the previous year; as at 31 December 2016, there were no significant net foreign-exchange positions.

Currency risks in the Group arise mainly from operating income and expenses denominated in US dollars, plus that portion of Clearstream's sales revenue and net interest income from banking business (less expenses) that is directly or indirectly generated in US dollars. The Clearstream segment generated 10 per cent of its sales revenue and net interest income (2015: 10 per cent) directly or indirectly in US dollars.

Acquisitions where payment of the purchase price results in material currency risk are generally hedged. Interest rate risks arise further from debt financing of acquisitions.

Deutsche Börse Group did not issue any bonds in 2016. For an overview on details on all bonds issued by Deutsche Börse Group see the "Net assets" section in the combined management report.

Risks from listed securities arise from contractual trust arrangements (CTAs) and from the Clearstream Pension Fund in Luxembourg. In addition, there are equity price risks arising from strategic equity investments in other exchange operators.

Economic capital is calculated at the end of each month for market risks that can arise in connection with cash investments or borrowing as a result of fluctuations in interest rates and foreign-exchange rates as well as through fluctuations of the asset value of the CTAs and the Clearstream Pension Fund in Luxembourg. On 31 December 2016, the economic capital for market risk was €67.0 million (2015: €59.0 million).

In financial year 2016, impairment losses amounting to €7.1 million (2015: €5.8 million) were recognised in profit and loss for strategic investments that are not included in the VaR for market risk.

Liquidity risk

For the Group, liquidity risk may arise from potential difficulties in renewing maturing financing, such as commercial paper and bilateral and syndicated credit facilities. In addition, financing required for unexpected events may result in a liquidity risk. Most of the Group's cash investments are short-term to ensure that liquidity is available, should such a financing need arise. Eurex Clearing AG remains almost perfectly matched with respect to the durations of customer cash margins received and investments, only a limited amount of which may have tenors of up to one month, while the Clearstream subgroup may invest customer balances up to a maximum of one year, in secured money market products or in high-quality securities with a remaining maturity of less than ten years, subject to strict monitoring of mismatch and interest rate limits (see note 31 for an overview of the maturity structure). Term investments can be transacted via reverse repurchase agreements against highly liquid collateral that can be deposited with the central bank and can be used as a liquidity buffer if required.

Contractually agreed credit lines

Company	Purpose of credit line	Currency	Amount at 31 Dec 2016 m	Amount at 31 Dec 2015 m
Deutsche Börse AG	working capital[1]	€	605.0	605.0
Eurex Clearing AG	settlement	€	1,170.0	1,170.0
	settlement	CHF	200.0	100.0
Clearstream Banking S.A.	working capital[1]	€	750.0	750.0

1) €400.0 million of Deutsche Börse AG's working capital credit lines is a sub-credit line of Clearstream Banking S.A.'s €750.0 million working capital credit line.

For refinancing purposes, Eurex Clearing AG and the Clearstream subgroup can pledge eligible securities with their respective central banks.

Clearstream Banking S.A. has a bank guarantee (letter of credit) in favour of Euroclear Bank S.A./N.V. issued by an international consortium to secure daily deliveries of securities between Euroclear Bank S.A./N.V. and Clearstream Banking S.A. This guarantee amounted to US$3.0 billion as at 31 December 2016 (2015: US$3.0 billion). Euroclear Bank S.A./N.V. has also issued a guarantee in favour of Clearstream Banking S.A. amounting to US$2.5 billion (2015: US$2.5 billion).

Furthermore, Eurex Clearing AG holds a credit facility of US$1.7 billion (2015: US$2.1 billion) granted by Euroclear Bank S.A./N.V. in order to maximise settlement efficiency.

A commercial paper programme offers Deutsche Börse AG an opportunity for flexible, short-term financing, involving a total facility of €2.5 billion in various currencies. As at year-end, there was no commercial paper outstanding (2015: €95.0 million).

Clearstream Banking S.A. also has a commercial paper programme with a programme limit of €1.0 billion, which is used to provide additional short-term liquidity. As at 31 December 2016, commercial paper with a nominal value of €349.5 million had been issued (2015: €286.5 million).

In December 2016, Standard & Poor's confirmed Deutsche Börse AG's "AA" credit rating with a negative outlook. Deutsche Börse AG was one of only two DAX-listed companies that had been given an AA rating by Standard & Poor's. Deutsche Börse AG's commercial paper programme was awarded the best possible short-term rating of A–1+.

The "AA" rating of Clearstream Banking S.A. was confirmed with a stable outlook by the rating agencies Fitch and Standard & Poor's in October 2016. For further details on the rating of Deutsche Börse Group, see the "Financial position" section in the combined management report.

37. Financial liabilities and other risks

For the coming financial years, the Group's expenses in connection with long-term contracts relating to maintenance contracts and other contracts (without rental and lease agreements, see note 38) are presented in the following:

Breakdown of future financial obligations

	31 Dec 2016 €m	31 Dec 2015 €m
Up to 1 year	47.0	60.9
1 to 5 years	39.2	60.8
More than 5 years	9.1	9.9
Total	**95.3**	**131.6**

Other litigation and liability risks

Contingent liabilities may result from present obligations and from possible obligations arising from events in the past. Deutsche Börse Group recognises provisions for the possible incurrence of losses only if there is a present obligation arising from a past event that is likely to result in an outflow of resources, and if Deutsche Börse Group can reliably estimate the amount of the obligation (see also note 3). In order to identify the litigation for which the possibility of incurring a loss is more than unlikely, as well as how the possible loss is estimated, Deutsche Börse Group considers a large number of factors, including the nature of the claim and the facts on which it is based, the jurisdiction and course of the individual proceedings, the experience of Deutsche Börse Group, prior settlement talks (as far as have already taken place) as well as expert reports and evaluations of legal advisors. However, it is also possible that no reliable estimate for any specific litigation could be determined before the approval of the consolidated financial statements, and that – as a result – no provisions are recognised.

Peterson vs Clearstream Banking S.A., Citibank NA et al. ("Peterson I") and Heiser vs Clearstream Banking S.A.

In its 2012 corporate report, Deutsche Börse Group informed about proceedings, Peterson vs Clearstream Banking S.A., the first Peterson proceeding, initiated by various plaintiffs seeking turnover of certain customer positions held in Clearstream Banking S.A.'s securities omnibus account with its US depository bank, Citibank NA, and asserting direct claims against Clearstream Banking S.A. for damages of US$250.0 million. That matter was settled between Clearstream Banking S.A. and the plaintiffs and the direct claims against Clearstream Banking S.A. were abandoned.

In July 2013, the US court ordered turnover of the customer positions to the plaintiffs, ruling that these were owned by Bank Markazi, the Iranian central bank. Bank Markazi appealed, and the decision was affirmed on 9 July 2014 by the Second Circuit Court of Appeals, and then by the US Supreme Court on 20 April 2016. Once the process of distribution of funds to the plaintiffs is complete, a related case, Heiser vs Clearstream Banking S.A., also seeking turnover of the same assets, should be dismissed.

Peterson vs Clearstream Banking S.A. ("Peterson II")

On 30 December 2013, a number of US plaintiffs from the first Peterson case, as well as other US plaintiffs, filed a complaint targeting restitution of certain assets that Clearstream Banking S.A. holds as a custodian in Luxembourg. In 2014, the defendants in this action, including Clearstream Banking S.A., moved to dismiss the case. On 19 February 2015, the US court issued a decision granting the defendants' motions and dismissing the lawsuit. On 6 March 2015, the plaintiffs appealed the decision to the Second Circuit Court of Appeals, which heard oral arguments in the case on 8 June 2016.

Havlish vs Clearstream Banking S.A. ("Havlish")

On 14 October 2016, a number of US plaintiffs filed a complaint naming Clearstream Banking S.A. and other entities as defendants. The complaint in this proceeding, Havlish vs Clearstream Banking S.A., is based on similar assets and allegations as in the Peterson proceedings. The complaint seeks turnover of certain assets that Clearstream Banking S.A. holds as a custodian in Luxembourg. The complaint also asserts direct claims against Clearstream Banking S.A. and other defendants and purports to seek damages of up to approximately US$6.6 billion plus punitive damages and interest.

Criminal investigations against Clearstream Banking S.A.

On 2 April 2014, Clearstream Banking S.A. was informed that the United States Attorney for the Southern District of New York has opened a grand jury investigation against Clearstream Banking S.A. due to Clearstream Banking S.A.'s conduct with respect to Iran and other countries subject to US sanction laws. Clearstream Banking S.A. is cooperating with the US attorney.

Dispute between MBB Clean Energy AG and investors

A dispute has arisen between MBB Clean Energy AG (MBB), the issuer of a bond eligible in Clearstream Banking AG, and end investors. MBB issued a first tranche of the bond in April 2013 and a second tranche of the bond in December 2013. The global certificates for the two tranches of the bond were delivered into Clearstream Banking AG by the paying agent of the issuer. The dispute relates to the non-payment of the second tranche of the bond with a nominal value of €500.0 million and the purported lack of validity of the bond. Clearstream Banking AG's role in the dispute on the purported lack of validity of the MBB Clean Energy AG bond is primarily to safekeep the global note, deposited by the paying agent of the issuer, as national central securities depository. At this stage, it is unclear if and to what extent potential damages exist and if so who would ultimately be responsible. Provisional insolvency proceedings have meanwhile been opened in respect of the issuer, MBB Clean Energy AG.

In addition to the matters described above and in prior disclosures, Deutsche Börse Group is from time to time involved in various legal proceedings that arise in the ordinary course of its business. The Group recognises provisions for litigation and regulatory matters when it has a present obligation arising from a past event, an outflow of resources with economic benefit to settle the obligation is probable, and it is able to reliably estimate the amount. In such cases, there may be an exposure to loss in excess of the amounts recognised as provisions. When the conditions are not met, the Group does not recognise a provision. As a litigation or regulatory matter develops, Deutsche Börse Group evaluates on an ongoing basis whether the requirements to recognise a provision are met. The Group may not be able to predict what the eventual loss or range of loss related to such matters will be. The Group does not believe, based on currently available information, that the results of any of these various proceedings will have a material adverse effect on its financial data as a whole.

Other liability risks

In connection with the planned transaction with London Stock Exchange Group, Deutsche Börse AG has entered into agreements with service providers, in particular relating to consultancy services, that include fees which only fall due in the event of the transaction being closed successfully. These success-based fees amount to €70.2 million.

Tax risks

Due to its business activities in various countries, Deutsche Börse Group is exposed to tax risks. A process has been developed to recognise and evaluate these risks, which are initially recognised depending on the probability of occurence. In a second step, these risks are measured on the basis of their expected value. A tax provision is recognised in the event that it is more probable than not that the risks will occur. Deutsche Börse Group continuously reviews whether the conditions for recognising corresponding tax provisions are met.

38. Leases

Finance leases

There were no minimum lease payments from finance leases for Deutsche Börse Group neither as at 31 December 2016 nor as at 31 December 2015.

Operating leases (as lessee)

Deutsche Börse Group has entered into leases to be classified as operating leases due to their economic substance, meaning that the leased asset is allocated to the lessor. These leases relate mainly to buildings, IT hardware and software.

Minimum lease payments from operating leases[1)]

	31 Dec 2016 €m	31 Dec 2015[2)] €m
Up to 1 year	59.8	67.6
1 to 5 years	176.7	193.7
More than 5 years	116.7	155.4
Total	**353.2**	**416.7**

1) The expected payments in US dollars were translated into euros applying the closing rate of 31 December.
2) Includes minimum lease payments of International Securities Exchange Holdings, Inc., which was fully consolidated until Q2/2016. For details, see note 2.

In the reporting period, minimum lease payments amounting to €58.5 million (2015: €63.3 million) were recognised as expenses. No expenses were incurred for subleases or contingent rentals in the reporting period.

Operating leases for buildings, some of which are subleased, have a maximum remaining term of six years. The lease contracts usually terminate automatically when the lease expires. The Group has options to extend some leases.

Expected rental income from subleases[1)]

	31 Dec 2016 €m	31 Dec 2015[2)] €m
Up to 1 year	0.6	0.9
1 to 5 years	0	0.7
More than 5 years	0	0
Total	**0.6**	**1.6**

1) The expected payments in US dollars were translated into euros applying the closing rate of 31 December.
2) Includes rental income from subleases of International Securities Exchange Holdings, Inc., which was fully consolidated until Q2/2016. For details, see note 2.

39. Share-based payment

Stock Bonus Plan (SBP)

In the reporting period, the company established an additional tranche of the SBP. In order to participate in the SBP, a beneficiary must have earned a bonus. The number of stock options for senior executives is determined by the amount of the individual and performance-based SBP bonus for the financial year, divided by the average share price (Xetra closing price) of Deutsche Börse AG's shares in the fourth quarter of the financial year in question. Neither the converted SBP bonus nor the stock options are paid at the time the bonus is determined. Rather, the entitlement is generally received three years after the grant date (waiting period). Within this period, beneficiaries cannot assert shareholder rights (in particular, the rights to receive dividends and attend the Annual General Meeting). Once they have met the condition of service, the beneficiaries' claims resulting from the SBP are calculated on the first trading day following the last day of the waiting period. The current market price at that date (closing auction price of Deutsche Börse shares in electronic trading on the Frankfurt Stock Exchange) is multiplied by the number of stock options.

For the stock bonus of senior executives under the 2013 to 2014 tranches, Deutsche Börse AG has an option to settle a beneficiary's claim in cash or shares. The company resolved a cash settlement for claims relating to the 2013 tranche due in February 2017. Cash settlement has been agreed upon with the introduction of the 2015 tranche. A cash settlement obligation has also existed for claims relating to the Stock Plan for the executive board members of the Clearstream companies since the 2011 tranche.

The SBP for members of the Executive Board of Deutsche Börse AG was terminated prematurely on 31 December 2015. Settlement of the stock bonus from the 2013 to 2015 tranches took place in the first half of 2016; payments made from the 2014 and 2015 tranches are subject to a restriction on disposal until 31 December 2016 and 31 December 2017, respectively. According to the new remuneration scheme, members of the Executive Board are obliged to invest the payments made in Deutsche Börse AG shares, where not restricted by takeover legislation with regard to the intended business combination with London Stock Exchange Group plc or other legal provisions.

For further information on the number of stock options granted to members of the Executive Board, and the new remuneration system for members of the Executive Board applicable since 1 January 2016, please also refer to the remuneration report.

Stock Plan

On 20 April 2009, the Luxembourg Commission de Surveillance du Secteur Financier (CSSF) published a circular on remuneration policies in the banking sector that addresses key aspects of remuneration practices for sustainable corporate governance and supports their implementation in banking institutions' day-to-day operations. According to this circular, every banking institution is required to introduce a remuneration policy that is aligned with its business strategy and corporate goals and values, as well as with the long-term interests of the financial enterprise, its clients and investors, and that minimises the institution's risk exposure. Clearstream companies in Luxembourg have therefore revised their remuneration system for executive boards in line with the circular, and introduced a Stock Plan. This plan stipulates the allocation of a stock bonus at the end of each financial year, which will be paid in three tranches of equal size with maturities of one, two or three years after the grant date. Claims under the Stock Plan have to be cash-settled if the performance targets already agreed in the year in which the targets were specified are met, irrespective of any condition of service.

The number of stock options under the Stock Plan is determined by the amount of the individual performance-based bonus established for each executive board member, divided by the average market price (Xetra closing price) for Deutsche Börse AG shares in the fourth quarter of the financial year in question. As the contracts require the stock bonus to be exercised gradually, it is divided into three separate tranches, which are measured according to their respective residual term using the corresponding parameters of the SBP for senior executives. This programme expired at the end of financial year 2013.

Evaluation of the Stock Bonus Plan (SBP) and the Stock Plan
In accordance with IFRS 2, the company uses an adjusted Black-Scholes model (Merton model) to calculate the fair value of the stock options.

Valuation parameters for SBP stock options

		Tranche 2016	Tranche 2015	Tranche 2014	Tranche 2013[1]
Term to		31 Mar 2020	31 Mar 2019	31 Dec 2016 to 31 Mar 2018	31 Dec 2016 to 31 Jan 2017
Risk-free interest rate	%	–0.65	–0.76	–0.92 to – 0.80	–0.92
Volatility of Deutsche Börse AG shares	%	23.71	25.49	0 to 26.23	0 to 18.15
Dividend yield	%	2.75	2.75	2.75	2.75
Exercise price	€	0	0	0	0

1) The SBP 2013 tranche also includes SBP options of the Stock Plan for the executive board members of the Luxembourg companies.

The valuation model does not take into account exercise hurdles. The volatilities applied correspond to the market volatilities of comparable options with comparable maturities.

Valuation of SBP stock options

Tranche	Balance at 31 Dec 2016 Number	Deutsche Börse AG share price at 31 Dec 2016 €	Intrinsic value/ option at 31 Dec 2016 €	Fair value/ option at 31 Dec 2016 €	Settlement obligation €m	Current provision at 31 Dec 2016 €m	Non-current provision at 31 Dec 2016 €m
2013	70,652	76.42	76.42	76.24 –76.98	5.4	5.3	0
2014	19,521	76.42	76.42	73.86 –76.98	1.4	0	1.0
2015	16,082	76.42	76.42	71.89	1.2	0	0.6
2016	25,931[1]	76.42	76.42	69.96	1.8	0	0.4
Total	**132,186**				**9.8**	**5.3**	**2.0**

1) Given that the 2016 tranche stock options for senior executives will not be granted until 2017, the number of shares applicable as at the reporting date may be adjusted subsequently.

Average price of the exercised and forfeited stock options

Tranche	Average price of the exercised stock options €	Average price of the forfeited stock options €
2012	78.94	–
2013	79.70	61.38
2014	79.75	39.47
2015	79.86	25.79

The stock options from the 2012 SBP tranche were exercised in the reporting period following expiration of the vesting period. Shares of the SBP tranches 2013, 2014 and 2015 were paid to former employees as part of severance payments in the year under review.

The carrying amount of the provision for the SBP results from the measurement of the number of SBP stock options at the fair value of the closing auction price of Deutsche Börse shares in electronic trading at the Frankfurt Stock Exchange at the reporting date and its proportionate recognition over the vesting period.

Provisions for the SBP and the Stock Plan amounting to €7.3 million were recognised at the reporting date of 31 December 2016 (31 December 2015: €22.7 million). Of these provisions, none were attributable to members of the Executive Board (2015: €16.7 million). The total expense for the stock options in the reporting period was €2.3 million (2015: €4.5 million). Of that amount, no expense was attributable to members of the Executive Board active at the reporting date (2015: €14.9 million). The provisions recognised in the previous year included provisions for the Co-Performance Investment Plan (CPIP), see section "Co-Performance Investment Plan (CPIP) and Performance Share Plan (PSP)".

Change in number of SBP stock options allocated

	Balance at 31 Dec 2015	Additions/ (disposals) Tranche 2013	Additions/ (disposals) Tranche 2014	Additions/ (disposals) Tranche 2015	Additions Tranche 2016	Fully settled cash options	Options forfeited	Balance at 31 Dec 2016
To the Executive Board	209,944[1)]	0	0	0	0	209,944	0	0
To other senior executives	117,592[2)]	0	0	1,042	25,931	11,622	757	132,186
Total	**327,536**	**0**	**0**	**1,042**	**25,931**	**221,566**	**757**	**132,186**

1) Including Executive Board stock options from the 2014 and 2015 SBP tranches, which expired as at 31 December 2015. For further information on stock options from the Co-Performance Investment Plan (CPIP), please refer to section "Co-Performance Investment Plan (CPIP) and Performance Share Plan (PSP)".
2) Given that the 2016 SBP tranche stock options for senior executives will not be granted until 2017, the number of shares applicable as at the reporting date may be adjusted subsequently.

Long-term Sustainable Instrument (LSI) and Restricted Stock Units (RSU)

Deutsche Börse Group introduced another share-based payment programme effective 1 January 2014. The programme meets the provisions for remuneration systems according to the supervisory requirements for the remuneration systems of institutions laid down in the Institutsvergütungsverordnung (InstitutsVergV, German Remuneration Regulation for Institutions), effective 16 December 2013, and the Kreditwesengesetz (German Banking Act), through which the provisions of Directive 2013/36/EU of the European Parliament and of the Council of 26 June 2013, in particular, were transposed into German law. The aim of the InstitutsVergV is to align the corporate goals even more closely with remuneration, especially in the banking sector, and thus to ensure the company's success is more sustainable. In the year under review, the company launched another LSI tranche and expanded its share-based payment programme by adding an RSU tranche. Accordingly, the disclosures for the 2014 and 2015 tranches include the information for the LSI stock options, and the 2016 tranche includes the disclosures for the stock options under LSI and RSU.

The LSI remuneration model requires at least half of a part of the variable remuneration to be settled in cash and half in shares of Deutsche Börse AG (LSI shares). A portion of the variable remuneration is paid in the subsequent year and another portion over a further period of three or four years. Moreover, a portion of the variable remuneration shall be converted into RSU, subject to a three-year retention period after grant and a one-year waiting period (RSU shares).

The number of LSI and RSU shares is calculated by dividing the proportionate LSI or RSU bonus, respectively, for the year in question by the average closing price of Deutsche Börse AG shares in the last month of a financial year. This results in individual LSI tranches for the LSI bonus, which have maturities of between one and up to five years. The RSU bonus is used as a basis for a further four-year tranche. Payment of each tranche is made after a vesting period of one year. The remuneration system does not stipulate any condition of service. Following the expiry of the vesting period, both the LSI and the RSU shares are measured on the basis of the average closing price of Deutsche Börse AG shares in the last month preceding the end of the vesting period. Settlement is generally made in cash, although the employer has the right to settle by delivering Deutsche Börse AG shares for the 2014 tranche.

Evaluation of the LSI and the RSU

In accordance with IFRS 2, the company uses an adjusted Black-Scholes model (Merton model) to calculate the fair value of the LSI and RSU stock options.

Valuation parameters for LSI and RSU stock options

		Tranche 2016	Tranche 2015	Tranche 2014
Term to		31 Mar 2018 –31 Mar 2022	31 Mar 2017 –31 Mar 2021	31 Mar 2017 –31 Mar 2020
Risk-free interest rate	%	–0.84 to – 0.51	–0.84 to 0	–0.84 to 0
Volatility of Deutsche Börse AG shares	%	23.02 to 26.20	0 to 26.2	0 to 26.2
Dividend yield	%	2.75	2.75	2.75
Exercise price	€	0	0	0

The valuation model does not take into account exercise hurdles. The volatilities applied correspond to the market volatilities of comparable options with comparable maturities.

Valuation of LSI and RSU stock options

Tranche	Balance as at 31 Dec 2016 Number	Deutsche Börse AG share price as at 31 Dec 2016 €	Intrinsic value/ option as at 31 Dec 2016 €	Fair value/ option as at 31 Dec 2016 €	Settlement obligation €m	Current provision as at 31 Dec 2016 €m	Non-current provision as at 31 Dec 2016 €m
2014	24,898[1]	76.42	76.42	70.44 –75.03	1.9	0.6	1.3
2015	49,109[1]	76.42	76.42	68.56 –75.03	3.6	1.4	2.1
2016	108,971[1]	76.42	76.42	66.72 –74.37	7.8	0	7.7
Total	**182,978**				**13.3**	**2.0**	**11.1**

1) As part of the grant dates for the 2014, 2015 and 2016 tranches are in future financial years, the number indicated at the reporting date may change subsequently.

The carrying amount of the provisions for the LSI and the RSU results from the measurement of the number of LSI and RSU stock options at the fair value of the closing auction price of Deutsche Börse shares in electronic trading at the Frankfurt Stock Exchange as at the reporting date.

Provisions amounting to €13.1 million were recognised as at 31 December 2016 (31 December 2015: €7.2 million). The total expense for LSI stock options in the reporting period amounted to €7.6 million (31 December 2015: €4.6 million).

Change in number of LSI and RSU stock options allocated

	Balance at 31 Dec 2015	Additions/ (disposals) Tranche 2014	Additions/ (disposals) Tranche 2015	Additions Tranche 2016	Fully settled cash options	Options forfeited	Balance at 31 Dec 2016
To other senior executives	93,742	669[1)]	1,564[1)]	108,971[1)]	21,968	0	182,978
Total	**93,742**	**669**	**1,564**	**108,971**	**21,968**	**0**	**182,978**

1) As part of the grant dates for the 2014, 2015 and 2016 tranches are in future financial years, the number indicated at the reporting date may change subsequently.

Co-Performance Investment Plan (CPIP) and Performance Share Plan (PSP)

In the 2015 financial year, a new remuneration programme (Co-Performance Investment Plan, CPIP) was introduced, and the CEO was offered a one-time participation. The appropriate number of phantom shares was calculated based on the number of shares granted and the increase of Deutsche Börse AG's net profit for the period attributable to shareholders of Deutsche Börse AG, as well as on the relative performance of the total shareholder return (TSR) on Deutsche Börse AG's shares compared with the total shareholder return of the STOXX Europe 600 Financials Index entities. The performance period for the measurement of the performance criteria commenced on 1 January 2015 and ends on 31 December 2019. The shares are subject to a performance period of five years and a holding period until 31 December 2019. The subsequent payment of the stock bonus will be settled in cash, by 31 March 2021.

On 1 January 2016, the Group launched its new share-based remuneration programme, the Performance Share Plan (PSP), for the Executive Board of Deutsche Börse AG as well as selected executives and employees of Deutsche Börse AG and participating subsidiaries. The 100 per cent stock bonus target was calculated in euros for each Executive Board member. The 100 per cent stock bonus target for selected executives and employees of Deutsche Börse AG and participating subsidiaries is defined by the responsible decision-making bodies.

Based on the PSP 100 per cent stock bonus target, the corresponding number of phantom shares for each beneficiary is calculated by dividing the stock bonus target by the average share price (Xetra closing price) of Deutsche Börse AG's shares in the last calendar month preceding the performance period. Any right to payment of a PSP stock bonus vests only at the end of a five-year performance period.

The final number of Performance Shares is calculated by multiplying the original number of Performance Shares with the level of overall target achievement. The PSP level of overall target achievement is based on two performance factors during the performance period: firstly, on the relative performance of the total shareholder return (TSR) on Deutsche Börse AG's shares compared with the total shareholder return of the STOXX Europe 600 Financials Index; and secondly, on the increase of Deutsche Börse AG's net profit for the period attributable to shareholders of Deutsche Börse AG. The two performance factors contribute 50 per cent each to calculate overall target achievement.

The payout amount is calculated by multiplying the final number of Performance Shares with the average share price (Xetra closing price) of Deutsche Börse AG's shares in the last calendar month preceding the performance period, plus the total of dividend payments made during the performance period based on the final number of Performance Shares.

Evaluation of the Co-Performance Investment Plan (CPIP) and the Performance Share Plan (PSP)
In accordance with IFRS 2, the company uses an adjusted Black-Scholes model (Merton model) to calculate the fair value of the CPIP and PSP stock options.

Valuation parameters for CPIP and PSP stock options

		Tranche 2016	Tranche 2015
Term to		31 Dec 2020	31 Dec 2019
Risk-free interest rate	%	–0.65	–0.76
Volatility of Deutsche Börse AG shares	%	23.02	23.88
Dividend yield	%	0	0
Exercise price	€	0	0
Relative total shareholder return	%	50.00	235.00
Increase in net profit for the period attributable to Deutsche Börse AG shareholders	%	190.00	155.00

The valuation model does not take into account exercise hurdles. The volatilities applied correspond to the market volatilities of comparable options with comparable maturities.

Valuation of CPIP and PSP stock options

Tranche	Balance as at 31 Dec 2016 Number	Deutsche Börse AG share price as at 31 Dec 2016 €	Intrinsic value/ option as at 31 Dec 2016 €	Fair value/ option as at 31 Dec 2016 €	Settlement obligation €m	Current provision as at 31 Dec 2016 €m	Non-current provision as at 31 Dec 2016 €m
2015	134,529	76.42	76.42	76.41	10.3	0	3.8
2016	84,177	76.42	76.42	76.41	6.4	0	1.3
Total	**218,706**				**16.7**	**0**	**5.1**

Provisions for the CPIP and the PSP amounting to €5.1 million were recognised at the reporting date of 31 December 2016 (31 December 2015: €1.1 million). Of the provisions, €4.6 million were attributable to members of the Executive Board (2015: €1.1 million). The total expense for CPIP and PSP stock options in the reporting period was €4.0 million (2015: €1.1 million). Of that amount, an expense of €3.5 million was attributable to members of the Executive Board active at the reporting date (2015: €1.1 million).

Change in number of CPIP and PSP stock options allocated

	Balance at 31 Dec 2015	Additions/ (disposals) Tranche 2015	Additions Tranche 2016	Fully settled cash options	Options forfeited	Balance at 31 Dec 2016
To the Executive Board	93,064	41,465	55,676	0	0	190,205
To other senior executives	0	0	28,501	0	0	28,501
Total	**93,064**	**41,465**	**84,177**	**0**	**0**	**218,706**

For further information on the number of stock options granted to Executive Board members, and on the remuneration system for Executive Board members introduced on 1 January 2016, please refer to the remuneration report.

Group Share Plan (GSP)

Employees of Deutsche Börse Group who are not members of the Executive Board or senior executives have the opportunity to subscribe for shares of Deutsche Börse AG at a discount of 30 or 40 per cent to the issue price under the Group Share Plan (GSP). This discount is based on the employee's length of service. Under the 2016 GSP tranche, eligible employees were able to buy up to 100 shares of the company. The purchased shares must be held for at least two years.

In the reporting period, an expense totalling €2.6 million (2015: €1.8 million) was recognised in staff expense for the Group Share Plan.

40. Executive bodies

The members of the company's executive bodies are listed in the "The Executive Board" and "The Supervisory Board" chapters of the 2016 financial report.

41. Corporate governance

On 8 December 2016, the Executive and Supervisory Boards issued the latest version of the declaration of conformity in accordance with section 161 of the Aktiengesetz (AktG, the German Stock Corporation Act) and made it permanently available to shareholders on the company's website (see also the corporate governance declaration in the combined management report).

42. Related party disclosures

Related parties as defined by IAS 24 are members of the executive bodies of Deutsche Börse AG as well as the companies classified as associates of Deutsche Börse AG, investors and investees, and companies that are controlled or significantly influenced by members of the executive bodies.

The remuneration of the individual members of the Executive and Supervisory Boards is presented in the “Remuneration report” in the combined management report.

Executive Board

In 2016, the fixed and variable remuneration of the members of the Executive Board, including non-cash benefits, amounted to a total of €20.4 million (2015: €15.3 million; figure includes members who have since retired from the Executive Board).

During the 2016 financial year, expenses of €2.7 million (2015: €1.1 million) were recognised in connection with the Co-Performance Investment Plan (CPIP). In addition, expenses of €0.8 million were recognised in connection with the Performance Share Plan (PSP) during the year under review.

The actuarial present value of the pension obligations to Executive Board members was €21.5 million as at 31 December 2016 (2015: €18.0 million). Expenses of €2.8 million (2015: €2.1 million) were recognised as additions to pension provisions.

Former members of the Executive Board or their surviving dependants

The remuneration paid to former members of the Executive Board or their surviving dependants amounted to €4.5 million in 2016 (2015: €2.3 million). The actuarial present value of the pension obligations was €74.2 million as at 31 December 2016 (2015: €71.8 million).

Supervisory Board

The aggregate remuneration paid to members of the Supervisory Board in financial year 2016 was €1.8 million (2015: €2.0 million).

In financial year 2016, the employee representatives on Deutsche Börse AG’s Supervisory Board received salaries (excluding Supervisory Board remuneration) amounting to €0.5 million (2015: €0.7 million). The total consists of the respective total gross amounts for those employee representatives who drew salaries from Deutsche Börse AG in the year under review.

Business relationships with related parties and key management personnel

Business relationships with related parties
The following table shows transactions entered into within the scope of business relationships with non-consolidated companies of Deutsche Börse AG during the 2016 financial year. All transactions were concluded at prevailing market terms.

Transactions with related entities

	Amount of the transactions revenues		Amount of the transactions expenses		Outstanding balances receivables		Outstanding balances liabilities	
	2016 €m	2015 €m	2016 €m	2015 €m	31 Dec 2016 €m	31 Dec 2015 €m	31 Dec 2016 €m	31 Dec 2015 €m
Associates	13.0	10.9	–12.3	–9.1	2.5	4.7	–3.6	–0.6
Joint ventures	0	0.2	0	0	0	0	0	0
Other shareholdings	0.5	3.1[1)]	–1.0	– 1.6[2)]	0	0	0	–1.2
Total sum of business transactions	**13.5**	**14.2**	**–13.3**	**–10.7**	**2.5**	**4.7**	**–3.6**	**–1.8**

1) Two companies formerly categorised as associated companies were retroactively reclassified as other shareholdings.
2) Thereof €–0.4 million arising from two companies formerly categorised as associated companies which were retroactively reclassified as other shareholdings

Monetary business relationships with key management personnel
Key management personnel are persons who directly or indirectly have authority and responsibility for planning, directing and controlling the activities of Deutsche Börse Group. The Group defines the members of the Executive Board and the Supervisory Board as key management personnel for the purposes of IAS 24.

European Commodity Clearing Luxembourg S.à r.l., Luxembourg, (ECC Luxembourg), – a subsidiary of European Commodity Clearing AG and therefore a member of the EEX group – entered into a managing director agreement with IDS Lux S.à r.l. The subject of the agreement is to provide a natural person for the function of managing director in the management of ECC Luxembourg. In addition to this position as managing director of ECC Luxembourg, this person is also a member of the key management personnel at IDS Lux S.à r.l. ECC Luxembourg paid €14.0 thousand for these management services during the 2016 financial year.

Moreover, a member of the Supervisory Board of STOXX Ltd., Zurich, Switzerland, also holds a key management position within the law firm Lenz & Staehelin, Geneva, Switzerland. Deutsche Börse Group reported expenses to this law firm of €1,174.4 thousand in the 2016 financial year.

On the Board of Directors of European Energy Exchange AG's subsidiary Powernext SA, Paris, France, representatives of Powernext SA's other shareholders hold key positions. These shareholder representatives also hold key positions in Powernext SA's shareholder companies, i.e. GRTgaz, Bois-Colombes, France (parent company of 3GRT, Tarascon, France), and EDEV S.A., Courbevoie, France. During the 2016 financial year, Powernext rendered development and maintenance services for customised software solutions in the area of market coupling and balancing, as well as in connection with an electronic trading platform for 3GRT. The company generated €936.7 thousand in revenue with these services during the 2016 financial year.

The Board of Directors and the Executive Board, of LuxCSD S.A., an associate from Deutsche Börse Groups' perspective, each comprise two members of management of fully consolidated subsidiaries who are maintaining a key position within these subsidiaries of Deutsche Börse Group, too. There have been business transactions with Clearstream Banking S.A., Clearstream Services S.A., Clearstream International S.A. and Clearstream Banking AG to LuxCSD. Overall, revenue of €623.0 thousand as well as expenses of €1,609.6 thousand were recognised for such contracts during the 2016 financial year.

Furthermore, an Executive Board member of Clearstream Banking AG concurrently holds an executive position within Deutsche Börse Commodities GmbH, an associate of Deutsche Börse Group. During the 2016 financial year, Deutsche Börse Group realised revenue of €2,057.3 thousand and incurred expenses of €8,890.6 thousand based on the business relationship with Deutsche Börse Commodities GmbH.

One member of Eurex Frankfurt AG's Executive Board was, until February 2016, the Chief Executive Officer of ZDB Cloud Exchange GmbH, and Zimory GmbH, both associates of Deutsche Börse Group. During the 2016 financial year, Deutsche Börse Group realised revenue of €375.5 thousand and expenses of €1.8 thousand based on the business relationship with ZDB Cloud Exchange GmbH.

Two Executive Board members of Deutsche Börse AG are members of the Supervisory Board of China Europe International AG (CEINEX), a joint venture of Shanghai Stock Exchange Ltd., the China Financial Futures Exchange and Deutsche Börse AG. During the 2016 financial year, Deutsche Börse Group realised revenue of €456.9 thousand and incurred expenses of €6.0 thousand based on the business relationship with CEINEX.

Other business relationships with key management personnel
Selected executives of Deutsche Börse Group subsidiaries also hold a key management position within the Clearstream Pension Fund ("association d'épargne pension", ASSEP). This defined benefit plan, established in favour of Luxembourg staff of Clearstream International S.A., Clearstream Banking S.A., as well as Clearstream Services S.A., is funded through cash payments to an ASSEP under Luxembourg law.

43. Employees

Employees

	2016	2015
Average number of employees during the year	5,095	4,760
Employed at the reporting date	5,176	5,100
Employees (average annual FTEs)	4,731	4,460

Of the average number of employees during the year, 29 (2015: 25) were classified as Managing Directors (excluding Executive Board members), 348 (2015: 358) as senior executives and 4,718 (2015: 4,377) as employees.

There was an average of 4,731 full-time equivalent (FTE) employees during the year (2015: 4,460). Please refer also to the "Employees" section in the combined management report.

44. Events after the end of the reporting period

On 1 February 2017, Deutsche Börse AG announced that the Public Prosecutor's Office of Frankfurt am Main investigated at Deutsche Börse AG in respect of a share purchase by its Chief Executive Officer which was carried out on 14 December 2015 in implementation of the Executive Board's remuneration programme as approved by the Supervisory Board of Deutsche Börse AG. Such programme provides for an investment of the Executive Board members in shares of Deutsche Börse AG. Deutsche Börse AG and the Chief Executive Officer fully cooperate with the public prosecutor.

On 6 February 2017, the relevant bodies of Deutsche Börse AG and London Stock Exchange Group plc (LSEG) decided to formally submit the divestment of LCH.Clearnet SA by LCH.Clearnet Group Limited as a remedy to the European Commission in order to address anti-trust concerns raised by the European Commission in relation to the business combination of both companies.

Following the market test in relation to the remedy proposal of 6 February 2017, the European Commission has raised new concerns regarding the viability of LCH SA as a divestment business in relation to access to bond and repo trading feeds currently provided for by MTS S.p.A., an Italian regulated electronic trading platform. The European Commission has therefore required that Deutsche Börse AG and LSEG commit to the divestment of LSEG's majority stake in MTS S.p.A. to secure merger clearance. LSEG has resolved to not commit to the required divestment of LSEG's majority stake in MTS S.p.A.

The parties will await the further assessment by the European Commission and currently expect a decision by the European Commission on the business combination of Deutsche Börse AG and LSEG no later than 3 April 2017.

On 2 March 2017, Deutsche Börse Group announced that it had completed the divestiture of its remaining shareholding in BATS Global Markets, Inc. (BATS). After receiving a cash and share consideration as part of the acquisition of BATS by Chicago Board Options Exchange, Inc. (CBOE), the CBOE shares were sold in the market. Deutsche Börse AG expects a positive impact on its net profit for the period attributable to Deutsche Börse AG shareholders of around €68 million in the first quarter of 2017. In Q4/2016, Deutsche Börse already realised a net profit contribution of around €23 million by selling one third of its stake in BATS. This stake resulted from a participation of the divested International Securities Exchange Holdings, Inc. (ISE) in Direct Edge Holdings, LLC, which later merged with BATS.

On 3 March 2017, the Executive Board of Deutsche Börse AG communicated that its indirectly held subsidiary European Energy Exchange AG has reached an agreement in principle with the shareholders of Nodal Exchange Holdings, LLC on the purchase of all shares in Nodal Exchange Holdings, LLC. The total purchase price for all shares amounts to a low nine-digit sum (in US dollars). The execution of binding agreements is intended to take place shortly. The closing of the acquisition is still subject to customary conditions such as required regulatory approvals.

45. Date of approval for publication

Deutsche Börse AG's Executive Board approved the consolidated financial statements for submission to the Supervisory Board on 7 March 2017. The Supervisory Board is responsible for examining the consolidated financial statements and stating whether it endorses them.

Frankfurt/Main, 7 March 2017
Deutsche Börse AG
The Executive Board

Carsten Kengeter

Andreas Preuss

Gregor Pottmeyer

Hauke Stars

Jeffrey Tessler

Deutsche Börse AG

Combined management report as at 31 December 2016

Combined management report

This combined management report covers both Deutsche Börse Group and Deutsche Börse AG. It has been prepared in accordance with sections 289, 315 and 315a of the Handelsgesetzbuch (HGB, German Commercial Code) and German Accounting Standard (GAS) 20. This management report also takes into account the requirements of the Practice Statement "Management Commentary" issued by the International Accounting Standards Board (IASB).

Fundamental information about the Group

Overview of Deutsche Börse Group

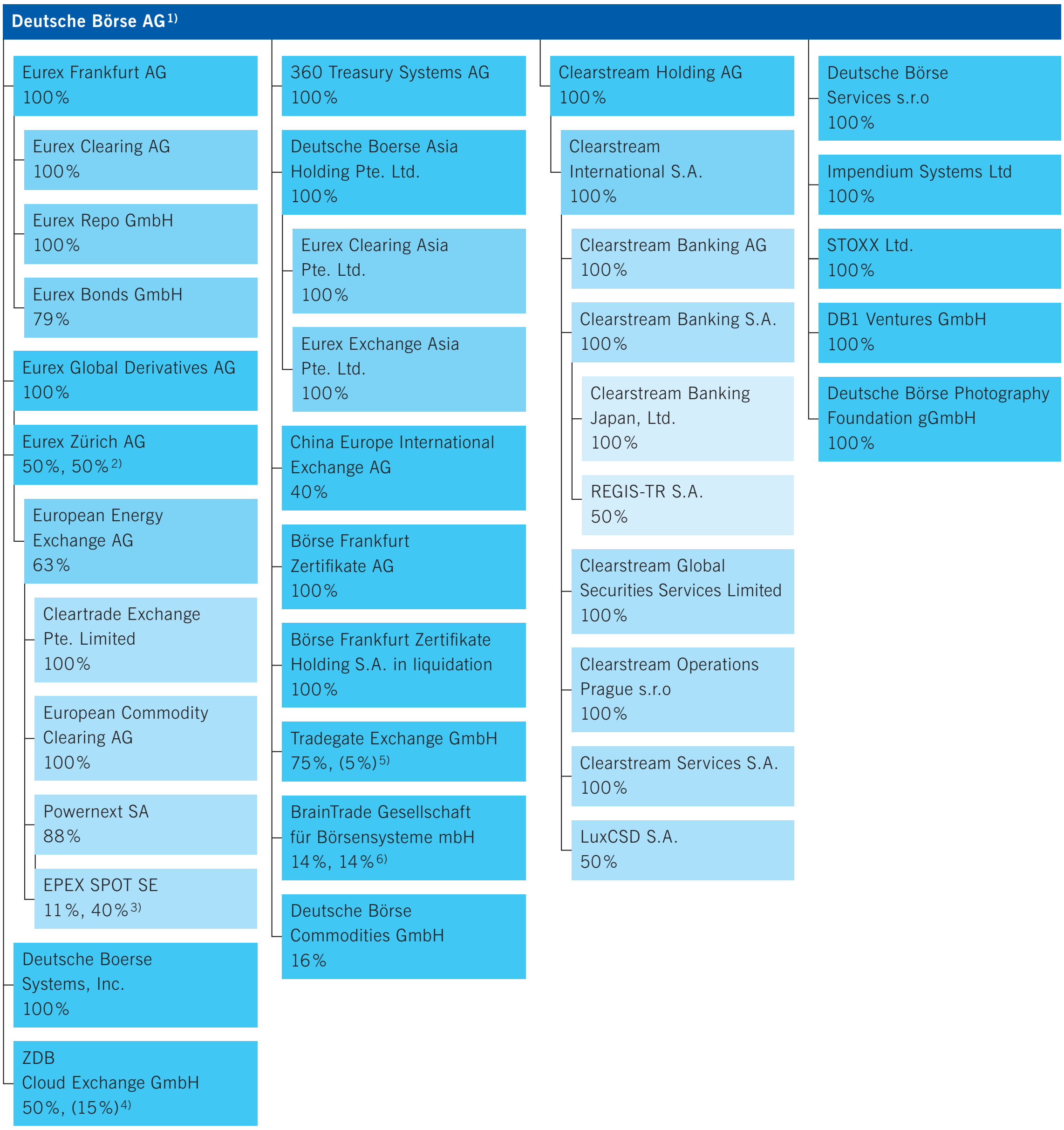
Business operations and Group structure

Deutsche Börse AG, which is headquartered in Frankfurt/Main, Germany, is the parent company of Deutsche Börse Group. As at 31 December 2016, the Group employed 5,176 people at 37 locations in 29 countries. As one of the largest market infrastructure providers worldwide, Deutsche Börse Group offers its customers a wide range of products and services. These cover the entire financial market transactions value chain – from equities and derivatives trading through transaction clearing and settlement, securities custody, services for liquidity and collateral management, and the provision of market information, down to the development and operation of IT systems that support all these processes.

Deutsche Börse AG operates the cash market at Frankfurter Wertpapierbörse (FWB®, the Frankfurt Stock Exchange) with its fully electronic Xetra® trading platform. It also offers trading in structured products (certificates and warrants) in Germany via Börse Frankfurt Zertifikate AG. In addition, Deutsche Börse AG operates the Eurex Exchange derivatives market via Eurex Frankfurt AG and Eurex Zürich AG. Commodities spot and derivatives markets are operated by the Group's indirect subsidiary European Energy Exchange AG (EEX). Deutsche Börse AG operates a foreign-exchange trading platform via its subsidiary 360 Treasury Systems AG (360T). The Group also offers clearing services for the cash and derivatives markets (Eurex Clearing AG). Furthermore, Deutsche Börse sells price and reference data as well as other trading information; its STOXX Ltd. subsidiary develops and sells indices. All post-trade services that Deutsche Börse Group provides for securities are handled by Clearstream Holding AG and its subsidiaries (Clearstream Holding group). These include transaction settlement, the administration and custody of securities, as well as services for global securities financing, investment funds and hedge funds. Deutsche Börse AG and Clearstream Services S.A. develop and operate Deutsche Börse Group's technological infrastructure.

The "Equity investments and partnerships strengthen product and service offering" chart gives an overview of Deutsche Börse Group's main shareholdings; its basis of consolidation is presented in full in note 2 to the consolidated financial statements. Material changes in the reporting period include the sale of US futures and options exchange International Securities Exchange Holdings, Inc. (ISE), effective 30 June 2016; details can be found in the "Changes to the basis of consolidation and to segment reporting" section.

Equity investments and partnerships strengthen product and service offering



1) Simplified presentation of main shareholdings (rounded values), as at 1 January 2017
2) Direct equity interest Deutsche Börse AG: 50%, direct equity interest Eurex Global Derivatives AG: 50%
3) Direct equity interest European Energy Exchange AG: 11%, direct equity interest Powernext SA: 40%
4) Direct equity interest Deutsche Börse AG: 50%, equity interest of 15%, which is held indirectly via Zimory GmbH
5) Direct equity interest Deutsche Börse AG: 75%, equity interest of 5%, which is held indirectly via Tradegate AG Wertpapierhandelsbank
6) Direct equity interest Deutsche Börse AG: 14%, direct equity interest Börse Frankfurt Zertifikate AG: 14%

Management

The governing bodies of Deutsche Börse AG, which is a German stock corporation, are the Annual General Meeting, the Supervisory Board and the Executive Board, each of which has its own areas of responsibility.

The Annual General Meeting resolves on the appropriation of the unappropriated surplus, appoints the shareholder representatives on the Supervisory Board and approves the actions of the Executive Board and the Supervisory Board. In addition, it resolves on corporate actions and other matters governed by the Aktiengesetz (AktG, German Stock Corporation Act).

The Supervisory Board appoints, supervises and advises the Executive Board and is directly involved in key decisions affecting the company. Additionally, it approves the consolidated financial statements prepared by the Executive Board. Members of the Supervisory Board are appointed for a period of three years, although the Annual General Meeting may determine a shorter term of office when electing members. The Supervisory Board of Deutsche Börse AG has twelve members: eight shareholder representatives and four employee representatives.

The Executive Board manages the company at its own responsibility; the Chief Executive Officer co-ordinates the activities of the Executive Board members. In financial year 2016, the Executive Board of Deutsche Börse AG had five members. The remuneration system and the remuneration paid to the individual members of the Executive Board are described in detail in the remuneration report.

Reporting segments

Deutsche Börse Group classifies its business into four segments: Eurex, Xetra, Clearstream and Market Data + Services. This structure serves as a basis for the Group's internal management and for financial reporting (see the table entitled "Deutsche Börse Group's reporting segments" for details).

Deutsche Börse Group's reporting segments

Reporting segment	Business areas
Eurex	▪ Electronic trading of European derivatives (Eurex Exchange), commodities (EEX group) and foreign exchange (360T®) ▪ Eurex Repo® over-the-counter (OTC) trading platform ▪ C7® electronic clearing architecture ▪ Central counterparty for on- and off-exchange derivatives and repo transactions
Xetra	▪ Cash market with the Xetra®, Börse Frankfurt and Tradegate trading venues ▪ Eurex Bonds® OTC trading platform ▪ Central counterparty for equities and bonds ▪ Admission of securities (listing)
Clearstream	▪ Custody and settlement services for domestic and international securities ▪ Global securities financing services and collateral management ▪ Investment funds and hedge funds services
Market Data + Services	▪ Distribution of licences for trading and market signals ▪ Development and sales of indices (STOXX) ▪ Technology and reporting solutions for external customers ▪ Trading participant connectivity

Organisational structure

At the start of 2016, Deutsche Börse AG realigned the assignment of responsibilities within its Executive Board in order to place client focus at the heart of its organisational structure. The Clients, Products & Core Markets division combines Deutsche Börse Group's derivatives trading businesses, its clearing house as well as Clearstream's settlement and custody business. Clients, Products & Core Markets is responsible for coordinating Group-wide product development as well as global sales activities. The IT & Operations, Data & New Asset Classes division combines Deutsche Börse Group's IT activities and market operations. Technological transformation and digitisation are key issues which are advanced by this division – in close coordination with the Chief Executive Officer (CEO). Some of Deutsche Börse Group's fastest growing business areas, such as the market data business, the electronic foreign-exchange trading platform 360T®, as well as EEX group also belong to this division. Deutsche Börse Group's cash market businesses – comprising Xetra, the Frankfurt Stock Exchange, and the certificates and warrants business – form part of the Cash Market, Pre-IPO & Growth Financing division. The division is also responsible for the build-up of a pre-IPO market, as well as for developing and establishing tools for growth financing. The portfolio of the Chief Financial Officer (CFO) includes risk management and compliance. The responsibilities of the CEO include Group Strategy and Human Resources, as well as innovation; moreover,

Deutsche Börse Group's management structure as at 1 January 2017

Group Executive Board

CEO C. Kengeter	**CFO** G. Pottmeyer	**Clients, Products & Core Markets** J. Tessler	**Cash Market, Pre-IPO & Growth Financing** H. Stars	**IT & Operations, Data & New Asset Classes** A. Preuss	
Group Strategy/ Mergers & Acquisitions	Financial Accounting & Controlling	Core Markets Development	Cash Market Development & Op. Management	IT Infrastructure & Operations	FX/360T
Group Communications, Marketing & Reg. Strategy	Chief Compliance Officer	Clearing/CCP/CH	Cash Market Sales & Partner Markets	Group Information Security	European Energy Exchange (EEX)
Group Audit	Investor Relations	Group Client Services & Administration	Pre-IPO & Capital Markets	Market Operations	Executive Office
Group Legal & Regulatory Affairs	Treasury	Settlement & Custody Core Products	Community Development	GSF IT	Clearing IT
Human Resources	Chief Risk Officer	Group Business & Product Development	Digitisation/ Platforms	IFS IT	Corporate Systems
Group Venture Portfolio Management	Group Organisational Services	Investment Funds Services & GSF	Growth Financing	Office Automation	Data IT
Chief of Staff	Strategic Finance	Group Sales		Derivatives & Cash Trading IT	Energy
Innovation	Group Project Portfolio Management	Derivatives Markets Trading		Asset Servicing	Risk IT
	Compensation Officer			Market Data + Services	Settlement IT

he provides strategic impetus in the areas of technological transformation and digitisation. The current organisational set-up is shown in the "Deutsche Börse Group's management structure as at 1 January 2017" chart.

Objectives and strategies

Deutsche Börse Group's objectives and strategies

Deutsche Börse Group is one of the largest market infrastructure providers worldwide. The Group's business model enhances the capital markets' stability, efficiency and integrity. Issuers benefit from the low capital costs it offers, while investors enjoy high liquidity and low transaction costs. At the same time, Deutsche Börse stands for transparent, secure capital markets in which organised trading is based on free price formation.

Deutsche Börse's business success is founded on its business model: its broadly diversified product and service range covers the entire value chain for financial market transactions. The business model aims to offer customers reliable services in an efficient and cost effective manner, based on the following key principles:

- integrating different financial market services such as trading, clearing, settlement, securities custody, liquidity and collateral management, as well as index and market data services
- providing these services for different asset classes such as equities, bonds, funds, commodities, FX products, fixed-income products and derivatives on these underlyings
- developing and operating proprietary electronic systems for all processes along the value chain
- organising an impartial marketplace to ensure orderly, supervised trading with fair price formation, plus providing risk management services

The efficiency of this business model can be seen from the fact that Deutsche Börse Group has generated strong cash flows from operating activities for many years and that it is one of the most cost-effective providers of trading, clearing and settlement services among comparable products.

In order to maintain its leading position among exchange organisations and to grow further, Deutsche Börse Group launched its Group-wide "Accelerate" programme in 2015, with the following objectives: to actively participate in global competition among capital markets infrastructure providers – in an agile, ambitious and effective manner with a strong client focus – and to turn Deutsche Börse into the global market infrastructure provider of choice, being top-ranked in all its activities. In order to achieve this strategic objective, Deutsche Börse has launched a broad range of initiatives, and triggered a cultural change throughout the company.

In the context of its "Accelerate" growth strategy, Deutsche Börse Group has implemented far-reaching organisational changes and defined its financial targets. As part of that, the company is constantly assessing its future competitive positioning, profitability, innovative strength, and strategic benefits of all its shareholdings and own activities. Deutsche Börse pursues the goal of becoming the number one or number two player in every business area the company operates in – a goal that requires active management of the business portfolio. In areas where Deutsche Börse is not able to meet this goal, it evaluates other options. As part of its ongoing review of capital allocation, the Group disposed of various investments during the year under review, including Infobolsa, Market News International and the International Securities Exchange. Moreover, it sold a partial shareholding in BATS Global Markets, Inc.

Thanks to a Group-wide approach in marketing, innovation and operations, the Group will be better positioned to serve changing client needs and to gradually exploit untapped sales potential. A cross-divisional Group Management Committee was established, and responsibilities on the Executive Board realigned, in order to promote the Group's new direction and to intensify collaboration. Besides, the new remuneration system for the Executive Board and executive staff, which was introduced during the year under review, has created stronger incentives for growth in the individual divisions. Likewise, the Group has conducted an in-depth review of its organic growth initiatives, and re-prioritised where appropriate. In this context, the Group pursues an accelerated expansion into new markets and asset classes. Within the scope of various initiatives, it aims for a markedly higher degree of innovation (please refer to the report on opportunities). As far as external growth opportunities are concerned, on the one hand the focus is on strengthening existing high-growth areas, and on exploring new asset classes and services.

Deutsche Börse Group has a scalable business model, which permits higher business volumes at relatively minor additional costs. With a strong business performance and organic or external growth, this means that income growth will exceed cost increases. To reinforce the scalability of its business model, the Group has introduced clearly defined profit growth targets. Accordingly, it anticipates net revenue increases of between 5 and 10 per cent annually, based on its current business portfolio and assuming a continued recovery of the world economy as well as medium-term interest rate rises. The Group is targeting 10 per cent to 15 per cent increases in earnings before interest and taxes (EBIT) and consolidated net profit for the period attributable to Deutsche Börse AG shareholders.

Deutsche Börse Group's ability to achieve its organic growth targets depends on the following factors, among others:

- The effect of macroeconomic conditions on the financial markets: e.g. greater stock market volatility typically leads to higher levels of trading in the cash and derivatives markets and rising interest rates drive higher net interest income.
- Regulatory requirements affecting all market participants: if regulatory initiatives (e.g. EMIR, Capital Requirements Directives) strengthen the role of exchanges, this will also benefit Deutsche Börse Group.
- Structural changes in the financial markets: e.g. trading activity increases if investment funds make greater use of derivatives to implement their trading strategies.
- The Group's innovative strength: if it succeeds in continually introducing new products and services for which there is demand on the market, the Group will further grow its business.

Deutsche Börse Group is committed to transparent, reliable and liquid financial markets, although it cannot affect how the volume drivers for these markets develop. However, the Group is able to influence the other factors to some extent or to control them in full; for instance, it can lobby for a favourable legal framework for the financial markets or it can develop products and services to support its customers' business. This also enables it to reduce its dependence on those factors that are beyond its control.

Management approach for a Group-wide commitment to sustainability
Deutsche Börse Group's objectives and strategies include discharging its corporate responsibility holistically. In line with this, its management approach is guided by three action-based principles that aim to sustainably strengthen and preserve the value added to the economy and to society by Deutsche Börse Group:

- **Building trust.** Deutsche Börse Group aims to organise the capital markets in a way that ensures their integrity, transparency and security. The availability of high-quality information is a key aspect in this process, and something that the company is working constantly to enhance. In this context, providing sustainability information is as significant as engaging in a constructive dialogue on the future viability of the international capital markets with both customers and the general public.

- **Leading by example.** As a listed service provider, Deutsche Börse Group aims to ensure that its own business activities are conducted responsibly and with a view to the future. In addition, the Group pursues a sustainable human resources policy and is committed to the environment and hence to conserving resources. It enhances its commitment to sustainability and its reporting on an ongoing basis in order to establish itself as a long-term role model on the market.
- **Increasing public awareness.** The Group is part of civil society and as such has a responsibility towards it. It is committed to fulfilling this role both in Germany and in its international locations, too. It systematically bases its actions on local requirements and, as a good corporate citizen, takes part in long-term cooperative initiatives aimed at strengthening structures in the non-profit sector.

Planned merger with London Stock Exchange Group
The 2016 reporting year was largely characterised by plans for the merger of Deutsche Börse with LSEG. The business combination would create a leading global market infrastructure provider with deep roots in Europe – a major opportunity for accelerating the growth strategies of both companies. The commitment to a client-focused business model would enable the Combined Group to fulfil client needs in the best possible manner. The merger would generate cost synergies of some €450 million (from the third year following completion of the transaction) as well as revenue synergies of at least €250 million (from the fifth year following completion).

Overall, approximately 89 per cent of Deutsche Börse AG's shareholders accepted the offer up until 12 August 2016, exchanging their Deutsche Börse shares into shares of the new company. LSEG shareholders had already approved the merger, with a large majority, at the extraordinary general meeting that took place on 4 July 2016.

At the time of writing this report, the approval process for this project is ongoing. Numerous authorities must approve the planned merger, including the European Commission, and the Ministry of Economics, Transportation and Regional Development of the State of Hesse.

On 28 September 2016, the European Commission embarked upon Phase II of the merger clearance proceedings, which are scheduled to be concluded no later than 3 April 2017. Within the scope of this ongoing EU merger control procedure, Deutsche Börse received a so-called "Statement of Objections" regarding the merger, which summarises concerns raised by the European Commission with regard to the merger. In order to remedy these concerns, LSEG agreed to sell its subsidiary LCH.Clearnet SA subsidiary to Euronext N.V., for a cash consideration of €510 million (subject to customary market price adjustments). The possible divestment of LCH.Clearnet SA would be subject to, amongst other things, examination and approval by the European Commission, in connection with the recommended merger of DBAG and LSEG. Moreover, the transaction would be conditional upon the successful completion of the merger. Following the market test in relation to this remedy proposal, the European Commission has raised new concerns regarding the viability of LCH SA as a divestment business. These concerns relate to access to bond and repo trading feeds currently provided for by MTS S.p.A., an Italian regulated electronic trading platform. The European Commission has therefore required that Deutsche Börse AG and LSEG commit to the divestment of LSEG's majority stake in MTS S.p.A. to secure merger clearance. LSEG has resolved to not commit to the required divestment of LSEG's majority stake in MTS S.p.A.

Besides the European Commission's approval, the merger is subject to a review from the Hesse Exchange Supervisory Authority, which is part of the Ministry of Economics, Energy, Transportation and Regional Development of the State of Hesse. The conclusion of this review procedure and the corresponding decision would be expected to take place during the second quarter of 2017.

Internal management

Management systems

Deutsche Börse Group's internal management system is based on key performance indicators taken from the consolidated income statement (net revenue, operating costs, EBIT, the Group's net profit for the period attributable to Deutsche Börse AG shareholders) and the balance sheet (cash flows from operating activities, liquidity, equity less intangible assets). Additionally, the system includes key performance indicators that are derived from the consolidated income statement and the balance sheet (interest coverage ratio, interest-bearing gross debt / EBITDA and return on shareholders' equity).

Net revenue is composed of sales revenue plus net interest income from banking business and from other operating income, less volume-related costs. Sales revenue from external customers is generally dependent on the growth factors described above (the performance of the financial markets, regulatory and structural changes, and the Group's innovative strength). Net interest income from banking business is dependent on how Clearstream's international settlement business performs, on the one hand, and on developments of short-term interest rates, particularly in the euro zone and the USA, on the other. In addition to income from the Clearstream segment, net interest income has also included interest income and expenses in the Eurex segment. This income is generated by the Group's clearing houses from investing their clients' cash collateral. Other operating income results from exchange rate differences, among other things. Volume-related costs normally correlate with sales revenue in the relevant business areas, such as fees and commissions from banking business or the cost of purchasing price data. In addition, various licence fees (e.g. for index licences) contribute to volume-related costs.

Operating costs include staff costs, depreciation, amortisation and impairment losses, and other operating expenses. Staff costs consist of wages and salaries, social security contributions and the cost of retirement benefits. They are subject to inflation adjustments and depend partially on the company's performance, as they also include a variable remuneration. Depreciation, amortisation and impairment charges include depreciation and amortisation of, and impairment losses on, intangible assets and property, plant and equipment. Other operating expenses mainly comprise the costs of developing and operating the Group's technological infrastructure, office infrastructure costs and marketing costs.

Around 80 per cent of Deutsche Börse Group's costs are fixed costs (excluding special factors). As a result, the Group can handle higher volumes of business without a significant increase in costs. Conversely, a decline in business volumes has a direct impact on the Group's profitability. Approximately 20 per cent of the Group's costs are volume-related costs.

Deutsche Börse Group manages its EBIT using net revenue and operating costs. At Group level, the net profit for the period attributable to Deutsche Börse AG shareholders also serves as a performance indicator for internal management.

The balance sheet key performance indicators include cash flows from operating activities, a predefined liquidity target and equity less intangible assets. Liquidity planning aims at maintaining enough liquidity to meet operating costs for one quarter (currently between €150 million and €250 million). There is no set target for the Group's management of its equity less intangible assets KPI; rather, the objective is to maintain a positive figure.

The interest coverage ratio is the ratio of EBITDA to the interest expense from financing activities. As part of its capital management programme, the Group aims to achieve an interest coverage ratio of at least 16 for Deutsche Börse Group. In addition, the goal is to achieve a maximum ratio of interest-bearing gross debt to EBITDA of 1.5 at Group level. The latter performance indicator is particularly important at present in protecting the Group's current AA rating. The goal of the Clearstream subgroup is to maintain an interest coverage ratio of 25 and to comply with other capital adequacy measures to protect its current AA rating. Because Clearstream had no financial liabilities from non-banking business in either the reporting period or the previous year, no interest coverage ratio had to be calculated for the subgroup.

Group projects are prioritised and steered using strategic and financial criteria, taking project-specific risks into account. The main criterion used to assess the strategic attractiveness of projects is their (expected) contribution to the strategic objectives for Deutsche Börse Group and its business areas. The main financial criteria are key performance indicators such as net present value (NPV), the payback period and the return after tax, which are calculated on the basis of the project or business plans. Risks are monitored at all levels of project work, i.e. both when prioritising and steering projects and during ongoing project management.

Further information on the Group's financial position is presented in the "Financial position" section of this combined management report.

Internal control system as part of the financial reporting process

Deutsche Börse has established a Group-wide internal control system (ICS). The ICS comprises a set of rules for the management of corporate activities as well as guidelines which help to ensure that such rules are being observed. Monitoring tasks are implemented through process-integrated measures (such as organisational safeguards and controls) as well as through process-independent measures. All business divisions are responsible that Group-wide ICS requirements are met in their respective areas of responsibility.

The purpose of the accounting-related ICS is to ensure orderly accounting practices. The central Financial Accounting and Controlling (FA&C) division is primarily responsible for preparing the accounts at Deutsche Börse AG and its consolidated subsidiaries. FA&C is supported in this task by decentralised units, which have to comply with the standards set by FA&C. The head of FA&C is responsible for the process, including effective safeguards and controls. The goal is to ensure that risks in the accounting process are identified early on so that remedial action can be taken in good time.

In order to maintain consistent and continuous accounting processes, FA&C provides regularly updated accounting manuals as well as guidelines and work instructions for the material accounting processes – as part of the preparation of the annual financial statements and consolidated financial statements of Deutsche Börse AG. All FA&C employees have access to this documentation, accounting manuals and account allocation guidelines, allowing them to obtain information on the management judgements and accounting options exercised by Deutsche Börse Group.

Moreover, Deutsche Börse Group continuously monitors and analyses changes in the accounting environment and adjusts its processes in line with them. This applies in particular to national and international accounting standards.

Another key feature of the ICS is the principle of the separation of functions: tasks and responsibilities are clearly defined and allocated within the organisation. Incompatible tasks – such as modifying master data on the one hand and issuing payment instructions on the other – are strictly segregated at a functional level. An independent control unit grants individual employees access rights to the accounting system and monitors these permissions continuously using an incompatibility matrix. Transactions are initially recorded in the general ledger or the appropriate subledgers on the basis of the chart of accounts and the account allocation guidelines. The principle of dual control applies to all closing entries made and to preparation of the consolidated financial statements.

Major Deutsche Börse Group subsidiaries maintain and consolidate their general ledgers in the same system. Accounting data from the other companies is uploaded for inclusion in the consolidated financial statements. Liabilities, expenses and income for individual transactions are recorded in separate accounts under the name of the counterparty concerned. Any consolidation differences are reviewed centrally and sent to the accounting departments of the companies concerned for clarification.

The processes, systems and controls described above aim to provide reasonable assurance that the accounting system complies with the applicable principles and laws. In addition, Compliance and Internal Audit act as a further line of defence, performing risk-based, process-independent controls on whether the ICS is appropriate and effective. The Executive Board and the Audit Committee established by the Supervisory Board receive regular reports on the effectiveness of the ICS with respect to the financial reporting process.

Research and development activities

As a service provider, Deutsche Börse Group does not engage in research and development activities comparable to those of manufacturing companies. As a result, this combined management report does not contain a detailed research and development report. However, Deutsche Börse does develop and operate its own trading and clearing systems as well as system solutions designed to achieve its structural growth objectives. The company works constantly to maintain and enhance the technology leadership and stability of its electronic systems in the interests of its customers and the systemic stability of the financial markets. This is why Deutsche Börse has significantly overhauled its trading and clearing systems, which go by the trade names T7® and C7®. Other technically challenging projects include implementing the European Central Bank’s plans to create a uniform, pan-European securities settlement platform (TARGET2-Securities).

In 2016, research and development expenses amounted to €171.0 million (2015: €202.2 million); of this figure, approximately 52 per cent (2015: 47 per cent) was attributable to development costs that were capitalised as internally developed software. In addition, €48.7 million of capitalised development costs were amortised in 2016. This means that research and development costs amounted to 7 per cent of net revenue (2015: 8 per cent). In the Eurex and Clearstream segments, which mainly invest in systems upgrades, research and development costs amounted to 6 per cent and 10 per cent of net revenue, respectively. Details can be found in note 7 to the consolidated financial statements.

Further details of product and services development activities can be found in the report on opportunities and the report on expected developments.

Takeover-related disclosures

Disclosures in accordance with sections 289 (4) and 315 (4) of the HGB
In accordance with sections 289 (4) and 315 (4) of the Handelsgesetzbuch (HGB, German Commercial Code), Deutsche Börse AG hereby makes the following disclosures as at 31 December 2016:

The share capital of Deutsche Börse AG amounted to €193.0 million on the above-mentioned reporting date and was composed of 193 million no-par value registered shares. There are no other classes of shares besides these ordinary shares.

The share capital has been contingently increased by up to €19.3 million by issuing up to 19.3 million no-par value registered shares (contingent capital 2014). The contingent capital increase will be implemented only to the extent that holders of convertible bonds or warrants attaching to bonds with warrants issued by the company or a Group company in the period until 14 May 2019 on the basis of the authorisation granted to the Executive Board in accordance with the resolution of the Annual General Meeting on 15 May 2014 on item 5 (a) of the agenda exercise their conversion or option rights, that they meet their conversion or option obligations, or that shares are tendered, and no other means are used to settle such rights or obligations. More details can be found in Article 4 (7) of the Articles of Association of Deutsche Börse AG.

The Executive Board is only aware of limitations to voting rights that result from the German Stock Corporation Act, according to which voting rights arising from shares affected by section 136 of the AktG may not be exercised. Furthermore, shares held by Deutsche Börse AG as treasury shares are exempted from the exercise of any rights according to section 71b of the AktG.

Under the Wertpapierhandelsgesetz (WpHG, German Securities Trading Act), any investor whose shareholding reaches, exceeds or falls below specified voting right thresholds as a result of purchase, sale or any other transaction is required to notify the company and the Bundesanstalt für Finanzdienstleistungsaufsicht (BaFin, German Federal Financial Supervisory Authority). The lowest threshold for this disclosure requirement is 3 per cent. Deutsche Börse AG is not aware of any direct or indirect equity interests in its capital exceeding 10 per cent of the voting rights.

There are no shares with special rights granting the holder supervisory powers.

Employees holding shares in Deutsche Börse AG exercise their rights in the same way as other shareholders in accordance with the statutory provisions and the Articles of Association.

Members of the Executive Board are appointed and dismissed in accordance with sections 84 and 85 of the AktG and with Article 6 of the Articles of Association of Deutsche Börse AG. Amendments to the Articles of Association of Deutsche Börse AG are adopted by resolution of the Annual General Meeting in accordance with section 119 (1) No. 5 of the AktG. Under Article 12 (4) of the Articles of

Association of Deutsche Börse AG, the Supervisory Board has the power to make changes to the Articles of Association that relate to the wording only. In accordance with Article 18 (1) of the Articles of Association of Deutsche Börse AG, resolutions of the Annual General Meeting are passed by a simple majority of the votes cast, unless otherwise mandated by the AktG. Insofar as the AktG additionally prescribes a majority of the share capital represented at the time of a resolution, a simple majority of the share capital represented is sufficient where this is legally permissible.

Subject to the approval of the Supervisory Board, the Executive Board is authorised to increase the share capital by up to a total of €13.3 million on one or more occasions in the period up to 10 May 2021 by issuing new no-par value registered shares in exchange for cash and/or non-cash contributions (authorised capital I). Shareholders must be granted pre-emptive rights. However, subject to the approval of the Supervisory Board, the Executive Board may exclude shareholders' pre-emptive rights with respect to fractional amounts. Pursuant to the authorisation, however, the exclusion of shareholders' pre-emptive rights is subject to the proviso that shares issued during the term of the authorisation, excluding shareholders' pre-emptive rights, shall not exceed twenty per cent of the registered share capital. Full authorisation, and particularly the conditions under which shareholders' pre-emptive rights can be excluded, derive from Article 4 (3) of the Articles of Association of Deutsche Börse AG.

The Executive Board is also authorised to increase the share capital by up to a total of €19.3 million on one or more occasions in the period up to 12 May 2020, subject to the approval of the Supervisory Board, by issuing new no-par value registered shares against cash and/or non-cash contributions (authorised capital II). Shareholders must be granted pre-emptive rights, which the Executive Board can disapply in certain cases, subject to the approval of the Supervisory Board in each case. The Executive Board is authorised to exclude shareholders' pre-emptive rights: (i) in the case of cash capital increases, provided that the issue price of the new shares is not significantly lower than the prevailing exchange price, and the total number of shares issued under exclusion of shareholders' pre-emptive rights does not exceed 10 per cent of the share capital; (ii) in the case of capital increases in exchange for non-cash contributions for the purpose of acquiring companies, parts of companies, interests in companies, or other assets; and (iii) with respect to fractional amounts. However, according to the authorisation, the Executive Board may only exclude shareholders' pre-emptive rights if the total number of shares issued during the term of authorisation does not exceed 20 per cent of the share capital. The full authorisation, and particularly the conditions under which shareholders' pre-emptive rights can be disapplied, derive from Article 4 (4) of the Articles of Association of Deutsche Börse AG.

In addition, the Executive Board is authorised to increase the share capital by up to a total of €38.6 million on one or more occasions in the period up to 12 May 2020, subject to the approval of the Supervisory Board, by issuing new no-par value registered shares in exchange for cash contributions (authorised capital III). Shareholders must be granted pre-emptive rights, which the Executive Board can exclude, subject to the approval of the Supervisory Board, only for fractional amounts. However, according to the authorisation, the Executive Board may only exclude shareholders' pre-emptive rights if the total number of shares issued during the term of authorisation does not exceed 20 per cent of the share capital. The exact content of this authorisation derives from Article 4 (5) of the Articles of Association of Deutsche Börse AG.

Furthermore, the Executive Board is authorised to increase the share capital by up to a total of €6.0 million on one or more occasions in the period up to 15 May 2017, subject to the approval of the Supervisory Board, by issuing new no-par value registered shares against cash and/or non-cash contributions (authorised capital IV). Shareholders must be granted pre-emptive rights unless the Executive Board makes use of the authorisation granted to it to disapply such rights, subject to the approval of the Supervisory Board. The Executive Board is authorised to disapply shareholders' pre-emptive rights for fractional amounts with the approval of the Supervisory Board. The Executive Board is also authorised, subject to the approval of the Supervisory Board, to exclude shareholders' pre-emptive rights in order to issue up to 900,000 new shares per financial year from authorised capital IV to members of the Executive Board and employees of the company as well as to members of the executive boards or management and employees of its affiliated companies in accordance with sections 15ff. of the AktG. Full authorisation derives from Article 4 (6) of the Articles of Association of Deutsche Börse AG.

The Executive Board is authorised to acquire treasury shares amounting to up to 10 per cent of the share capital. However, the acquired shares, together with any treasury shares acquired for other reasons that are held by the company or attributed to it in accordance with sections 71a ff. of the AktG, may at no time exceed 10 per cent of the company's share capital. The authorisation to acquire treasury shares is valid until 12 May 2017 and may be exercised by the company in full or in part on one or more occasions. However, it may also be exercised by dependent companies, by companies in which Deutsche Börse AG holds a majority interest or by third parties on its or their behalf. The Executive Board may elect to acquire the shares (1) on the stock exchange, (2) via a public tender offer addressed to all shareholders or via a public request for offers of sale addressed to the company's shareholders, (3) by issuing tender rights to shareholders or (4) using derivatives (put or call options or a combination of the two). The full and exact wording of the authorisation to acquire treasury shares, and particularly the permissible uses to which the shares may be put, can be found in items 8 and 9 of the agenda for the Annual General Meeting held on 13 May 2015.

The following material agreements of the company are subject to a change of control following a takeover bid:

- On 18 March 2013, Deutsche Börse AG and its subsidiary Clearstream Banking S.A. entered into a multicurrency revolving facility agreement with a banking syndicate for a working capital credit totalling up to €750 million. If there is a change of control, the credit relationship between Deutsche Börse AG and the lenders can be reviewed in negotiations within a period of no more than 60 days. In this process, each lender has the right, at its own discretion, to terminate its credit commitment and demand partial or full repayment of the amounts owing to it. A change of control has occurred if Deutsche Börse AG no longer directly or indirectly holds the majority of Clearstream Banking S.A. or if a person or a group of persons acting in concert acquires more than 50 per cent of the voting shares of Deutsche Börse AG.
- Under the terms of Deutsche Börse AG's €600.0 million fixed-rate bond issue 2015/2041 (hybrid bond), Deutsche Börse AG has a termination right in the event of a change of control which, if exercised, entitles Deutsche Börse AG to redeem the bonds at par, plus accrued interest. If Deutsche Börse AG does not exercise this termination right, the affected bonds' coupon will increase by 5 percentage points. A change of control will take place if a person or a group of persons acting in concert, or third parties acting on their behalf, has or have acquired more than 50 per cent of the shares of Deutsche Börse AG or the number of Deutsche Börse AG shares required to exercise more than 50 per cent of the voting rights at Annual General Meetings of Deutsche Börse AG. In addition, the relevant bond terms require that the change of control must adversely affect the long-term rating given to Deutsche Börse AG by Moody's Investors Services, Inc., Standard & Poor's Rating Services or Fitch Ratings Limited. Further details can be found in the applicable bond terms.

- The terms of the €500.0 million fixed-rate bonds 2015/2025, the €600.0 million fixed-rate bonds 2013/2018, and the €600.0 million fixed-rate bonds 2012/2022, which were all issued by Deutsche Börse AG, all provide Deutsche Börse AG with a termination right in the event of a change of control. If these cancellation rights are exercised, the bonds are repayable at par plus any accrued interest. A change of control has taken place if a person or a group of persons acting in concert, or third parties acting on their behalf, has or have acquired more than 50 per cent of the shares of Deutsche Börse AG or the number of Deutsche Börse AG shares required to exercise more than 50 per cent of the voting rights at Annual General Meetings of Deutsche Börse AG. In addition, the respective sets of bond terms require that the change of control must adversely affect the rating given to one of the preferential unsecured debt instruments of Deutsche Börse AG by Moody's Investors Services, Inc., Standard & Poor's Rating Services or Fitch Ratings Limited. Further details can be found in the applicable bond terms.
- Furthermore, the Co-operation Agreement entered into on 16 March 2016 between Deutsche Börse AG, London Stock Exchange Group plc, and HLDCO123 plc concerning the planned merger of Deutsche Börse AG and London Stock Exchange Group plc provides for certain termination rights in the event of a takeover offer by third parties. Pursuant to this, Deutsche Börse AG and London Stock Exchange Group plc are each entitled to terminate the Co-operation Agreement if a takeover offer for Deutsche Börse AG has been announced, and (i) the Executive Board and Supervisory Board of Deutsche Börse AG have issued a recommendation for acceptance of such takeover offer; or (ii) the takeover offer has been completed. A termination of the Co-operation Agreement would not automatically prevent completion of the merger of Deutsche Börse AG and London Stock Exchange Group plc, but would merely end the Co-operation Agreement. Please refer to the Co-operation Agreement for further details.
- Under certain conditions, members of Deutsche Börse AG's Executive Board have a special right to terminate their contracts of service in the event of a change of control. According to the agreements made with all Executive Board members, a change of control has occurred if (i) a shareholder or third party discloses that it owns more than 50 per cent of the voting rights in Deutsche Börse AG in accordance with sections 21 and 22 of the WpHG, (ii) an intercompany agreement in accordance with section 291 of the AktG is entered into with Deutsche Börse AG as a dependent company, or Deutsche Börse AG is absorbed in accordance with section 319 of the AktG or (iii) Deutsche Börse AG is merged in accordance with section 2 of the Umwandlungsgesetz (UmwG, German Reorganisation and Transformation Act).

Moreover, change-of-control agreements have been entered into with the members of the Executive Board. A description of these agreements, which are in line with customary national and international practice, can also be found in the remuneration report.

Deutsche Börse AG shares

The average annual return since Deutsche Börse AG's initial public offering in 2001 has been 13 per cent. Thus Deutsche Börse AG shares prove to be an attractive long-term investment. They closed financial year 2016 with a slight decline by 5 per cent – in line with the performance of the STOXX® Europe 600 Financials Return (minus 7 per cent), but underperforming the DAX® blue-chip index (plus 4 per cent) as well as the Dow Jones Global Exchanges Index, which tracks other exchange organisations and rose by 7 per cent during 2016 (see the "Share price development of Deutsche Börse AG and benchmark indices in 2016" chart).

Deutsche Börse AG shares: key figures[1)]

		2016	2015
Earnings per share (basic)[2)]	€	4.34	3.85
Dividend per share	€	2.35[3)]	2.25
Dividend distribution ratio[2)]	%	54	55
Dividend yield[4)]	%	3.1	3.0
Opening price (as at 1 Jan)[5)]	€	81.39	59.22
High[6)]	€	83.00	87.41
Low[6)]	€	67.19	58.65
Closing price (as at 31 Dec)	€	77.54	81.39
Average daily trading volume on Xetra®	m shares	0.5	0.7
Number of shares (as at 31 Dec)	m	193.0	193.0
thereof outstanding (as at 31 Dec)	m	186.8	186.7
Free float (as at 31 Dec)	%	100	100
Price-earnings ratio[4)]		17.3	18.3
Market capitalisation (as at 31 Dec)	€bn	14.5	14.7
Average annual return since IPO in 2001	%	13.2	14.4
Attendance of share capital at the Annual General Meeting	%	65.8	42.2
Share of investors from Germany / UK / USA / other countries	%	17/29/30/24	15/28/31/26
Institutional investors	%	94	95
Shareholders		appr. 60,000	appr. 57,000
Analyst recommendations buy / hold / sell (as at 31 Dec)	%	43/50/7	52/39/9
Average target price set by analysts at year-end	€	84.00	85.00

1) Since 18 July 2016, all information related to share prices has been based on Deutsche Börse shares tendered for exchange (ISIN DE000A2AA253).
2) Adjusted for exceptional items
3) For financial year 2016, proposal to the Annual General Meeting 2017
4) Based on the volume-weighted average of the daily closing prices
5) Closing price on preceding trading day
6) Intraday price

Report on economic position

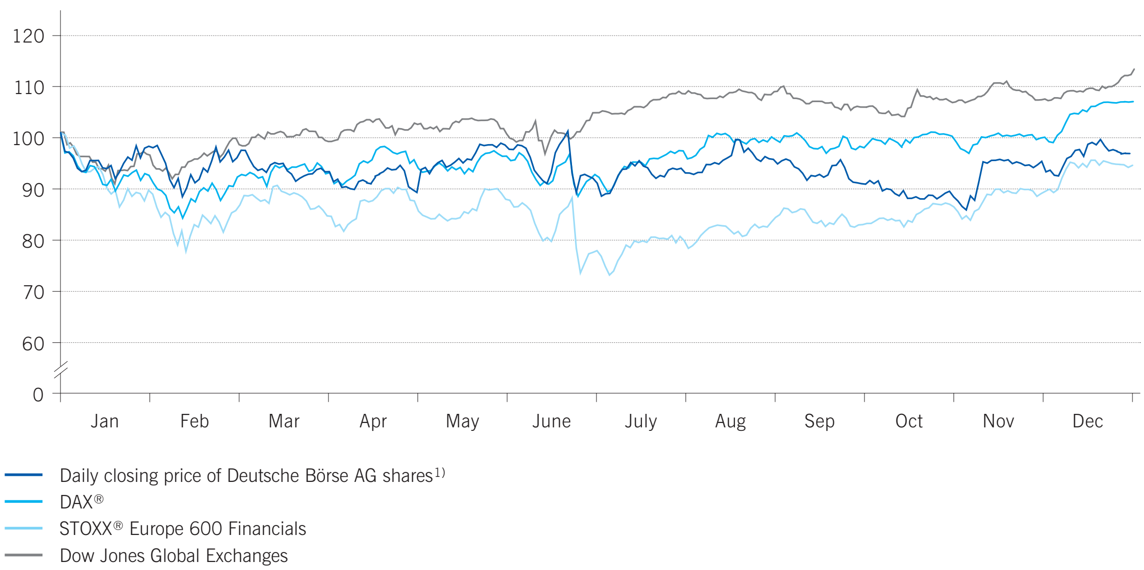
Macroeconomic and sector-specific environment

Macroeconomic developments had and continue to have a significant impact on the overall economic environment and on trading activity on the markets. For Deutsche Börse Group, the macroeconomic environment during the year under review was rather complex; whilst some factors have a stimulating effect on business, others have the potential of unsettling market participants, burdening their business activity:

- the slight overall slowdown during 2016 in economies which are relevant to Deutsche Börse Group (Central Europe, USA)
- the major central banks' low interest rate policy and the resulting large volumes of liquidity, in Europe especially as a result of the European Central Bank's quantitative easing (QE), and in the US as a result of the Federal Reserve's interest rate policy (albeit with two minor interest rate hikes in December 2015 and December 2016)
- the fragile economic situation in the euro area (burdened by the high national debt levels of individual European countries), the result of the UK referendum in June 2016, the US elections in November 2016 – and as a result, the devaluation of the euro and pound sterling against the US dollar, which reached its highest level in 14 years in December 2016
- unstable political conditions in some parts of Eastern Europe and recurring flashpoints in the Arab world and their impact on the Western world
- regulatory projects and the resulting stricter requirements for capital market participants (see the next section entitled "Regulatory environment")

Share price development of Deutsche Börse AG and benchmark indices in 2016

Indexed to 30 December 2015



1) As from 18 July 2016, the data shown refer to tendered shares (ISIN DE000A2AA253).

Against this background, the economies of industrialised nations showed somewhat weaker growth in 2016 compared to the previous year, as estimated by the International Monetary Fund (IMF). According to these estimates, real gross domestic product (GDP) rose by 1.6 per cent in 2016, compared to a growth rate of 2.1 per cent in 2015. Global economic growth was 3.1 per cent in 2016 (2015: real growth rate of 3.2 per cent).

Despite a minor slowdown in global economic growth, German GDP for 2016 slightly outperformed the previous year's levels, according to initial estimates. The IMF's January 2017 estimates put growth in German economic output at 1.7 per cent in 2016 (2015: increase in real terms of 1.5 per cent).

Economic performance throughout the euro area deteriorated again somewhat in 2016: even though no country was in recession during 2016, economic growth weakened in some states within the European Economic Area such as Spain, the Netherlands and Portugal. Hence, the European Central Bank continues to assess the economic situation in the EU as relatively fragile. It lowered the deposit rate for banks further in March 2016, from –0.30 per cent to –0.40 per cent. Moreover, it extended its bond-buying programme until the end of 2017, albeit cutting monthly volumes from €80 billion to €60 billion per month from April 2017 on.

The IMF expects US economic output to have posted a real 1.6 per cent increase for 2016, compared to a 2.6 per cent increase the year before. Given further relief on the labour market and higher expected economic growth for 2017 (not least as a result of the US elections), the US Federal Reserve raised its key interest rate again in December 2016, to a range between 0.50 per cent and 0.75 per cent.

All told, stagnating economic growth, political uncertainty in Europe, and the continued low interest rate policy pursued by the European Central Bank had a dampening effect on European capital markets during 2016. As a result, traded volumes on Deutsche Börse Group's cash markets showed a marked decline, whilst the Group's derivatives markets posted a slight increase.

Development of trading activity on selected European cash markets

	2016 €bn	Change vs 2015 %
London Stock Exchange[1)]	1,566.3	–8
Euronext[2)]	1,802.0	–15
Deutsche Börse Group	**1,377.0**	**–16**
Borsa Italiana[1)]	755.3	–20
Bolsas y Mercados Españoles[2)]	652.9	–32

1) Part of London Stock Exchange Group
2) Trading volume in electronic trading (single-counted)

Source: Exchanges listed

Development of contracts traded on selected derivatives markets

	2016 m contracts	Change vs 2015 %
Shanghai Futures Exchange	1,680.7	60
Moscow Exchange	1,950.1	19
CME Group	3,942.2	12
Deutsche Börse Group – Eurex®	**1,727.5**	**3**
Intercontinental Exchange	2,037.5	2
National Stock Exchange of India	2,134.7	–30

Source: Exchanges listed

Regulatory environment

The international financial crisis has demonstrated the necessity for increased transparency and stability in the global financial markets and has sparked a discussion about the role and details of the necessary financial market infrastructure.

As a provider of a highly regulated financial market infrastructure, Deutsche Börse Group shares the objective of the national legislator, the European Union as well as the G20 to strengthen transparent and regulated markets. Being a constructive partner, we contribute to the political discussion on suitable national and European initiatives for financial market regulation.

The considerable increase in regulatory requirements has a twofold impact on Deutsche Börse Group: as a market infrastructure provider, the Group must meet regulatory duties and at the same time strive to offer products tailored exactly to meet the needs of its customers. It therefore holds an important position as a link between regulators and customers. As such, Deutsche Börse Group supports its customers in measures ensuring their compliance with regulatory requirements and thereby minimising their risks. The various regulatory dossiers have different impacts and/or offer opportunities for the entities contributing to Deutsche Börse Group's value chain. Accordingly, the Group views regulation not just as an obligation to comply but also as an opportunity to grow (see also the report on opportunities).

Financial markets infrastructure regulation

Regulation of markets in financial instruments (MiFID II, MiFIR)

The revised directive (MiFID II) and the accompanying regulation (MiFIR) entered into force in July 2014. However, the date of application has been postponed to 3 January 2018 in order to give market participants and supervisory authorities sufficient time to prepare to the new requirements, particularly with regard to establishing technical reporting and monitoring systems. In Germany, the Second Financial Market Amendment Act (Zweites Finanzmarktnovellierungsgesetz, 2nd FiMaNoG) will transpose the new rules into national law and make these provisions applicable by July 2017 at the latest; a first legislative proposal also contains provisions on further EU Benchmark Regulation as well as the Securities Financing Transactions Regulation (SFTR) (see also below).

The European Parliament, the European Commission as well as the Council of Member States have agreed on the large majority of implementing measures (Level 2). The European Securities and Markets Authority (ESMA) in close cooperation with national supervisors is currently developing a set of common standards guiding the interpretation and application of the new rules (Level 3).

The new directive and regulation will fundamentally transform the European financial market by expanding transparency provisions, strengthening the stability and integrity of its infrastructure, revising the market's microstructure and improving the quality and availability of market data. The new rules will have a profound impact on Deutsche Börse Group, too, in particular on its trading and clearing activities, as well as on its market data business. We will continue our intense exchange with regulators, supervisors as well as market participants to apply the new rules consistently and will proceed in the development of new services and solutions which will support market participants in implementing regulatory objectives efficiently. Thereby, our focus lies on the areas of transparency provisions and disclosure requirements, market making and algorithmic trading as well as amending the organisational requirements with regard to the security mechanisms of trading venues and market participants.

EMIR: implementation and review

The European Market Infrastructure Regulation (EMIR), which entered into force in 2012, is a significant regulation for central counterparties. With the step-by-step introduction of a clearing obligation, which started in June 2016, implementation is about to enter the final phase. The European Commission commenced the official revision process for the regulation in the summer of 2015. The EU Commission's draft revision with amendments to EMIR has been published on 6 January 2017. The revision is centred around the following issues: liquidity of central counterparties, supervisory structures as well as risk management aspects and infrastructure reporting requirements.

Recovery and resolution regulation for central counterparties

The recovery and resolution plans complement EMIR with the aim of providing central counterparties with greater stability against market disruptions. In this context, one key aspect is to establish a sound incentive structure at a European and global level which helps to exclude the use of tax payers' money.

On a European level, the EU Commission published a proposed legislation on recovery and resolution plans for central counterparties in November 2016. On a global scale, the Committee on Payments and Market Infrastructures (CPMI), together with the International Organization of Securities Commissions (IOSCO), published first considerations for consultation back in 2012. CPMI/IOSCO provided global standards for recovery plans in October 2014. At the same time, the Financial Stability Board (FSB) published a framework for resolution plans in close cooperation with CPMI/IOSCO. The organisations published consultations in mid-2016 aiming to specify initial reports. It is expected that CPMI/IOSCO and FSB will publish respective results in the first half of 2017.

Central Securities Depository Regulation (CSDR)

With the CSDR, a uniform European regulatory framework for central securities depositories was established for the first time in September 2014. The EU Commission and ESMA are currently specifying the requirements, by way of technical standards; these are expected to apply from March 2017 onwards. The CSDR will harmonise the securities settlement systems and supervisory rules for central securities depositories throughout Europe. This will strengthen Clearstream's business model, because the provision of integrated banking services will still be permitted. Clearstream, Deutsche Börse Group's provider of central securities depository (CSD) services, is actively involved in the legislative process and will submit its authorisation files for licences by November 2017.

Regulation on benchmarks and indices

The regulation on indices used as benchmarks in financial instruments and financial contracts (Benchmark Regulation) entered into force on 30 June 2016. The final application of the regulation will take place on 1 January 2018. The regulation largely follows the global IOSCO principles for financial benchmarks. The IOSCO principles were developed, back in 2013, as a response to the manipulation of certain indices or reference rates (such as LIBOR and Euribor).

Deutsche Börse Group, which successfully implemented the IOSCO principles in 2014 for its DAX® indices as well as for the indices of its subsidiary STOXX Ltd., welcomes the agreement reached between the EU Parliament and the Council. The regulation's specific impact on the Group's business activities depends on the implementation measures still to be laid out in the form of delegated acts and technical standards by the EU Commission and ESMA.

BIS FX Code of Conduct

In May 2016, the Bank for International Settlements (BIS) released a new global Code of Conduct designed to restore confidence in the foreign-exchange (FX) market following a number of scandals. The code is an industry-wide attempt, developed in close cooperation with regulators, to lay down common standards for the FX market. Phase 1 laid its focus on banks, while phase 2, due to be published in May 2017, will cover market issues such as electronic and high-speed trading and expand the original text to cover governance and risk management.

Capital Markets Union

Following the economic, monetary and banking unions, the Capital Markets Union (CMU) is the next step towards an integrated European financial market. The main objectives are to promote growth and job creation on a sustainable basis, and to develop a diversified financial system which complements bank-based financing with highly developed capital markets. Small and medium-sized enterprises in Europe still face a credit crunch, and thus a funding bottleneck. In the current financial climate, it has become increasingly difficult for them to obtain the financing they need to start and to grow. Another objective is further harmonisation and financial integration to release inactive capital throughout Europe, in order to offer savers a wider variety of investment forms and increase corporate financing opportunities at the same time. Current plans also include the simultaneous creation of an EU domestic capital market, to promote cross-border investments and enable companies to tap different sources of finance, independent of their domicile.

Overview of regulatory initiatives and their impact on Deutsche Börse Group's business areas

	Cash Market	Eurex	EEX	360T	Eurex Clearing	Clear-stream	IT & MD+S	Status as at 31 December 2016
Financial market infrastructure								
MiFID II, MiFIR	X	X	X	X	X		X	Published in 2014; application to start in 2018
EMIR			X	X	X	X		Became effective in 2012; clearing obligation for derivatives implemented successively from Q2/2016 onwards; draft for a revision expected in 2017
Recovery and resolution plans for FMIs			X		X	(X)[1]		New proposal for recovery and resolution for CCPs issued in November 2016
CSDR	X	X			X	X		Became effective in 2014; application expected from November 2017 onwards
Regulation on benchmarks and indices		X	X		X		X	Entered into force on 30 June 2016; application to start in 2018
BIS FX Code of Conduct				X				Phase 1 published in May 2016; Phase 2 expected in May 2017
Capital Markets Union	X	X	X		X	X	X	Development of an action plan in 2015; implementation by 2019
Banks								
CRD IV, CRR			X		X	X		Effective since 2014; transitional regulations applicable until 2019
CRD V, CRR II			X		X	X		Finalisation expected in 2017/2018, with subsequent implementation throughout the EU
SFTR						X		Entry into force in January 2016; implementing measures (Level 2) still outstanding

1) Not in scope of legislative proposal

The EU Commission presented an action plan in September 2015, with the aim of implementing it by 2019. It has become increasingly clear that the goal of a CMU may not be realised by one particular initiative; instead, this goal requires a series of small steps, which – taken together – will most likely have a significant impact. This is reflected in a package of more than 33 measures identified by the European Commission, from which 15 initiatives have already been completed.

With Brexit advancing, the EU Commission officials continue to strongly back the CMU Action Plan, arguing that the project is more than ever necessary for the remaining 27 Member States to improve financing conditions, but also to function as a risk transfer mechanism between them. On 14 September 2016, the Commission announced its intention to accelerate the reform, launching a more ambitious second phase in early 2017 to tackle some challenging long-term issues such as insolvency laws and withholding tax procedures. In January 2017, the European Commission launched a CMU mid-term review. This public consultation shall help shape the next phase in building a single market for capital in Europe. Market participants were invited to provide feedback by 17 March 2017.

The CMU affects Deutsche Börse Group's entire value chain. Thus, the Group actively supports the project and assumes an active role in the political debate. In fact, Deutsche Börse is already taking steps to support the goals of the CMU (e.g. with its Deutsche Börse Venture Network® or its FinTech Hub); indeed, enabling growth in the real economy is an integral part of the company's mission.

Brexit

On 23 June 2016, the British population voted that the United Kingdom should leave the European Union. Deutsche Börse Group deeply regrets this decision. Against this background, we strongly believe that the economic connection between Continental Europe and the United Kingdom should be reinforced by an integrated financial market structure.

Once the UK has formally declared its intention to exit the EU – which it intends to do, but has not done yet – there will be a two-year period during which the UK will negotiate an exit treaty with the EU; this period may be extended. Until then, the UK will remain a full EU member. Hence, there will be no change to the existing legal framework for the time being.

After the British referendum, a stable financial market connection with the United Kingdom seems to be more important than ever before. From our perspective, Frankfurt should promote a stable connection between the largest economy in Continental Europe and London, the largest financial hub in the world.

For further regulatory information, please visit Deutsche Börse Group's regulation webpages at www.deutsche-boerse.com/dbg-en/regulation.

Banking regulations

Basel III

In consequence of the recent financial crisis and based on G20 decisions, the Basel Committee on Banking Supervision (BCBS) has substantially amended and updated the preceding banking framework, known as Basel II. Substantial cornerstones were published in 2011 and additional changes have been issued since then. Changes which have already been implemented include:

- stricter definition of the term “capital”
- increased capital levels
- revised market risk framework
- introduction of a leverage ratio

The revised framework, known as Basel III, is supposed to be finalised by adding revisions of the credit risk framework (standardised and model-based approaches) and the operational risk framework. The final elements are currently under discussion but the outstanding items have not yet been agreed upon by the BCBS members. How and when those elements will be implemented is currently unknown.

CRD IV/CRR

By issuing the Capital Requirements Directive (CRD IV) and the Capital Requirements Regulation (CRR), which both became effective on 1 January 2014, the EU implemented the first cornerstones of the Basel III framework. Implementation with some transitional and phase-in arrangements is scheduled to be completed by 2019.

CRD V/CRR II

In November 2016, the European Commission proposed amendments to CRD IV and CRR which take into account the ongoing changes regarding the Basel III framework and other elements of banking regulation. The proposed legislative package also reflects changes related to legislation on the Minimum Requirement for own funds and Eligible Liabilities (MREL) and the Total Loss-Absorbing Capacity (TLAC) which leads to adjustments mainly affecting the Bank Recovery and Resolution Directive (BRRD).

Key elements of the legislative proposal beside the MREL/TLAC adjustments are:

- the introduction of a binding leverage ratio of 3 per cent
- the introduction of a binding net stable funding ratio (NSFR)
- a revised framework for market risk

The legislative proposal is supposed to be finalised by early 2018 and will enter into force not before 2019. As the legislative process is at an early stage and the proposal is still subject to change, its impact on financial market infrastructures cannot be assessed yet. Deutsche Börse Group takes an active part in the discussion process regarding the modification of banking regulations, and thus addresses the regulation’s specific impact on financial market infrastructures with (limited) authorisation to engage in banking business. Furthermore, Deutsche Börse Group will continuously analyse the capitalisation of its regulated entities, making any necessary adjustments in order to ensure that risks are adequately covered.

Transparency of securities financing transactions

The EU bodies resolved a regulation on the transparency of securities financing transactions, which complements the proposed regulation on the introduction of a segregated banking system that ring-fences proprietary trading from the deposit and lending business. The regulation was published on 23 December 2015 in the Official Journal of the European Union. It introduces a requirement to report securities lending and repo transactions to central trade repositories. In addition, it introduces rules for repledging collateral and regulates the reporting requirements of investment fund providers with securities lending activities. The impact of comprehensive reporting requirements for securities lending transactions is different for Clearstream, Eurex Clearing AG and REGIS-TR S.A. For their own securities financing transactions, higher expenditures are to be expected. The fact that transactions must be reported to a trade repository however also bears business potential for REGIS-TR.

Deposit Guarantee Schemes

The implementation into national law of the Deposit Guarantee Schemes Directive only has a minor impact on Deutsche Börse Group entities. In November 2015, the European Commission presented a proposal on the further modification of deposit guarantee schemes, with a view to completing the banking union. The current status of political discussions does not yet allow for any projections on the possible impact of the legislative process on Deutsche Börse Group.

Business developments

Given the overall framework conditions outlined at the beginning of the economic report, the situation on the capital markets for financial services providers in the reporting period was somewhat less favourable compared to 2015. Slowing economic growth, the beginning of the turnaround in US interest rate policy, as well as uncertainty regarding the potential development of the European Union following the UK's Brexit referendum, all had a dampening effect on numerous business areas of the Group. Europe saw significant cash inflows from US investors during 2015. This trend reversed during the year under review, which placed an additional burden upon the Group's business. For instance, volumes in equities and equity derivatives declined; settlement and custody volumes in domestic securities also decreased. On the other hand, index derivatives volumes rose thanks to stock market volatility, which was elevated at times. Moreover, the Group's growth areas – such as commodities traded at the EEX group, investment funds services offered by Clearstream, and foreign exchange trading at 360T – continued to develop positively. Thanks to the turnaround in US interest rates in late 2015, Clearstream's net interest income also finally showed a marked increase. Looking at developments during the course of the year, business was strongest in the fourth quarter, whereas the third quarter turned out to be the weakest one, not least due to reticence amongst market participants' after the UK's referendum.

Changes to the basis of consolidation and to segment reporting

As at 30 June 2016, Deutsche Börse Group sold International Securities Exchange Holdings, Inc. (ISE), operator of three US equity options exchanges, as well as ISE's parent company, U.S. Exchange Holdings, Inc., to Nasdaq, Inc., against a total cash consideration of US$1.1 billion. The stakes held in BATS Global Markets, Inc, in Digital Asset Holdings LLC, and in ICE US Holding Company, Inc were not part of this agreement; Deutsche Börse Group continues to hold these investments. On 26 October 2016, Deutsche Börse sold parts of its stakes held in BATS Global Markets, Inc. The €23.1 million capital gain after taxes achieved upon disposal is reported in the Eurex segment. Following the sale of ISE as at 30 June 2016, this subsidiary has represented a discontinued operation as defined in IFRS 5. In accordance with IFRS requirements, the Group is now reporting its financial indicators in its combined management report without this discontinued operation. The comparative prior-year figures for the 2015 financial year were adjusted accordingly.

Effective 25 February 2016, Deutsche Börse AG sold its interest in Infobolsa S.A. Until that date, Bolsas y Mercados Españoles (BME) and Deutsche Börse had each held 50 per cent of the interests in Infobolsa S.A. and its subsidiaries (Market Data + Services segment). Effective 8 July 2016, Deutsche Börse AG sold the assets and liabilities related to its subsidiary Market News International Inc. (MNI) to Hale Global as part of an asset deal. In 2015, MNI contributed less than 1 per cent to the Group's net revenue (Market Data + Services segment).

Within Deutsche Börse Group, a series of organisational changes took place, affecting segment reporting:

Xetra segment

- explicit recognition of revenue from listings (which was previously recognised under the “other” item)

Clearstream segment

- breakdown of custody and settlement revenue into international business (ICSD), domestic business (CSD) and Investment Funds Services (prior to this, breakdown was only into custody and settlement)

Market Data + Services segment

- merger of the Tools and Market Solutions business segments into Infrastructure Services
- information business segment was renamed Data Services
- reassignment of revenue from regulatory services, from Tools to Data Services
- reassignment of EEX connection revenue to Eurex

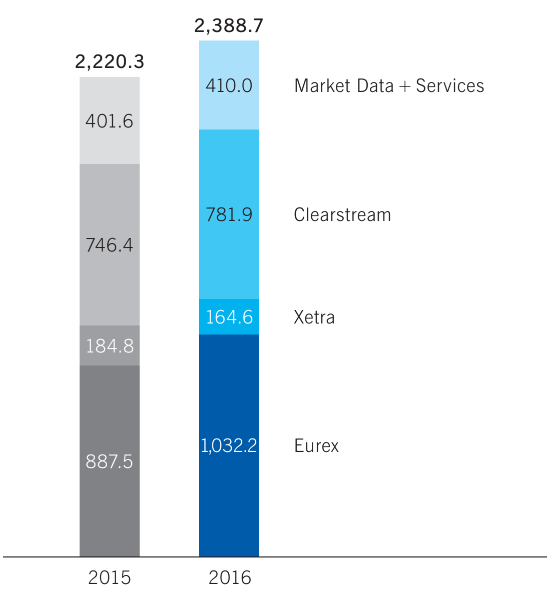
Results of operations

Although Deutsche Börse Group’s revenue resources were influenced differently by the macroeconomic environment, the Group was able to prove the capabilities of its diversified business model during the year under review.

Compared to the previous financial year, cash markets profited less from the expansive monetary policy and excess market liquidity, although the ECB pushed deposit rates further negative during the first quarter of 2016, and extended its bond-buying programme. On the contrary, in light of the uncertainty surrounding the future of the European Economic Area, investors (notably from the US) increasingly withdraw their capital from European markets, and invested in their domestic markets, or emerging markets. The Brexit referendum held in June, and the presidential elections in the US in November contributed to the capital outflow from Europe, even though Deutsche Börse registered high trading volumes immediately before and after these events, as expected. Moreover, an increasing share of investments was bound towards alternative investment forms. Index levels of the benchmark indices DAX and STOXX® did

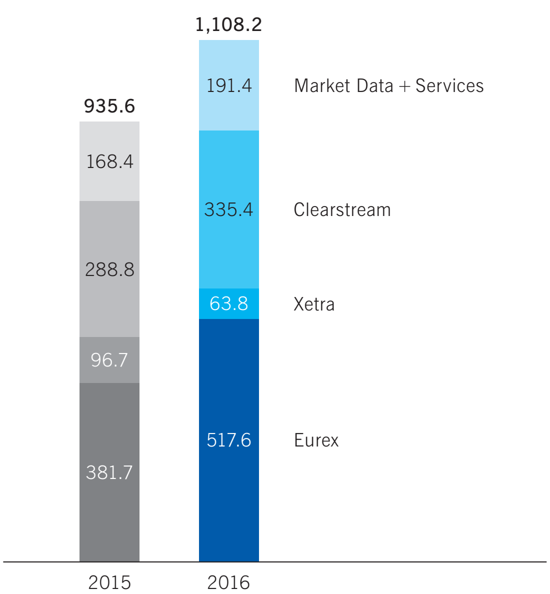
Net revenue by segment

€ millions



EBIT by segment

€ millions



not quite reach the annual average of the previous year, which was due, among other things, to the revenue achieved with cash markets, Clearstream's domestic business, and the MD+S segment. Benchmark indices only accelerated towards the end of the year – after the US elections. However, equity index derivatives generated constant growth rates throughout the year, while interest rate derivatives accelerated only during the fourth quarter, following the turnaround in US interest rates. Deutsche Börse's commodities business, operated by the European Energy Exchange (EEX) and its subsidiaries, clearly increased in all areas, expanding its market position vis-à-vis competitors, and OTC trading. Regarding FX trading, operated by Deutsche Börse's subsidiary 360T, new customer business in particular provided the ground to achieve growth in a decelerating market. With regard to the post-trade business, Clearstream took advantage of rising interest rates in the US and the expansion of its international business, while the domestic business – given the weaker German cash market – lagged the previous year. The technology and market data business of Deutsche Börse Group (Market Data + Services segment) achieved growth, in particular with the index business. The Group benefited from additional tailwinds in selected business divisions, such as the lower valuation of the euro compared to the US dollar, or the stable economic cycles prevailing in relevant economies (e.g. Germany, US).

Deutsche Börse Group's net revenue increased by 8 per cent in the 2016 financial year, with the Eurex segment generating the strongest growth rate of 16 per cent. Net revenue of the Clearstream and Market Data + Services segments increased by 5 per cent and 2 per cent, respectively, while the cash market lacked 11 per cent behind the previous year, at very high trading activities and increased index levels. Net revenue attributable to changes in the basis of consolidation totalled €41.3 million. Net revenue is composed of sales revenue plus net interest income from banking business and of other operating income, less volume-related costs.

Some of Deutsche Börse Group's markets allocated to the Eurex segment and traded on its systems significantly increased their volume compared to the previous year. The number of futures and options contracts traded on Eurex Exchange increased by 3 per cent, trading in electricity products soared by 46 per cent, trading in gas products by 71 per cent, and emissions trading rose by 40 per cent. Net revenue in the Eurex segment increased by a total of 16 per cent. Besides the higher number of contracts, this was particularly attributable to the growth rate achieved by EEX, which more than doubled its net revenue through organic growth, and to 360T, which was fully consolidated on an annual basis for the first time.

However, trading volumes declined on all cash market trading platforms. Moreover, the – compared to the previous year – relatively low index levels had a negative impact on the realised revenues, given that cash market fees are based on transaction value. Hence, net revenue decreased by 11 per cent.

The Clearstream segment provides post-trade services and generated solid growth rates during the year under review: in the international business, and the Global Securities Financing (GSF) business, the segment grew by 3 per cent, and 8 per cent, respectively. Funds business generated stable revenues, while the domestic business deteriorated by 7 per cent, in line with the weaker cash market. Net interest income from the banking business grew by 84 per cent compared to the previous year based on the turnaround in US interest rates and the charging of negative deposit rates.

Net revenue of the Market Data + Services segment was slightly above the previous year's figure – the index business in particular developed strongly on a sustained basis and increased net revenue by 12 per cent.

Operating costs were up 3 per cent year-on-year, including non-recurring effects of €143.2 million (2015: €124.8 million). Non-recurring effects are partially related to the planned merger with London Stock Exchange Group (LSEG) (€65.8 million), the integration of acquired companies or the devolving of sold companies (€42.7 million), criminal proceedings against Clearstream Banking S.A. in the US (€19.7 million) as well as efficiency programmes (€11.1 million). Adjusted for these non-recurring factors, operating costs increased by 1 per cent compared to the previous year. This year-on-year increase was exclusively due to consolidation activities; excluding consolidation effects, costs slightly declined by €15.1 million or 1 per cent (2015: €1,189.3 million).

Staff costs are a key driver for operating costs. Adjusted staff costs increased by €32.4 million to €573.0 million (2015: €540.6 million) due to a series of reasons:

- full consolidation of 360T on an annual basis
- salary increase of 2.5 per cent
- higher bonus payments to employees due to successful financial year
- increased average number of employees during the year under review

Depreciation, amortisation and impairment losses increased by 8 per cent (adjusted) in the year under review. This was mainly due to the amortisation of hidden reserves which were revealed in connection with the full consolidation of 360T in 2015, in the amount of €10.1 million (2015: €2.1 million).

Other operating expenses relate primarily to the costs of enhancing and operating Deutsche Börse Group's technological infrastructure, including, for example, costs for IT services providers and data processing. In addition, other operating expenses include the cost of the office infrastructure at all the Group's locations as well as travel expenses, most of which are incurred in connection with sales activities. Because of the Group's business model and the fact that the company does not normally distribute its products and services to end customers, advertising and marketing costs only account for a very small portion of the company's operating expenses. Adjusted for non-recurring effects, the other operating expenses declined by 5 per cent.

The result from equity investments amounted to €36.9 million (2015: €–1.5 million). The significant increase was due in particular to non-recurring income in connection with the disposal of the shares held in BATS Global Markets, Inc during the fourth quarter 2016. Adjusted for this non-recurring effect, the result from equity investments was €5.7 million (2015: €2.7 million).

Deutsche Börse Group's earnings before interest and taxes (EBIT) increased by 18 per cent during the year under review. Adjusted for non-recurring items in costs and the result from equity investments, the Group's EBIT increased by 15 per cent.

Deutsche Börse Group key performance figures

	unadjusted			adjusted		
	2016 €m	2015 €m	Change %	2016 €m	2015 €m	Change %
Net revenue	2,388.7	2,220.3	8	2,388.7	2,220.3	8
Operating costs	1,317.4	1,283.2	3	1,174.2	1,158.4	1
EBIT	1,108.2	935.6	18	1,220.2	1,064.6	15
Consolidated net profit for the period attributable to Deutsche Börse AG shareholders	722.1	613.3	18	810.8	712.1	14
Earnings per share (basic) in €	3.87	3.31	17	4.34	3.85	13

The Group's financial result was €–74.6 million (2015: €–57.5 million). The change compared with the previous year was due in particular to positive currency effects attributable to the first quarter 2015 in the amount of €18.1 million.

The effective Group tax rate 2016 was 27.7 per cent. Adjusted for non-recurring effects, it was 27.0 per cent as expected.

The net profit for the period attributable to Deutsche Börse AG shareholders (hereinafter referred to as consolidated net profit) increased by 18 per cent compared with the previous year (adjusted: 14 per cent).

Non-controlling interests in consolidated net profit attributable to Deutsche Börse AG shareholders for the period amounted to €25.5 million (2015: €35.7 million). Non-controlling shareholders of EEX group received a considerable portion of net profits. The decline was due, among other things, to the full consolidation of STOXX in 2015.

Basic earnings per share, based on the weighted average of 186.8 million shares, amounted to €3.87 (2015: €3.31 for an average of 185.0 million shares outstanding). Adjusted for the non-recurring income items described above, basic earnings per share rose to €4.34 (2015: €3.85).

Comparison of results of operations with the forecast for 2016

For 2016, Deutsche Börse Group originally expected an increase in net revenue between 5 and 10 per cent given the cyclical market environment showing improving already in 2015, and the multiple structural growth initiatives being part of the "Accelerate" programme. Although the average stock market volatility remained under the previous year's figure, and the low interest rate environment in Europe prevailed throughout the year under review, the conditions described earlier in the "Business developments" section partly reflected the assumptions used in the forecast. Based on its highly diversified business model, Deutsche Börse Group increased its net revenue by 8 per cent, and thus reached the mean of its forecast for 2016.

In 2015, Deutsche Börse Group introduced principles for managing operating costs in order to ensure the scalability of the Group's business model. Since then, the Group has continuously managed operating costs relative to the development of net revenue. For 2016, the Group forecast an adjusted operating costs growth range of between 0 and 5 per cent, depending on the net revenue increase. With the disclosure of a modest growth figure of 1 per cent, at a revenue increase of 8 per cent, the Group met expectations.

Deutsche Börse Group projected an increase in net revenue of between 5 and 10 per cent, and of operating costs in a corresponding range. Furthermore, the Group expected an increase in EBIT and in the

Key figures by quarter (adjusted)

	Q1		Q2		Q3		Q4	
	2016 €m	2015 €m	2016 €m	2015 €m	2016 €m	2015 €m	2016 €m	2015 €m
Net revenue	610.5	564.7	600.7	547.1	558.5	555.0	619.0	553.5
Operating costs	279.8	260.5	275.8	273.4	275.7	290.6	342.9	333.9
EBIT	332.3	305.8	325.6	273.5	286.0	265.9	276.3	219.4
Consolidated net profit for the period attributable to Deutsche Börse AG shareholders	221.3	205.6	218.5	180.8	190.7	179.2	180.3	146.5
Earnings per share (basic) in €	1.18	1.12	1.17	0.98	1.02	0.97	0.97	0.78

consolidated net profit of between 10 and 15 per cent. With an EBIT increase of 15 per cent, and an increase in net profit for the period attributable to Deutsche Börse AG shareholders (consolidated net profit) of 14 per cent on an adjusted basis, Deutsche Börse Group's performance lies at the upper end of the projection range. Moreover, the Group achieved a ratio of interest-bearing gross debt to adjusted EBITDA of 1.5 at Group level, exactly in line with the target value of 1.5. The adjusted tax rate was 27.0 per cent, as planned. In line with projections, the operating cash flow was clearly positive. Investments in the continued business in property, plant and equipment, as well as intangible assets in the amount of €152.6 million were in line with the forecast. After increasing its target figures, the Group aimed to distribute dividends equivalent to the mean of the projected range of 40 to 60 per cent of (adjusted) consolidated net profit. According to the proposal made to the Annual General Meeting, a figure of 54 per cent will be reached.

Eurex segment

The performance of the Eurex derivatives segment largely depends on the trading activities of institutional investors and proprietary trading by professional market participants. The segment's revenue is therefore generated primarily from the combined transaction fees that Eurex charges for trading and clearing derivatives contracts.

Revenue generated from Deutsche Börse Group's derivatives markets is primarily driven by the derivatives traded on Eurex Exchange: equity index derivatives accounted for 42 per cent of net revenue, interest rate derivatives 18 per cent and equity derivatives 4 per cent. Energy products traded on the EEX and its subsidiaries and/or shareholdings, and derivatives based thereon (commodities), contributed 21 per cent; foreign-exchange trading on 360T® contributed approximately a further 6 per cent. The "other" item (9 per cent) includes, among other things, the repo business, the participation fees paid by trading and clearing participants, as well as interest income generated by the Group's clearing houses from investing their clients' cash collateral. Deutsche Börse Group sold US options ISE to Nasdaq, Inc. as at 30 June 2016. The sale represents a discontinued operation as defined in IFRS 5. In accordance with IFRS 5 requirements, the Group is now reporting its financial key figures in its combined management report without this discontinued operation. The prior-year figures for the 2015 financial year were adjusted accordingly.

The derivatives market benefited from a trading environment that was very active overall. Even though average volatility was lower than in the previous year, demand for Eurex products rose during the course of the year as a whole – also due to changes in the political environment, such as the UK's "Brexit" referendum on the country's EU membership in June or the US presidential election in November. Moreover, the turnaround in US interest rates – initiated in December 2015 and affirmed in December 2016 – stimulated business in interest rate derivatives during the second half of the year. Thanks to its broad product portfolio, Eurex is in a prime position to service investors' hedging strategies in all situations. Nonetheless, the macroeconomic environment continued to present challenges. The ECB continued its

Comparison of results of operations with the forecast for 2016

	Forecast %	Result %
Net revenue	+5–10	+8
Operating costs (adjusted)	0–5	+1
EBIT (adjusted)	+10–15	+15
Net profit for the period attributable to Deutsche Börse AG shareholders (adjusted)	+10–15	+14

bond-buying programme and lowered its key interest rates once again in March 2016, cutting the deposit facility rate to –0.4 per cent, and the rate for its main refinancing operations in the euro area to 0 per cent. This was exacerbated by the persistently fragile economic situation in some countries and the low inflation environment during much of the year, with deflationary trends in some cases. Higher capital requirements – compared to the levels prevailing just a few years ago – and stricter rules for proprietary trading were additional burdens for investors.

Against this background, the Eurex segment once again improved on the previous year's result during the year under review. In total, 1,727.5 million futures and options contracts were traded on Eurex Exchange during 2016, up 3 per cent year-on-year (2015: 1,672.6 million). Commodities trading flourished, posting double-digit growth rates for electricity and gas products, as well as in emissions trading. The foreign-exchange business advanced slightly, against a decline in the overall market.

Net segment revenue increased by 16 per cent, operating costs rose by 8 per cent. €54.2 million (2015: €49.8 million) were attributable to non-recurring effects, especially in the context of the planned merger with LSEG and the integration of 360T and Powernext. 360T, which was consolidated in Q4/2015 accounted for €64.2 million of net revenue; its share in costs was €48.5 million. EBIT rose by 36 per cent, adjusted for non-recurring effects by 26 per cent.

As in the previous year, Eurex equity index derivatives were the product group with the highest trading volume. Contracts on the EURO STOXX 50® index were by far the most commonly traded products (374.5 million futures and 301.5 million options). The volume of Eurex's equity derivatives contracts (single-stock options and futures) traded in the year under review declined by 7 per cent. The volume of interest rate derivatives traded rose by 3 per cent during the year under review.

A rising proportion of Eurex segment revenue is contributed by relatively new products, such as volatility derivatives or derivatives on Italian and French government bonds, which Eurex launched to gradually supplement its range of benchmark products. Traded volumes in these products posted double-digit growth rates during the year under review.

Segment key figures (adjusted)

	Eurex		Xetra		Clearstream		Market Data + Services	
	2016 €m	2015 €m	2016 €m	2015 €m	2016 €m	2015 €m	2016 €m	2015 €m
Net revenue	1,032.2	887.5	164.6	184.8	781.9	746.4	410.0	401.6
Operating costs	495.5	457.6	95.1	81.0	398.8	402.8	184.8	217.0
EBIT	540.6	430.3	71.1	106.0	383.3	343.7	225.2	184.6

EEX is the leading European energy exchange: it develops, operates and connects secure, liquid and transparent markets for energy and commodity products. The products traded on markets operated by EEX Group are electricity, natural gas, environmental products (such as emission allowances), agricultural products, as well as other commodities (in particular, freight rates, bunker fuel, and metals). EEX completed additional inorganic growth initiatives during 2016, thus strengthening its position as the central market for energy, energy-related products and commodities in Europe. The most important strategic steps in 2016 included the acquisition of a majority stake in Power Exchange Central Europe a.s. (PXE), based in Prague, which is EEX Group's first presence in the East European trading markets; the cooperation between Powernext and Austrian Central European Gas Hub AG (CEGH) for the joint development of gas markets in Austria, as well as in Central and Eastern Europe; and the full acquisition of Danish gas exchange Gaspoint Nordic A/S. Moreover, EEX Group succeeded in markedly growing its market share, compared to off-exchange markets, in the relevant products. On this basis, EEX Group posted substantial double-digit growth rates in its three core business segments during the 2016 financial year: up 46 per cent in the spot and forward electricity markets, up 71 per cent in the gas market, and up 40 per cent in emission rights trading.

Eurex segment: key figures

	2016	2015	Change
Financial key figures	**€m**	**€m**	**%**
Net revenue	1,032.2	887.5	16
Operational costs	549.7	507.4	8
EBIT	517.6	381.7	36
EBIT (adjusted)	540.6	430.3	26
Financial derivatives: trading volume on Eurex Exchange	**m contracts**	**m contracts**	**%**
Derivatives[1]	1,727.5	1,672.6	3
Equity index derivatives[2]	894.0	837.7	7
Interest rate derivatives	526.6	509.1	3
Equity derivatives[2]	291.1	311.8	–7
Commodities: trading volume on EEX[3] [4]	**TWh / m t CO_2**	**TWh / m t CO_2**	**%**
Electricity	4,455.6	3,061.5	46
Gas	1,756.2	1,024.9	71
Emissions trading	949.9	677.6	40
Foreign exchange business: traded volume on 360T®	**€bn**	**€bn**	**%**
Average daily volume on 360T®	57.6	55.3	4

1) The total deviates from the sum of individual figures since it includes additional traded products, such as ETF, volatility, currency and precious metals derivatives.
2) Dividend derivatives are assigned to equity index and equity derivatives.
3) Volumes traded on EEX – in terawatt hours (TWh) for power and gas contracts, and in million tonnes of CO_2 for emissions trading
4) Including volumes traded in the power segment on EPEX, APX/Belpex (or SEEPEX, since 17 February 2016), and in the gas segment on Powernext and Gaspoint Nordic (the latter added in 2016)

Global foreign exchange trading was characterised by declining traded volumes during the year under review, due to various factors including political uncertainty, changes in the regulatory framework, and reduced prime brokerage capacity, which burdened trading activity. Nonetheless, 360T®, one of the world's leading foreign-exchange platforms (winning awards such as "Best Professional E-trading Venue" and "Best e-FX Platform for Corporates"), which was acquired in 2015, managed to buck this trend, increasing its foreign-exchange trading volumes by 4 per cent. This growth was mainly driven by trading activity of new clients. 360T continued to grow its client portfolio across all regions and market segments; its integration into Deutsche Börse Group is making dynamic progress. During the year under review, this included joint client calls and joint cooperation in developing new offerings – for example, the FX trading order book, FX futures products and preparing a clearing offer for FX OTC contracts.

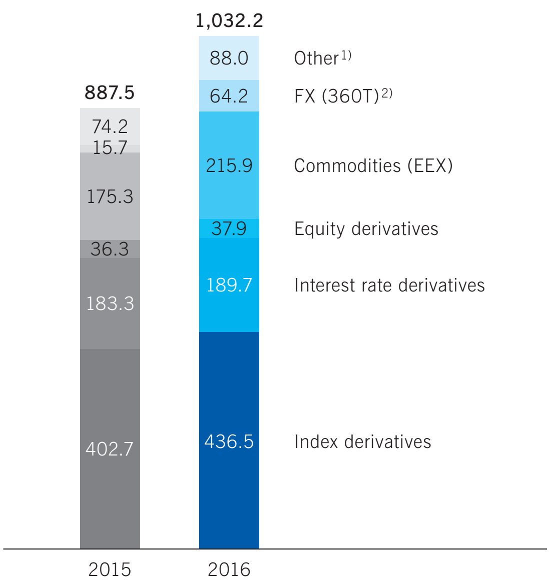
Xetra segment

The Xetra segment generates most of its net revenue from trading and clearing cash market securities. The primary sales driver, accounting for 64 per cent, was net revenue from trading. The central counterparty (CCP) for equities and exchange-traded products (ETPs) operated by Eurex Clearing AG contributed 16 per cent to the segment's net revenue; the net revenue of the CCP is determined to a significant extent by trading activities on Xetra®. Listing revenue (which accounts for around 9 per cent) is primarily generated from existing listings and new admissions. The "other" item (accounting for a total of 10 per cent of net revenue) includes, among others, net revenue generated by Eurex Bonds.

Net revenue in the Xetra segment declined by 11 per cent during the year under review. Operating costs rose by 21 per cent, mainly due to non-recurring effects. These non-recurring effects had burdened the

Net revenue in the Eurex segment

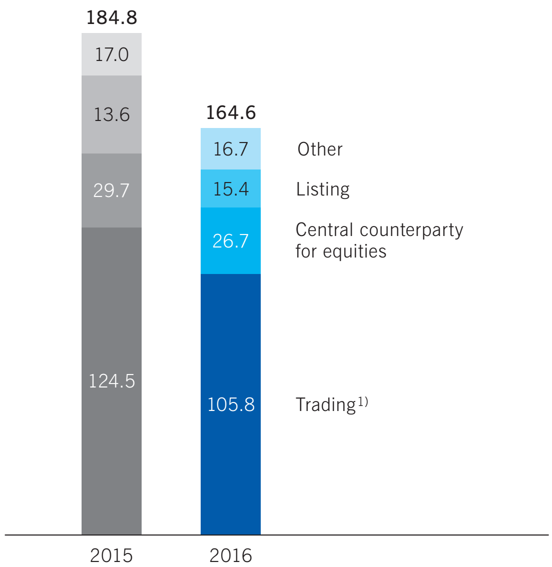
€ millions



1) Incl. repo business and net interest income from banking business
2) Consolidation in Q4/2015

Net revenue in the Xetra segment

€ millions



1) The position "Trading" includes the Xetra® electronic trading system, Börse Frankfurt as well as structured products trading.

financial year 2015 (€3.9 million) and amounted to €7.3 million in the year under review, amongst others driven by the planned business combination with LSEG. As a result of significantly higher costs, EBIT decreased by 34 per cent.

During the year under review, cash markets in Europe failed to match the high trading volumes seen in 2015's record year – a development which Deutsche Börse and its marketplaces Xetra, the Frankfurt Stock Exchange, and Tradegate, were not immune to either. In the previous year, cash markets had benefited strongly from the launch of the ECB's bond-buying programme (as part of its quantitative easing policy, QE), and from strong market liquidity. This effect was reduced during the second year of QE, and investors were increasingly looking at alternative investment opportunities again. This was exacerbated by the continued fragile state of economies in Europe, plus the UK's decision to leave this economic area – developments which dented investors' confidence in the European capital markets. As a result, US investors in particular pulled capital from Europe, shifting investments to other markets.

In the 2016 financial year, securities with a total volume of €1.38 trillion were traded on Deutsche Börse Group's cash markets (2015: €1.64 trillion). They included shares and bonds from German and international issuers, exchange-traded funds (ETFs) and exchange-traded commodities (ETCs) as well as units in actively managed mutual funds and structured products. Institutional, private and international investors primarily trade on Xetra, the electronic trading platform. As a result, Xetra generates by far the highest trading volumes within the segment. In addition to Xetra, Deutsche Börse operates trading at the Frankfurt Stock Exchange and holds a 75 per cent stake in Tradegate Exchange GmbH – Germany's leading stock exchange for retail investors. At the end of the reporting year, Deutsche Börse increased its stake in Tradegate AG Wertpapierhandelsbank, which holds the remaining shares in Tradegate Exchange, from just under 15 per cent to just under 20 per cent, subject to regulatory approval.

Deutsche Börse has been operating Europe's leading marketplace for ETFs since 2000. It offers investors the largest selection of ETFs of all European exchanges: as at 31 December 2016, 1,133 ETFs were listed (2015: 1,116 ETFs). Assets under management held by ETF issuers totalled €411.6 billion at the end of the year, a year-on-year increase of 17 per cent (31 December 2015: €351.6 billion). Trading volumes declined by 16 per cent to €158.0 billion (2015: €188.9 billion). The most heavily traded ETFs are based on the European STOXX equity indices and on the DAX index.

Xetra-Gold®, a bearer bond issued by Deutsche Börse Commodities, benefited from the ECB's low interest rate policy as well as from investor unrest following the UK's Brexit referendum. Xetra-Gold has gen-

Xetra segment: key figures

	2016	2015	Change
Financial key figures	**€m**	**€m**	**%**
Net revenue	164.6	184.8	–11
Operating costs	102.4	84.9	21
EBIT	63.8	96.7	–34
EBIT (adjusted)	71.1	106.0	–33
Cash market: trading volume (single-counted)	**€bn**	**€bn**	**%**
Xetra®	1,262.1	1,505.8	–16
Frankfurt Stock Exchange	43.9	54.6	–19
Tradegate	71.0	75.3	–6

erated the most turnover among all ETCs traded on Xetra: aggregate order book turnover was around €2.7 billion in 2016. Likewise, assets under management in Xetra-Gold stood at a record level of approximately €4.2 billion as at 31 December 2016.

The number of IPOs declined on a global scale during 2016, reflecting political and economic uncertainty. Accordingly, IPO activity at Frankfurter Wertpapierbörse (FWB®, the Frankfurt Stock Exchange) showed a mixed picture, with 19 new companies listed (2015: 24 new listings), bringing aggregate new issue volume to around €5.2 billion (2015: €7 billion). Despite the challenging market environment for IPOs, innogy SE, a subsidiary of RWE AG, managed to place the biggest IPO since 2000 in early October: a total of 555.6 million shares were admitted to trading, bringing the issue volume to some €5 billion.

The purpose of an exchange is to provide financing to, and foster growth for the real economy – this is at the very heart of an exchange's business. This is why Deutsche Börse has decisively expanded the pre-IPO business in its "Pre-IPO and Growth Financing" franchise. Alongside established on-exchange business (including trading in equities, bonds and other securities, as well as IPOs), this business has (once again) formed part of a separate Executive Board portfolio since 2016. Over a medium-term horizon, coordinated initiatives in the pre-IPO area are designed to lead to IPOs at the Frankfurt Stock Exchange.

It is Deutsche Börse's goal to establish an ecosystem for growth, designed to facilitate a better flow of investments and to enhance financing options for enterprises of any size (whether it is start-ups, small and medium-sized enterprises (SMEs), or large corporate groups). One of the building blocks in this development is the FinTech Hub in Frankfurt/Main, which supports start-ups on the Frankfurt financial marketplace and thus fosters a lively entrepreneurial culture. Launched in 2015, Deutsche Börse Venture Network® is designed to support companies in their growth phase which require more substantial follow-up financing. It brings these enterprises together with international investors, facilitating the raising of capital and enabling companies to build an extensive network – paving the way for their IPO. At the end of September 2016, Würzburg-based va-Q-tec was the first Venture Network company to go public, with an IPO in the Prime Standard segment. The exclusive Venture Network online platform allows investors and entrepreneurs to establish initial contacts, exchanging information within a protected area. Deutsche Börse Venture Network is continuously growing: at the end of the reporting year, 120 growth companies and 211 investors were active on the platform. Since the launch of the Venture Network, enterprises have raised around €1 billion in growth financing. With the new Venture Match service, introduced in September 2016, experts from Deutsche Börse now offer a more targeted matching of investors and companies, thus simplifying and enhancing access to growth capital as well as investment opportunities.

In its listing business, Deutsche Börse has announced the launch of Scale, a new segment for established small to medium-sized – and predominantly German – companies. The segment started operations on 1 March 2017. Companies seeking a listing in the new SME segment must fulfil certain minimum criteria: besides quantitative requirements, the focus here is on transparency and visibility – e.g. through mandatory research reports.

Clearstream segment

The segment provides the post-trade infrastructure for the Eurobond market, and offers custody services for domestic securities from more than 50 markets worldwide. In doing so, Clearstream ensures that once a trade has been executed, cash and securities change hands. Clearstream is responsible for securities issuance, settlement, management and custody. As an international central securities depository (ICSD), Clearstream provides these settlement and custody services for securities held in Luxembourg. The ICSD business contributed 52 per cent to net revenue during the year under review. As a central securities depository (CSD), Clearstream services the market for German securities; this business accounts for 15 per cent of net revenue. Investment fund services are the segment's third pillar, accounting for 16 per cent of net revenue. Using Clearstream's Vestima® fund processing platform, clients can manage settlements and custody for their entire fund portfolio. Net revenue from the Global Securities Financing (GSF) franchise – which encompasses triparty repo, GC Pooling®, securities lending and collateral management – contributed 9 per cent of the segment's net revenue. Net interest income from Clearstream's banking operations accounted for 8 per cent of net revenue.

Within the ICSD and CSD business, custody services provide the greater contribution. Net revenue in this business is mainly driven by the volume and value of securities under custody, which determines the deposit fees. The settlement business – the second pillar – depends heavily on the number of settlement transactions processed by Clearstream, both via stock exchanges and over the counter (OTC).

During the year under review, Clearstream saw growth in its ICSD business, in its Global Securities Financing services and in its net interest income from banking business. The segment increased its net revenue by 5 per cent. Operating costs declined by 2 per cent. Non-recurring effects totalled €47.9 million in 2016. In addition to costs for the planned business combination with LSEG they were attributable in particular to criminal investigations against Clearstream Banking S.A. in the US (2015: non-recurring effects of €54.9 million). EBIT thus increased by 16 per cent, adjusted for non-recurring effects of 12 per cent.

The Clearstream segment grew its ICSD business by 3 per cent: the value of international assets held in custody (which predominantly comprise bonds traded on the OTC market) increased slightly year-on-year, as did the number of transactions.

Clearstream segment: key figures

	2016	2015	Change
Financial key figures	**€m**	**€m**	**%**
Net revenue	781.9	746.4	5
Operating costs	446.7	457.7	–2
EBIT	335.4	288.8	16
EBIT (adjusted)	383.3	343.7	12
Business key figures			
International business (ICSD)	**€tn**	**€tn**	**%**
Value of securities under custody (average value during the year)	6.8	6.7	1
Domestic business (CSD)	**€tn**	**€tn**	**%**
Value of securities under custody (average value during the year)	4.4	4.8	–7
Investment Funds Services	**€tn**	**€tn**	**%**
Value of securities under custody (average value during the year)	1.9	1.8	5
Global Securities Financing	**€bn**	**€bn**	**%**
Outstanding volume (average value during the year)	515.9	598.6	–14
Net interest income from banking business	**€bn**	**€bn**	**%**
Average daily cash balances[1]	13.1	12.4	5

1) Includes some €1.5 billion currently or formerly blocked by EU and US sanctions (2015: €1.5 billion)

The domestic CSD business reflects the business development on the German cash markets, whereby custody volumes are largely determined by the market values of equities, funds and structured products traded. Given lower trading activity, settlement volumes were down 8 per cent, whilst the value of assets held in custody declined by 7 per cent, due to lower average index levels compared to the previous year.

In the funds business, Clearstream saw slight increases in the volume of assets held in custody, reflecting the positive overall performance on the international fund markets throughout the year. However, the number of transactions settled was down 5 per cent. Clearstream owns Clearstream Global Securities Services (CGSS) based in Cork, Ireland, previously Citco's custody operations for financial institutions' hedge funds.

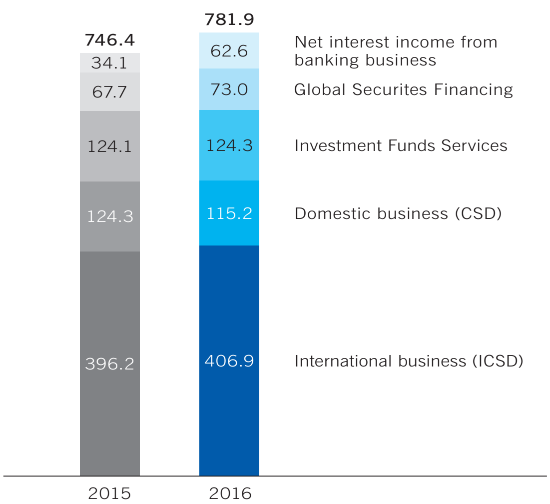
Average outstanding volumes in GSF decreased by 14 per cent. After the ECB flooded markets with liquidity within the scope of its quantitative easing policy, volumes were down significantly, especially in GC Pooling. At the same time, order flows shifted towards smaller, higher-priced lending volumes, raising GSF net revenue overall.

Average cash customer deposits were up 5 per cent year-on-year. Besides the effect of this increase in volume, net interest income benefited from the charging of negative interest rates to clients (in some cases with a mark-up). In addition, the US Federal Reserve had raised its US dollar interest rates for the first time after a long period in December 2015, following up with another increase in December 2016. This provided an added boost to net interest income (over and above the higher liquidity levels), given that around 49 per cent of cash deposits is denominated in US dollars.

The TARGET2-Securities (T2S) settlement service, designed by the Eurosystem, commenced operations in 2016. Once T2S is fully functional in 2017 – according to schedule – it will harmonise cross-border securities settlements in central bank money throughout Europe. Directly following the launch date, Clearstream provided its clients with the full range of benefits that the new settlement system offers. This enables clients to bundle their assets in a single pool, using the respective CSD as their access point to T2S.

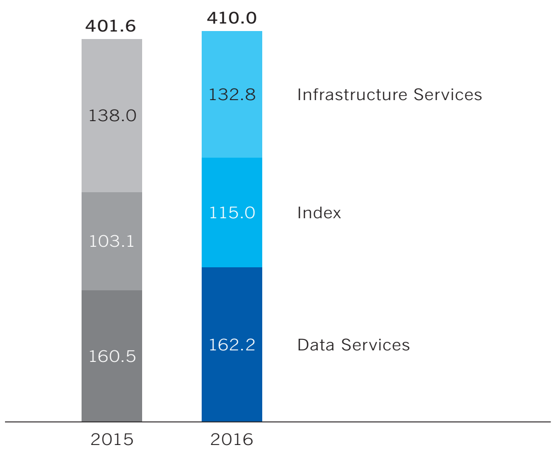
Net revenue in the Clearstream segment

€ millions



Net revenue in the Market Data + Services segment

€ millions



At the same time, they can benefit from the ICSD's securities lending and collateral management services. For instance, it is now possible to settle triparty repos using commercial bank money (i.e. in multiple currencies) or central bank money (in euros), with positions being held with the ICSD and CSDs. On 6 February 2017, Clearstream Banking AG and LuxCSD S.A. migrated – on schedule and in full – to the ECB's settlement systems. Clearstream's systems, which were initially running in parallel during the test phase, have been switched off. The segment envisages at least compensating for lost settlement fees, through a sensitive pricing policy and additional offers to clients.

Market Data + Services segment

The core business of the Market Data + Services segment is the distribution of capital market information, technology and infrastructure services to clients worldwide. These services include real-time trading and market signals, as well as indices such as EURO STOXX 50® and DAX. Capital market participants subscribe to this information, or licence it for their own use, processing, or dissemination. The segment generates much of its net revenue on the basis of long-term client relationships; it is relatively independent of trading volumes and capital markets volatility. The assets and liabilities related to its MNI subsidiary were sold by way of an asset deal, effective 8 July 2016. Deutsche Börse AG already sold its 50 per cent stake in Infobolsa S.A. in February.

Despite the deconsolidation of MNI and Infobolsa, Market Data + Services slightly increased net revenue during the year under review. Operating costs showed a significant marked decline, due to deconsolidation (amongst other factors), but also through strict cost management: they included non-recurring effects of €33.8 million (2015: €16.2 million), largely related to the planned business combination with LSEG as well as to the integration respective disintegration of companies (STOXX, MNI). Accordingly, the segment's EBIT rose considerably by 14 per cent, excluding non-recurring effects by 22 per cent.

The net revenue of the segment comprises the business areas Data Services (40 per cent), Index (28 per cent), and Infrastructure Services (32 per cent).

The Data Services business area mainly involves the distribution of licences for real-time trading and market signals, and for the provision of historical data to banks, trading firms, and fund management companies. The most important products in this respect are order book data from the cash and derivatives markets, as well as reference data of Deutsche Börse and its partner exchanges. Business remained largely stable during the year under review, despite the deconsolidation of MNI.

In its Index business area, which it conducts through its STOXX Ltd. subsidiary, Deutsche Börse generates revenue from calculating and marketing indices and benchmarks, which banks and fund management companies use as underlying instruments or benchmark references for financial instruments and investment vehicles. The extensive range of indices offered by STOXX Ltd. provides issuers with a wealth of opportunities for creating financial instruments for most diverse investment strategies. The Index business continued its growth path, driven especially by a vivid issuance of structured products on STOXX indices that are designed for investors to realise their investment strategies and higher trading volumes of Eurex contracts based on STOXX and Deutsche Börse indices. Conversely, assets under management in ETFs declined, due to investors withdrawing capital particularly from those ETFs which track the European capital markets – these make up a large part of the STOXX portfolio.

The Infrastructure Services business area generates revenue primarily from connectivity services for trading and clearing participants. Revenue generated from these services rose during the year under review, thanks to the segment's success in convincing a constantly rising number of clients to opt for data connections with higher bandwidth. In addition, Infrastructure Services provides development and operational services for technology clients outside the Group – such as partner exchanges, banks acting as Designated Sponsors, or the German regional stock exchanges. Deutsche Börse operates technology on behalf of partner exchanges in Dublin, Vienna, Sofia, Ljubljana, Prague, Budapest, on Malta and the Cayman Islands, as well as domestic exchanges operated by brokers and banks in Frankfurt/Main, Berlin, Dusseldorf, Hamburg/Hanover and Munich.

Development of profitability

Deutsche Börse Group's return on shareholders' equity expresses the ratio of net income after taxes to average equity available to the Group during the course of 2016. Mainly due to the increase in net income and equity, return on shareholders' equity remained largely unchanged at 17.3 per cent (2015: 17.0 per cent) in the 2016 financial year. Adjusted for the non-recurring effects described in the "Results of operations" section, the return on equity amounted to 19.4 per cent (2015: 19.6 per cent).

Financial position

Cash flow

Cash and cash equivalents at Deutsche Börse Group comprise cash and bank balances to the extent that these do not result from reinvesting current liabilities from cash deposits by market participants as well as receivables and liabilities from banking business with an original maturity of three months or less. Cash and cash equivalents as at 31 December 2016 amounted to €–146.9 million (31 December 2015: €–1,579.4 million). The technical closing-date item is negative especially due to finan-cial assets with a maturity of more than three months. The latter do not qualify as cash and cash equivalents and the cash flows associated with them have been allocated to investing activities. Cash and bank balances amounted to €1,458.1 million as at 31 December 2016 (31 December 2015: €711.1 million).

Deutsche Börse Group's cash flow from operating activities is relevant only to a limited extent as it includes in particular CCP positions, which are subject to significant fluctuations on the reporting date. Due to this, the following refers in particular to the cash flow from operating activities excluding CCP positions. In the 2016 financial year, Deutsche Börse Group generated €856.6 million (2015: €796.6 million) in cash flow from operating activities, excluding changes in CCP positions on the reporting date.

Moreover, Deutsche Börse Group paid taxes in the amount of €277.8 million during the 2016 financial year (2015: €207.7 million). Higher tax payments were partly attributable to the sale of shares in U.S. Exchange Holdings, Inc.

Other non-cash income amounted to €52.3 million (2015: other non-cash expenses of €7.0 million); this was, in particular, due to income from the sale of shares in BATS Global Markets Inc. The transaction generated cash of €80.3 million, reported under cash flows from investing activities.

Market Data + Services segment: key figures

	2016	2015	Change
Financial key figures	€m	€m	%
Net revenue	410.0	401.6	2
Operating costs	218.6	233.2	–6
EBIT	191.4	168.4	14
EBIT (adjusted)	225.2	184.6	22

Taking CCP positions into account, cash flow from operating activities totalled €1,621.4 million (2015: €10.1 million). The change in CCP positions was influenced by non-delivered GC Pooling transactions in a total amount of US$869.5 million; these could not be delivered on the due date (31 December 2015), but only on 4 January 2016. The reason was a clearing participant's failure to provide the necessary cash in good time.

Cash inflows from investing activities amounted to €578.5 million in the 2016 financial year (2015: cash outflows of €1,592.3 million). These were attributable, in particular, to the sale of shares in ISE Group, which generated cash of €916.3 million (adjusted for cash and cash equivalents sold of €13.0 million that were originally included in the cash amount). Furthermore, the sale of shares in Infobolsa S.A. generated cash of €1.1 million (adjusted for cash and cash equivalents sold of €7.1 million).

In addition, cash inflows of €149.9 million (2015: €208.3 million) resulted from maturities and disposals of securities with an original maturity of more than one year.

Cash outflows of €178.9 million (2015: €815.5 million) were due to the acquisition of long-term financial instruments.

At €164.9 million, investments in intangible assets and property, plant and equipment were above the prior-year level (2015: €154.5 million); most were made in the Clearstream and Eurex segments. Clearstream's investments related primarily to the expansion of its settlement and collateral management systems, while Eurex invested in its trading and clearing systems.

Consolidated cash flow statement (condensed)

	2016 €m	2015 €m
Cash flows from operating activities (excluding CCP positions)	856.6	796.6
Cash flows from operating activities	1,621.4	10.1
Cash flows from investing activities	578.5	–1,592.3
Cash flows from financing activities	–848.8	76.1
Cash and cash equivalents as at 31 December	–146.9	–1,579.4
Cash and other bank balances as at 31 December	1,458.1	711.1

Cash outflows for the acquisition of subsidiaries totalled €3.9 million (2015: €641.5 million). Cash outflows included €676.6 million for the acquisition of shares in 360T in the previous year. Full consolidation of Powernext and EPEX at 1 January 2015 increased cash by €40.1 million. Since no purchase price was payable in the acquisition of Powernext and EPEX during the business year 2015, there were no cash outflows.

Cash outflows stood at €848.8 million in the 2016 financial year (2015: cash inflows of €76.1 million).

During the 2016 financial year Deutsche Börse AG repaid series B and C of private placements issued in 2008, prior to maturity and within the scope of the ISE acquisition; this led to cash outflows of €321.6 million. In the previous year, cash outflows of €150.5 million were attributable to the maturity of series A of private placements issued in 2008.

The acquisition of a 49.9 per cent stake in STOXX Ltd. led to aggregate cash outflows of €653.8 million in the 2015 financial year. This transaction was financed through the issue of a debt security with a nominal amount of €600.0 million. Moreover, the company placed Treasury shares in the amount of €200.0 million as well as a bond with a nominal amount of €500.0 million within the scope of the 360T acquisition.

Moreover, the company placed commercial paper of €400.0 million (2015: €2,100.0 million), and paid out €495.0 million (2015: €2,065.0 million) due to maturing commercial paper issues. No commercial paper was outstanding as at 31 December 2016.

In addition, Deutsche Börse AG distributed €420.1 million in dividends for the 2015 financial year (dividends for the 2014 financial year: €386.8 million).

As in previous years, the Group assumes it will have a strong liquidity base in financial year 2016 due to its positive cash flows from operating activities, adequate credit lines and flexible management and planning systems.

Deutsche Börse Group's interest coverage ratio

Interest expense from financing activities	Issue volume	2016 €m	2015 €m
Fixed-rate bearer bond (term until March 2018)	€600 m	7.4	7.4
Fixed-rate bearer bond (term until October 2022)	€600 m	14.8	14.8
Fixed-rate bearer bond (term until October 2025)	€500 m	8.7	2.0
Fixed-rate bearer bond (hybrid bond)	€600 m	17.2	7.0
Private placements[1]	US$290 m	9.3	18.5
Commercial paper	€142 m – 2015[2] €35 m – 2016[2]	 –	0.1
Other interest expense		4.5	4.5
Total interest expense (incl. 50 per cent of the hybrid coupon)		**53.3**	50.8
EBITDA (adjusted)		1,345.7	1,180.7
Interest coverage[3]		**25.3**	23.2

1) Bought back with the proceeds from the sale of ISE mid-2016
2) Annual average
3) EBITDA / interest expense from financing activities (includes 50 per cent of the interest on the hybrid bond)

Operating leases

Deutsche Börse Group mainly uses operating leases for the office building in Eschborn that the Group moved into in the second half of 2010 and for the buildings used by Clearstream Inter-national S.A. in Luxembourg (see note 38 to the consolidated financial statements for details).

Liquidity management

Deutsche Börse primarily meets its operating liquidity requirements from internal financing, i.e. by retaining generated funds. The aim is to provide enough liquidity to cover operating costs for one quarter (currently between €150 million and €250 million). An intra-Group cash pool is used for pooling surplus cash as far as regulatory and legal provisions allow. All of the Group's cash investments are short-term in order to ensure rapid availability and are largely collateralised using liquid bonds from prime-rated issuers. Moreover, Deutsche Börse AG has access to external sources of financing, such as bilateral and syndicated credit lines, and a commercial paper programme (see note 36 to the consolidated financial statements for details on financial risk management). In recent years, Deutsche Börse AG has leveraged its access to the capital markets to issue corporate bonds in order to meet its structural financing needs.

Capital management

The company's clients generally expect it to maintain conservative interest service cover and leverage ratios, and to achieve good credit ratings. Therefore, the Group targets a minimum consolidated interest service cover ratio (defined as the ratio of EBITDA to interest expenses from financing activities) of 16. During the reporting period, Deutsche Börse Group achieved this target, with an interest service cover ratio of 25.3 (2015: 23.2). This figure is based on relevant interest expenses of €53.3 million and adjusted EBITDA of €1,345.7 million.

Data included for the purpose of calculating interest service cover comprises interest expenses incurred for financing Deutsche Börse Group, less interest expenses incurred by subsidiaries which are also financial institutions, including Clearstream Banking S.A., Clearstream Banking AG and Eurex Clearing AG. Interest expenses incurred which are not related to Group financing are not included in the calculation of interest service cover.

Moreover, Deutsche Börse targets a maximum ratio of interest-bearing gross debt to EBITDA of 1.5 at Group level. During the reporting period, the Group achieved a 1.5 ratio of gross debt to EBITDA. This figure is based on gross debt of €1,984.7 million, and adjusted EBITDA of €1,345.7 million. Gross debt consisted of interest-bearing liabilities of €1,984.7 million.

Debt instruments issued by Deutsche Börse AG (outstanding as at 31 December 2016)

Type	Issue volume	ISIN	Term	Maturity	Coupon p.a.	Listing
Fixed-rate bearer bond	€600 m	DE000A1R1BC6	5 years	March 2018	1.125 %	Luxembourg/ Frankfurt
Fixed-rate bearer bond	€600 m	DE000A1RE1W1	10 years	October 2022	2.375 %	Luxembourg/ Frankfurt
Fixed-rate bearer bond	€500 m	DE000A1684V3	10 years	October 2025	1.625 %	Luxembourg/ Frankfurt
Fixed-rate bearer bond (hybrid bond)	€600 m	DE000A161W62	Call date 5.5 years/ final maturity in 25.5 years	February 2021/ February 2041	2.75 % (until call date)	Luxembourg/ Frankfurt

The decline in gross debt is a result of the full repurchase of outstanding US private placements, in the amount of US$290 million, which also led to the ratio of gross debt to EBITDA reaching the target at the end of the year.

Furthermore, the company endeavours to maintain the strong AA credit rating of Clearstream Banking S.A., in order to ensure the long-term success of its Clearstream securities settlement and custody segment. The activities of the Eurex Clearing AG subsidiary also require Deutsche Börse AG to have and maintain a strong credit quality.

Also, Deutsche Börse AG has publicly stated its intention to maintain certain additional financial indicators for Clearstream entities which the company believes to be consistent with an AA rating. Specifically, this involves a commitment to maintain minimum tangible equity (equity less intangible assets) of €700 million for Clearstream International S.A., and of €400 million for Clearstream Banking S.A. During the reporting period, Clearstream International S.A. fulfilled this commitment, reporting tangible equity of €1,092.1 million; the figure for Clearstream Banking S.A. was €1,179.4 million, also in line with this target. To the extent that the Clearstream sub-group has financial liabilities to non-banks, the sub-group is committed to a minimum interest service cover ratio of 25. During the reporting period as in the previous year, Clearstream had no financial liabilities to non-banks; for this reason, no interest cover ratio is being reported.

Deutsche Börse Group generally aims to distribute dividends equivalent to between 40 and 60 per cent of adjusted net profit for the period attributable to Deutsche Börse AG shareholders. In recent years (where the Group's net profit was lower), the dividend payout ratio was kept at the upper end of this range, in order to distribute stable dividends to shareholders. Given that the Group's profit targets were raised in 2015 in connection with the announcement of the "Accelerate" growth strategy, the company aims for a dividend payout ratio in the middle of the range between 40 and 60 per cent going forward.

Moreover, until 2012 the company distributed a part of freely available funds to shareholders, via share buy-backs. Since 2013, these funds have been used predominantly to support the company's development, as well as to fulfil credit rating and regulatory capital requirements. Against the background of the "Accelerate" growth strategy, the company anticipates that in future, freely available funds will increasingly be applied not only to support the Group's organic growth, but also to complementary external growth options.

Dividends

For financial year 2016, Deutsche Börse AG is proposing that the Annual General Meeting resolve to pay a dividend of €2.35 per no-par value share (2015: €2.25). This dividend corresponds to a distribution ratio of 54 per cent of net profit for the period attributable to Deutsche Börse AG shareholders, adjusted for the special factors described in the "Results of operations" section (2015: 55 per cent, also adjusted for special items). Given 186.8 million no-par value shares bearing dividend rights, this would result in a total dividend of €439.0 million (2015: €420.1 million). The aggregate number of

Relevant key performance indicators

	2016 €m	2015 €m
Tangible equity of Clearstream Inter-national S.A. (as at the reporting date)	1,092.1	1,079.2
Tangible equity of Clearstream Banking S.A. (as at the reporting date)	1,179.4	1,071.6

Credit ratings

	Long-term	Short-term
Deutsche Börse AG		
Standard & Poor's	AA	A–1+
Clearstream Banking S.A.		
Fitch	AA	F1+
Standard & Poor's	AA	A–1+

shares bearing dividend rights is produced by deducting the 6.2 million treasury shares from the ordinary share capital of 193.0 million shares.

Credit ratings
Deutsche Börse AG regularly has its credit quality reviewed by the Standard & Poor's (S&P) rating agency, while Clearstream Banking S.A. is rated by Fitch and S&P.

On 7 October 2016, Fitch Ratings affirmed the AA credit rating of Clearstream Banking S.A. with a stable outlook. The rating reflects Clearstream Banking's leading position in the post-trade business and its very low risk appetite, combined with strict risk management systems, diligent liquidity management, as well as its impeccable capitalisation.

On 19 December 2016, S&P affirmed the AA credit rating of Deutsche Börse AG, but maintained the negative outlook it had set in 2015, in connection with the acquisition of 360T.

On the same date, S&P affirmed the AA credit rating of Clearstream Banking S.A. with a stable outlook. The rating reflects the strong risk management, minimum debt levels, as well as Clearstream's strong position on the international capital markets, especially through its international custody and transaction business.

As at 31 December 2016, Deutsche Börse AG was one of only two DAX-listed companies that had been awarded an AA rating by S&P. The ratings histories of Deutsche Börse AG and Clearstream are given in the five-year overview.

Net assets

Material changes to net assets are described below; the full consolidated balance sheet is shown in the consolidated financial statements.

Deutsche Börse Group's non-current assets include primarily of intangible assets and financial assets as well as financial instruments held by central counterparties. The last category represented the largest item. This asset item is matched by a liability item in the same amount. Receivables and securities from the banking business, which Deutsche Börse Group holds as financial assets, declined during the year under review, in line with goodwill and other intangible assets. This decline mainly results from the disposal of ISE.

Current assets also decreased, driven in particular by financial instruments held by central counterparties, while receivables and securities from banking business (as well as restricted bank balances) increased slightly. This was mainly driven by two factors: higher client cash deposits at Clearstream, and higher cash collateral provided by the clearing members of Eurex Clearing AG during the year under review. Cash and bank balances clearly improved due to the disposal of ISE.

The financing of assets was provided through equity and debt capital. Equity increased year-on-year, driven particularly by the accounting profit realised with the disposal of ISE.

Consolidated balance sheet (extracts)

	31 Dec 2016 m€	31 Dec 2015 m€
ASSETS		
Non-current assets	11,940.4	14,386.9
thereof intangible assets	3,973.7	4,633.0
thereof goodwill	2,721.1	2,898.8
thereof financial assets	1,920.9	2,309.0
thereof receivables and securities from banking business	1,604.8	2,018.6
thereof financial instruments held by central counterparties	5,856.6	7,175.2
Current assets	151,904.4	165,688.9
thereof financial instruments held by central counterparties	107,909.6	126,289.6
thereof restricted bank balances	27,777.6	26,870.0
thereof other cash and bank balances	1,458.1	711.1
EQUITY AND LIABILITIES		
Equity	4,624.5	3,695.1
Liabilities	159,220.3	176,380.7
thereof non-current liabilities	8,669.9	10,585.4
thereof financial instruments held by central counterparties	5,856.6	7,175.2
thereof interest-bearing liabilities	2,284.7	2,546.5
thereof current liabilities	150,550.5	165,795.3
thereof financial instruments held by central counterparties	107,479.4	126,006.5
thereof cash deposits by market participants	27,777.6	26,869.0

Non-current liabilities declined, driven mainly by two factors: Firstly, financial instruments held by central counterparties decreased. This liability item is matched by an asset item in the same amount. Secondly, interest-bearing liabilities declined. In July, Deutsche Börse redeemed series B and C bonds for an amount of US$290 million.

The main changes within the non-current liabilities item occurred in the following areas:

- a decline in financial instruments held by central counterparties
- an increase of liabilities from cash deposits by market participants as a result of higher cash collateral provided by the clearing members of Eurex Clearing AG; the main reason for this increase was that clearing participants provided a larger proportion of cash compared to securities as collateral for Eurex Clearing AG in the reporting period

Overall, Deutsche Börse Group invested €152.6 million in the continued business in intangible assets and property, plant and equipment (capital expenditure or capex) in the reporting period (2015: €147.7 million). The Group's largest investments were made in the Clearstream and Eurex segments.

Working capital

Working capital comprises current assets less current liabilities, excluding technical closing-date items and commercial paper. Current assets excluding technical closing-date items amounted to €1,293.6 million (2015: €1,675.3 million). As Deutsche Börse Group collects fees for most of its services on a monthly basis, the trade receivables of €669.8 million included in current assets as at

31 December 2016 (31 December 2015: €554.1 million) were relatively low compared with net revenue. The current liabilities of the Group, excluding technical closing-date items, amounted to €1,453.0 million (2015: €1,196.2 million, excluding technical closing-date items). The Group therefore had slightly negative working capital of €159.4 million at the end of the year (2015: €479.1 million).

Technical closing-date items
The "receivables and securities from banking business" and "liabilities from banking business" balance sheet items on the balance sheet are technical closing date items that were strongly correlated in the reporting period and that fluctuated between approximately €14 billion and €20 billion (2015: between €10 billion and €15 billion). These amounts mainly represent customer balances in Clearstream's international settlement business.

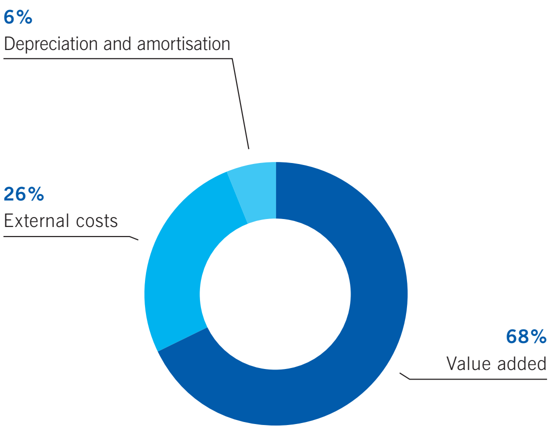
The "financial instruments of the central counterparties" item relates to the function performed by Eurex Clearing AG and European Commodity Clearing AG: since the latter act as the central counter parties for Deutsche Börse Group's various markets, their financial instruments are carried in the balance sheet at their fair value. The financial instruments of the central counterparties are described in detail in the risk report and in notes 3, 15 and 36 to the consolidated financial statements.

Market participants linked to the Group's clearing houses partly provide collateral in the form of cash deposits, which are subject to daily adjustments. The cash deposits are generally invested on a secured basis overnight by the central counterparties and reported in the balance sheet under "restricted bank balances". The total value of cash deposits at the reporting dates relevant for the reporting period (31 March, 30 June, 30 September and 31 December) varied between €24 billion and €29 billion (2015: between €27 billion and €36 billion).

Value added: breakdown of company performance
Deutsche Börse Group's commercial activity contributes to private and public income – this contribution is made transparent in the value added statement. Value added is calculated by subtracting depreciation and amortisation as well as external costs from the company performance. In 2016, the value added by Deutsche Börse Group amounted to €1,627.1 million (2015: €1,541.0 million). The breakdown shows that large portions of the generated value added flow back into the economy: 28 per cent (€454.3 million) benefit shareholders in the form of dividend payments, while 37 per cent (€607.5 million) was attributable to staff costs in the form of salaries and other remu-

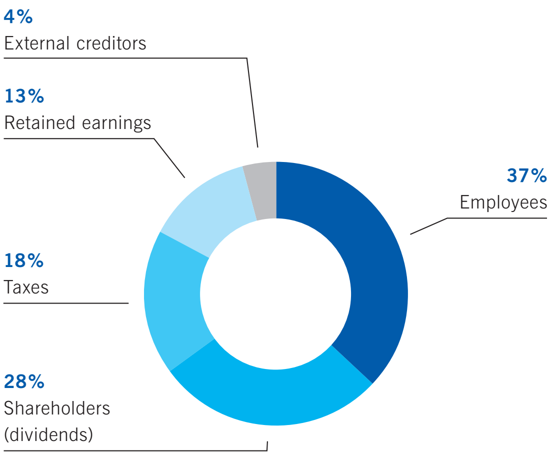
Origination of value added

Company performance: €2,395.5 million



Distribution of value added

Value added: €1,627.1 million



neration components. Taxes accounted for 18 per cent (€291.8 million), while 4 per cent

(€56.8 million) was attributable to external creditors. The 13 per cent value added that remained in the company (€216.7 million) is available for investments in growth initiatives, among other things (see "Origination of value added" and "Distribution of value added" charts).

Overall assessment of the economic position by the Executive Board

Deutsche Börse Group's financial performance during the 2016 financial year was in line with the range expected by the Executive Board, given the Group's success on the derivatives and energy markets and – at least in the US – the accelerating interest rate curve. In total, the Group recorded an 8 per cent increase in net revenue. Operating costs were up 3 per cent year-on-year, a modest increase compared to 2015, despite consolidation effects. The increase was due in particular to costs incurred in connection with mergers and acquisitions. Adjusted by such effects, costs incurred during the year under review increased by only 1 per cent compared to the previous year, despite the consolidation of new subsidiaries. EBIT, as well as net profit for the period attributable to Deutsche Börse AG shareholders, increased considerably over the previous year, reaching the upper end of the forecast range.

The Executive Board believes that Deutsche Börse Group's financial position was extremely sound during the reporting period. The Group generated high operating cash flows, as in the previous year. Given the considerable increase in adjusted EBIT, Deutsche Börse Group was able to improve the ratio of interest-bearing gross debt to EBITDA at Group level: at 1.5, it was at the target value of 1.5.

Rating agencies again affirmed the Group's credit quality, awarding it excellent ratings in 2016. On 19 December 2016, Standard & Poor's affirmed the AA credit rating of Deutsche Börse AG, but maintained the negative outlook in connection with the acquisition of 360T, financed with equity and debt capital. Furthermore, Standard & Poor's – just like Fitch Ratings on 7 October 2016 – affirmed the AA credit rating of Clearstream Banking S.A. Both ratings were assigned a stable outlook.

Deutsche Börse AG has offered its shareholders attractive returns for years – and financial year 2016 is no exception. At €2.35 (2015: €2.25), the dividend proposed for distribution to shareholders is above the prior-year level. In addition, the distribution ratio decreased slightly as a result of the improvement in earnings, falling from 55 per cent in the previous year to 54 per cent in the year under review (adjusted for non-recurring effects in both cases), and was thus in line with the Executive Board's forecast range of 40 to 60 per cent.

The Group's net assets, financial position and results of operations can be considered to be in an orderly state.

Deutsche Börse Group: five-year overview

		2012	2013	2014	2015	2016
Consolidated income statement						
Net revenue	€m	1,932.3	1,912.3	2,047.8	2,220.3[1]	2,388.7
thereof net interest income from banking business	€m	52.0	35.9	37.6[2]	50.6[2]	84.0
Operating costs	€m	–958.6	–1,182.8	–1,114.8	–1,283.2[1]	–1,317.4
Earnings before interest and tax (EBIT)	€m	969.4	738.8	1,011.3	935.6[1]	1,108.2
Net profit for the period attributable to Deutsche Börse AG shareholders	€m	645.0	478.4	762.3	613.3[1]	722.1
Earnings per share (basic)	€	3.44	2.60	4.14	3.31[1]	3.87
Consolidated cash flow statement						
Cash flows from operating activities	€m	707.7	728.3	677.3	10.1	1,621.4
Consolidated balance sheet						
Non-current assets	€m	5,113.9	8,796.9	11,267.2	14,386.9	11,940.4
Equity	€m	3,169.6	3,268.0	3,752.1	3,695.1	4,624.5
Non-current interest-bearing liabilities	€m	1,737.4[3]	1,521.9	1,428.5[3]	2,546.5	2,284.7
Performance indicators						
Dividend per share	€	2.10	2.10	2.10	2.25	2.35[4]
Dividend payout ratio	%	58[5][6][7][8]	61[9][10][11]	58[6][7][11]	55	54[12]
Employees (average annual FTEs)		3,416	3,515	3,911	4,460[1]	4,731
Personnel expense ratio (staff costs / net revenue)	%	21[6]	22[13]	23[9]	27	25
EBIT margin, based on net revenue	%	50	39	49	42	46
Tax rate	%	26.0[7]	26.0[8][13]	26.0[14]	26.0	27.0
Return on shareholders' equity (annual average)[15]	%	22	21	21	20[16]	19[16]
Deutsche Börse shares						
Year-end closing price	€	46.21	60.20	59.22	81.39	77.54
Average market capitalisation	€bn	8.5	10.0	10.8	14.7	14.0
Rating key figures						
Gross debt / EBITDA		1.6[6]	1.5[6]	1.5[6]	1.9[6][11]	1.5
Interest coverage ratio	%	15.2[6]	20.1[6]	26.0[6]	23.2[1]	25.3
Deutsche Börse AG: Standard & Poor's	Rating	AA	AA	AA	AA	AA
Clearstream Banking S.A.: Standard & Poor's	Rating	AA	AA	AA	AA	AA
Fitch	Rating	AA	AA	AA	AA	AA
Market indicators						
Xetra®, Frankfurt Stock Exchange and Tradegate						
Trading volume (single-counted)[17]	€bn	1,160.2	1,157.6	1,282.6	1,635.7	1,377.0
Eurex®						
Number of contracts	m	2,292.0	2,191.9	2,097.9	1,672.6[1]	1,727.5
Clearstream						
Value of securities deposited (annual average)	€bn	11,111	11,626	12,215	13,274	13,075
Global Securities Financing (average outstanding volume for the period)	€bn	570.3	576.5	609.8	598.6	515.9

1) Figures for 2015 without consideration of ISE, which represents a discontinued operation due to its disposal as at 30 June 2016 2) Clearstream and Eurex segments 3) Bonds that will mature in the following year are reported under "other current liabilities" (2012: €577.4 million; 2014: €139.8 million). 4) Proposal to the Annual General Meeting 2017 5) Adjusted for the non-taxable income related to the revaluation of the share component of the purchase price paid for the acquisition of the shares of Eurex Zürich AG held by SIX Group AG 6) Adjusted for the costs of mergers and acquisitions and of efficiency programmes 7) Adjusted for expenditure relating to the revaluation of the share component of the purchase price paid for the acquisition of the shares of Eurex Zürich AG held by SIX Group AG, a one-off gain from the reversal of deferred tax liabilities for STOXX Ltd. resulting from a decision by the Swiss Financial Supervisory Authority and a one-off gain from the recognition of deferred tax assets resulting from the future possible offsetting of losses carried forward by Eurex Global Derivatives AG 8) Adjusted for the tax benefit from initial recognition of deferred tax assets on tax loss carryforwards at a Group company 9) Adjusted for efficiency programme effects and costs incurred for the change of CEO in 2015 10) Adjusted for costs for mergers and acquisitions 11) Adjusted for costs largely related to criminal proceedings against Clearstream Banking S.A. in the US 12) Amount based on the proposal to the Annual General Meeting 2017 13) Adjusted for the costs of the OFAC settlement 14) Adjusted for a one-off gain from the dissolution of the financing structure established in connection with the acquisition of ISE, and a one-off expense mainly attributable to the reduction in deferred tax assets in respect of a tax loss carryforward 15) Net profit for the period attributable to Deutsche Börse AG shareholders / average shareholders' equity for the financial year based on the quarter-end balance of shareholders' equity 16) Adjusted for non-recurring effects 17) Since Q3/2013, this figure has included warrants and certificates due to the consolidation of Börse Frankfurt Zertifikate AG.

Report on post-balance sheet date events

On 1 February 2017, Deutsche Börse AG announced that the Public Prosecutor's Office of Frankfurt/Main investigated at Deutsche Börse AG in respect of a share purchase by its Chief Executive Officer which was carried out on 14 December 2015 in implementation of the Executive Board's remuneration programme as approved by the Supervisory Board of Deutsche Börse AG. Such programme provides for an investment of the Executive Board members in shares of Deutsche Börse AG. Deutsche Börse AG and the Chief Executive Officer fully cooperate with the public prosecutor.

On 6 February 2017, the relevant bodies of Deutsche Börse AG and London Stock Exchange Group plc (LSEG) decided to formally submit the divestment of LCH.Clearnet SA by LCH.Clearnet Group Limited as a remedy to the European Commission in order to address anti-trust concerns raised by the European Commission in relation to the merger of both companies.

Following the market test in relation to the remedy proposal of 6 February 2017, the European Commission has raised new concerns regarding the viability of LCH SA as a divestment business in relation to access to bond and repo trading feeds currently provided for by MTS S.p.A., an Italian regulated electronic trading platform. The European Commission has therefore required that Deutsche Börse AG and LSEG commit to the divestment of LSEG's majority stake in MTS S.p.A. to secure merger clearance. LSEG has resolved to not commit to the required divestment of LSEG's majority stake in MTS S.p.A.

The parties will await the further assessment by the European Commission and currently expect a decision by the European Commission on the merger of Deutsche Börse AG and LSEG no later than 3 April 2017.

On 2 March 2017, Deutsche Börse Group announced that it had completed the divestiture of its remaining shareholding in BATS Global Markets, Inc. (BATS). After receiving a cash and share consideration as part of the acquisition of BATS by Chicago Board Options Exchange, Inc. (CBOE), the CBOE shares were sold in the market. Deutsche Börse AG expects a positive impact on its net profit for the period attributable to Deutsche Börse AG shareholders of around €68 million in the first quarter of 2017. In Q4/2016, Deutsche Börse already realised a net profit contribution of around €23 million by selling one third of its stake in BATS. This stake resulted from a participation of the divested International Securities Exchange Holdings, Inc. (ISE) in Direct Edge Holdings, LLC, which later merged with BATS.

On 3 March 2017, the Executive Board of Deutsche Börse AG communicated that its indirectly held subsidiary European Energy Exchange AG has reached an agreement in principle with the shareholders of Nodal Exchange Holdings, LLC on the purchase of all shares in Nodal Exchange Holdings, LLC. The total purchase price for all shares amounts to a low nine-digit sum (in US dollars). The execution of binding agreements is intended to take place shortly. The closing of the acquisition is still subject to customary conditions such as required regulatory approvals.

Non-financial key performance indicators

Employees

Committed, highly skilled employees are one of the cornerstones of Deutsche Börse Group's business success. Their dedication, flexibility and will to deliver outstanding performance shape its corporate culture. Deutsche Börse Group aims to make sure that staff with these qualities continue to join the company in the future and, ideally, that they stay for the long term. It does this by adopting a sustainable human resources policy. Within the scope of its "Accelerate" programme, the Group increased its emphasis upon a high-performance culture, with a more distinct focus on clients' needs and on innovation. This culture is supported by a remuneration system for executive staff which incorporates growth, performance, and financial indicators to a higher extent than before.

Deutsche Börse Group employs an international workforce at 37 locations worldwide: as at 31 December 2016, Deutsche Börse Group had 5,176 employees (31 December 2015: 5,100), while the average number of employees in the reporting period was 5,095 (2015: 4,760). The decrease in staffing levels was predominantly attributable to the deconsolidation of International Securities Exchange Holdings, Inc. (–183), Infobolsa S.A. (–79) and Market News International Inc. (–91) and their respective subsidiaries. On the other hand new jobs were created (+246) mainly in the context of the "Accelerate" growth initiatives and other strategically important projects, such as IT sourcing and outsourcing initiatives.

To recruit and retain the best talent for the company, Deutsche Börse Group offers flexible working time models. Including part-time employees, there was an average of 4,731 full-time equivalents during the year (2015: 4,460). As at 31 December 2016, the proportion of part-time employees was higher in the general workforce than in management, and it was higher among women than among men.

It is Deutsche Börse Group's declared intention to achieve a reasonable work-life balance. The company offers a number of options designed to achieve a positive work-life balance as part of its "Job, Life & Family" initiative:

- option to work from home (teleworking)
- childcare service for emergencies and during school holidays (a service used in Germany on a total of 78 days)
- emergency parent-child offices at the Eschborn, Luxembourg and Prague locations

Employees per countries/regions

	31 Dec 2016	%
Germany	2,226	43
Luxembourg	1,076	21
Czech Republic	793	15
Ireland	314	6
United Kingdom	167	3
Rest of Europe	302	6
North America	97	2
South America	2	0
Asia	192	4
Middle East	7	0
Total	**5,176**	**100**

Employees by segment

	31 Dec 2016	31 Dec 2015
Eurex	1,851	1,651
Xetra	323	326
Clearstream	2,443	2,397
Market Data + Services	559	726
Total	**5,176**	**5,100**

- reservation of places for employees' children aged between six months and three years at a day care centre in Eschborn, whereby the number of dedicated places depends on demand within the company
- an "Elder and Family Care" programme to facilitate support for family members requiring care
- the option to take sabbaticals, used by three employees in Luxembourg and six in Prague in 2016

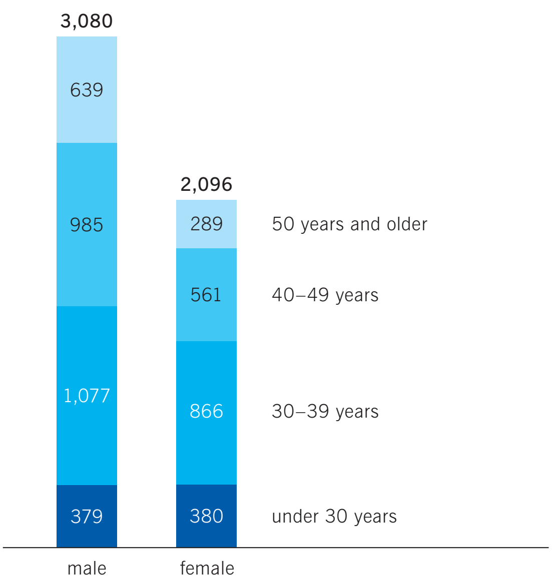
A total of 67 male and 81 female employees took parental leave in financial year 2016, thereof one male and one female in management positions. In the reporting period, 61 male and 53 female employees returned to the company after taking parental leave, while three male and five female employees left the company after their parental leave. Deutsche Börse Group supported its employees by subsidising childcare in the amount of €791 thousand in the reporting period (2015: €789 thousand). All employees receive a monthly net amount of up to €255.65 per child until it is six years old or starts school.

Employees may attend sports or relaxation courses. The purpose of these measures is to achieve a good work-life balance. One of the objectives pursued with these measures is to ensure that employees remain healthy, in spite of high workloads, and to keep sickness levels within the company as low as possible. For instance, the company assigns increased importance to the fact that employees take their annual vacation during the course of the year. The sickness ratio within Deutsche Börse Group amounted to 2.9 per cent in the year under review (2015: 3.1 per cent).

As at 31 December 2016, 70 per cent of Deutsche Börse Group employees were graduates (2015: 69 per cent). This figure is calculated on the basis of the number of employees holding a degree from a university, university of applied sciences or university of cooperative education; it also includes employees who have completed comparable studies abroad. In the area of continuing professional development, the Group invested an average total of 3.8 days per employee in 2016 (2015: 3.6 days) and, among other things, conducted 1,524 internal training events (2015: 1,079 internal training events). Of these, 40 per cent were on business-related issues, 26 per cent covered specialist topics, 10 per cent dealt with the work-life balance, 24 per cent were on IT subjects and

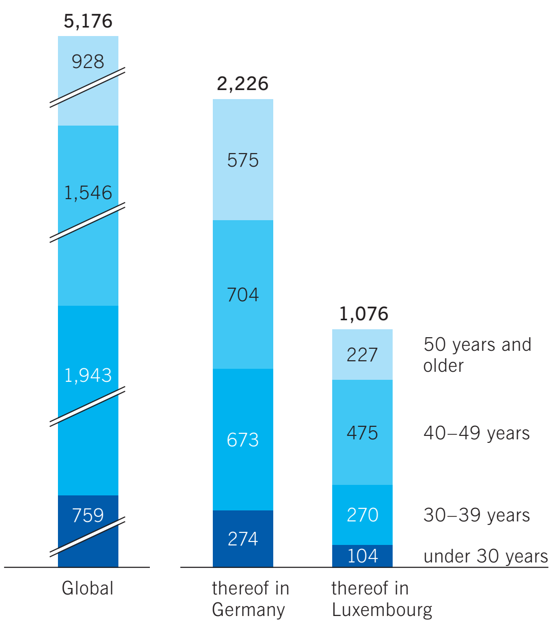
Deutsche Börse Group employee age structure

by gender



Deutsche Börse Group employee age structure

by location



were part of induction training. The digital “Future Workplace” environment supports collaboration throughout the Group; it brings colleagues around the world closer together and facilitates everyday work routines for all members of staff. The Future Workplace comprises the Microsoft SharePoint collaboration platform, the Skype for Business messenger and video call service, as well as Good Work for mobile business communications. Numerous information sessions and training courses were held to train staff in using the Future Workplace.

Adjusted for efficiency programme costs, staff costs per employee stood at €121 thousand and corresponded approximately to those of the previous year (2015: €125 thousand). Deutsche Börse Group’s Executive Board resolved a voluntary salary increase of 2.5 per cent in Germany in financial year 2016. Salaries were also adjusted at the Group’s other locations.

The average age of Deutsche Börse Group’s employees at the end of the reporting period was 39.7 years (2015: 39.8 years). The charts entitled “Deutsche Börse Group employee age structure” show the employee age structure as at 31 December 2016. In the course of the year, a total of 386 employees left Deutsche Börse Group (not including deconsolidation effects and colleagues who accepted one of the company’s offers under the efficiency programmes and left the company or took early retirement). A total of 755 people joined the Group (excluding consolidation effects). The staff turnover rate was 9.8 per cent (adjusted: 7.7 per cent), an increase year-on-year (2015: 7.6 per cent and 7.2 per cent respectively). The average length of service at the end of the reporting period was 8.9 years (2015: 9.7 years).

Intensified talent promotion

To motivate and promote top talent is a key instrument for Deutsche Börse Group to remain sustainably successful in this digital age. Two new programmes were launched to this end: the "Evolving Leaders" programme, which is designed to identify and promote future managers, and the "Show Your Talent" initiative, which is set to create visibility for – and to support – employees' entrepreneurial and innovative potential. The previous nomination process was replaced by an application scheme, which provides for a better overview of existing talent within the company. At the same time, the programmes are designed to strengthen staff commitment and their performance orientation, as outlined above.

360-degree feedback introduced for executive staff

During the year under review, executives' performance was for the first time not only assessed by their respective superiors but also by employees within their area of responsibility, and by fellow executives. The over 90 per cent response rate shows that the programme was very well received. The experience gained will be incorporated into career development planning for executive staff.

Key data on Deutsche Börse Group's workforce as at 31 December 2016

	Global			thereof in Germany			thereof in Luxembourg		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
Employees	3,080	2,096	5,176	1,364	862	2,226	646	430	1,076
Senior and middle management	282	48	330	151	29	180	70	14	84
Junior management	230	88	318	111	31	142	57	27	84
Staff	2,568	1,960	4,528	1,102	802	1,904	519	389	908
Part-time employees									
Senior and middle management	5	4	9	4	1	5	1	3	4
Junior management	0	9	9	0	4	4	0	5	5
Staff	80	432	512	54	251	305	19	122	141
Disabled employees	32	28	60	28	27	55	3	0	3
Proportion of graduates (%)	73	66	70	76	65	72	57	54	56
Apprentices	18	6	24	18	6	24	–	–	–
Interns and students[1]	105	116	221	90	105	195	15	11	26
Length of service									
Under 5 years (%)	42	42	42	36	39	37	23	28	25
5–15 years (%)	33	35	34	31	30	31	31	31	31
Over 15 years (%)	25	23	24	33	31	32	46	41	44
Staff turnover									
Joiners	439	316	755	160	132	292	35	35	70
Leavers	309	192	501	126	61	187	45	25	70
Training days per staff member	3.57	4.14	3.80	3.70	4.96	4.19	4.16	4.14	4.15
Promotions	131	132	263	34	45	79	37	19	56
Employees covered by collective bargaining agreements	1,525	1,102	2,627	966	689	1,655	559	413	972

1) The global figures reported here refer solely to the locations in Germany, Luxembourg and the Czech Republic; this corresponds to 80 per cent of Group staff.

Target female quotas adopted

In accordance with the Gesetz für die gleichberechtigte Teilhabe von Frauen und Männern an Führungspositionen in der Privatwirtschaft und im öffentlichen Dienst (German Act on the Equal Participation of Women and Men in Leadership Positions in the Private and Public Sectors), Deutsche Börse AG's Supervisory Board and Executive Board have defined target quotas for women on these boards and for the two management levels directly beneath the Executive Board. These target quotas relate to Deutsche Börse AG (excluding subsidiaries) and will be valid until 30 June 2017.

At the time the Executive Board resolved the target quotas (15 September 2015), the share of female employees amounted to 6 per cent for the first management level, and 10 per cent for the second management level. The Executive Board resolved as a minimum target to maintain those quotas until 30 June 2017. As at 31 December 2016, female proportion for the first and second management level below Deutsche Börse AG's Executive Board was 11 per cent and 15 per cent, respectively.

In 2010, the Executive Board had already set a voluntary target for Deutsche Börse Group to increase the proportion of women in middle and senior management to 20 per cent, and in junior management to 30 per cent, by 2020. The Group has affirmed this ambition. These targets relate to Deutsche Börse Group worldwide, including subsidiaries. In contrast to statutory obligations, the voluntary commitment is based on a wider definition of management levels, including team leaders, for example. In Deutsche Börse Group's global operations, as at 31 December 2016, these quotas stood at 15 per cent (2015: 15 per cent) for middle and senior management and 28 per cent (2015: 27 per cent) for junior management levels. In the Group's German locations, they were 16 per cent (2015: 14 per cent) and 22 per cent (2015: 23 per cent), respectively.

In order to raise the share of women in executive positions, the company explicitly ensures that women are included in proposals for executive positions. In principle, however, qualifications are decisive when filling such vacancies. In addition, Deutsche Börse Group offers numerous additional tools to promote female employees, such as targeted succession planning, a mentoring programme involving internal and external mentors, a women's network, as well as training courses designed specifically for women. 12 of the current 25 members of the High Potential Circle, Deutsche Börse Group's training programme for potential future executives, are female (48 per cent).

Furthermore, the Group analyses at regular intervals whether there are remuneration differences between men and women. No systematic discrimination against men or women was detected. In fact, any differences in remuneration are based on qualifications, the length of service and function.

Sustainable economic activity

Deutsche Börse Group acts "with an eye to the future". Its sustainability strategy of the same name defines the Group's understanding of entrepreneurial responsibility, and guides its operations. As an international capital markets organiser, Deutsche Börse aims to build and grow trust in market structures. As a listed company included in DAX®, it wants to lead by example. And as a corporate citizen, it endeavours to use its core business competence to contribute to resolving social challenges.

Building trust

Sustainable index products

To provide investors with responsible investment options that meet ecological, social and economic criteria, Deutsche Börse Group develops sustainable indices. Deutsche Börse Group aims to strengthen the future viability of capital markets by offering a wide variety of indices. The indices capture public attention for sustainably operating businesses and increase transparency.

STOXX Ltd., a subsidiary of Deutsche Börse AG, offers a broad spectrum of transparent sustainability indices. With the STOXX® Low Carbon index family, Deutsche Börse more than doubled its offering of indices from 35 to 100 in 2016. It comprises amongst others the index families STOXX® Global ESG Leaders and STOXX® Sustainability. The STOXX Global ESG Leaders indices are based on sustainability ratings covering environmental, social and governance (ESG) criteria. The STOXX Sustainability indices show the performance of sustainable companies.

The STOXX Low Carbon index family was introduced in February 2016. It was designed for investors wishing to "decarbonise", i.e. limit the exposure of their portfolios to reduce climate-related risks, such as stricter regulation or physical damage, while participating in the growth of low-carbon industries. To cater to different investment strategies, STOXX developed fully tailored solutions based on broad index universes, with four sub-families offering additional diversification potential across varying degrees of carbon exposure.

Transparency and standardisation

As a marketplace organiser, Deutsche Börse Group considers ensuring transparency in the capital markets as its direct responsibility. In doing so, it fosters stability in these markets, thereby promoting their economic success. Positioning itself in this manner, Deutsche Börse Group is geared to the needs of market participants.

Today, ESG factors account for a considerable share of enterprise value, which is why institutional investors place more and more importance on this information in their decision-making processes. To support these processes, Deutsche Börse Group has conducted surveys amongst companies listed in the DAX, MDAX®, SDAX® and TecDAX® indices on their sustainability reporting every year since 2014. The results are openly accessible on en.boerse-frankfurt.de/sustainable-securities and provide an overview of the reporting formats the companies choose (annual report, separate sustainability report or combined/integrated report), the standards they apply as well as the contact details for sustainability-related questions for each company.

Leading by example

Sustainability indices and ratings inform on the reporting and performance of companies in the area of sustainability, including a company's ecological, social and corporate governance performance, together with its management of opportunities and risks. As a listed company, Deutsche Börse itself is also subject to regular audits carried out by independent third-party providers. Given thoroughly positive assessments during the year under review, Deutsche Börse Group was again included in numerous sustainability indices:

- Dow Jones Sustainability Indices (DJSI) Europe: since 2005; World: since 2015; result of Robeco SAM rating: total score 71; average sector score 43
- ECPI Euro Ethical Equity Index: since 2008; ECPI EMU Ethical Equity Index: since 2008; ECPI Global Developed ESG Best in Class Equity Index: since 2013 (launch year); result of ECPI ESG rating
- Ethibel Sustainability Index (ESI) Excellence Europe: since 2013; based on Forum Ethibel rating (part of Vigeo)
- Euronext Vigeo – Eurozone 120 Index: since 2014; based on Vigeo rating
- FTSE4Good Indices (Global and Europe): since 2009; result of FTSE ESG rating: total score 4.0 out of 5; supersector relative: 96 out of 100
- MSCI World ESG Index: since 2010; MSCI ACWI ESG Indices: since 2010; based on MSCI ESG research
- PAX ellevate Global Women's Index (PXWEX): since 2014; based on MSCI ESG research
- STOXX ESG Leaders Index: since 2011 (launch year). The entirely rule-based and transparent STOXX rating model means that there is no conflict of interests; result of Sustainalytics rating: total score of 75 (E: 78, S: 74, G: 73), ranking: 7th out of 248 companies
- STOXX Sustainability Indices (Europe and eurozone): since 2001; the entirely rule-based and transparent STOXX rating model means that there is no conflict of interests; based on Bank Sarasin analyses

Raising public awareness

As Deutsche Börse Group is committed to sustainably empowering the non-profit sector, it founded Phineo gAG together with the Bertelsmann Foundation in 2009. Phineo is a charitable public limited company that provides advisory and analysis services to foundations, non-profit organisations and companies. In 2015 Deutsche Börse renewed its status as principal shareholder of Phineo for another two years. Deutsche Börse decided to continue this cooperation with the goal of interlocking its core competences more closely with those provided by Phineo, to jointly develop solutions for social challenges. During the year under review, both houses were among those successfully applying to participate in the EU project "Establishing a new early-stage impact fund for social-tech ventures", thereby establishing a thematic focus for their joint work in 2017.

Key sustainability figures for Deutsche Börse Group

Within the scope of so-called materiality analyses, Deutsche Börse regularly assesses which topics are of particular significance for the Group. The "Sustainability: key figures for Deutsche Börse Group" table summarises the non-financial key performance indicators that characterise the Group's sustainability profile according to these analyses. Key figures on transparency and security have been collected quarterly since 2013, and published in the yearly and half-yearly financial reports.

In July 2016, Deutsche Börse Group established its Group Sustainability Board to develop the Group-wide sustainability strategy and advise the Executive Board on sustainability issues. Thanks to the new Board, Deutsche Börse Group has already included additional steps in its value creation chain and linked the key figures more clearly to its core business.

Comparison with the forecast for 2016

With regard to the development expected of its non-financial performance indicators for 2016, the Group succeeded in maintaining a very high level of systems availability whilst adhering to the highest security standards. In specific terms, the availability of the T7® trading system rose from 99.93 to 99.96 per cent, while Xetra® availability remained at a very high level of 99.99 per cent.

It was in 2010 that the Executive Board adopted a voluntary commitment to increase the share of women holding management positions to 20 per cent by 2020. These numbers cover Deutsche Börse Group in its entirety, on a global basis. During the year under review, the share of women in senior and middle management remained at 15 per cent, and rose to 28 per cent in junior management.

Deutsche Börse Group diligently complies with the Gesetz für die gleichberechtigte Teilhabe von Frauen und Männern an Führungspositionen in der Privatwirtschaft und im öffentlichen Dienst (German Act on Equal Participation of Women and Men in Leadership Positions in the Private and Public Sectors), specifying target quotas for the parent company, Deutsche Börse AG. For details, please see the "Target figures for women in management positions" section in the corporate governance declaration.

Sustainability: key figures for Deutsche Börse Group

		2016	2015
ESG criteria			
Assets under management in ESG index-related products[1]	€m	12.5	–
Transparency			
Proportion of companies reporting in accordance with maximum transparency standards[2]	%	91	91
Number of indices calculated		11,975	11,403
Number of sustainable index concepts		100	35
Security and reliability			
Availability of cash market trading system (Xetra®)	%	99.999	99.999
Availability of derivatives market trading system (T7®)	%	99.962	99.930
Market risk cleared via Eurex Clearing (gross monthly average)	€ trillion	14.8	16.7
Compliance			
Punished cases of corruption		0	0
Proportion of business units reviewed for corruption risk	%	100	100
Number of employees trained in anti-corruption measures[3]		47	976
Number of justified customer complaints relating to data protection		0	0

1) Comprising FlexShares STOXX® Global ESG Impact Index and FlexShares STOXX® US ESG Impact Index, which are used as basis for two ETFs launched in 2016.
2) Ratio of the market capitalisation of companies listed in the Prime Standard to the market capitalisation of all companies listed on the Frankfurter Wertpapierbörse (FWB®, the Frankfurt Stock Exchange)
3) In the fourth quarter of 2016, seven mandatory training modules were planned for implementation. Among these, one completely redesigned module is focused on anti-bribery and corruption. Since December 2016, this module has been successively rolled out for all employees of Deutsche Börse Group; the roll-out will continue into 2017. As of the reporting date, 31 December 2016, the roll-out included 504 employees, with a participation rate of 9 per cent. It will be ensured that all Group employees complete the mandatory trainings in 2017.

Risk report

Deutsche Börse Group's core area of expertise includes solutions that enable its customers to efficiently manage risk and collateral. It is therefore all the more important for the Group to protect itself against risk. This section of the combined management report shows how the company deals with risks and threats. Despite the continuing tensions in the financial system and the regulatory developments, the Group's risk profile remained largely stable. Overall operational risk declined, although the threat of cyber crime increased.

The first section of this risk report explains the enhanced risk strategy and demonstrates how the Group manages its risk. In the second section of this risk report, the Group outlines approaches and methods employed for monitoring risk. In the third section, the various types of risks the Group is exposed to are described, and how the Group manages them. The fourth section provides a summary of the risk situation, together with an outlook on future developments for Deutsche Börse Group's risk management. Supplementing the risk report, senior management sets out what it believes the Group's future prospects are, in the report on opportunities.

Deutsche Börse Group includes, among other companies, Clearstream Banking S.A. and Clearstream Banking AG, which form part of the Clearstream Holding group (hereinafter "Clearstream"), and Eurex Clearing AG. These institutions are subject to the banking supervision regime and its corresponding statutory requirements, and therefore already meet the strictest requirements for risk management. In addition, European Commodity Clearing AG, Eurex Bonds GmbH and Eurex Repo GmbH are also subject to the regulatory requirements set out in EMIR, CRD IV and MiFID (for details on the requirements, see note 20 to the consolidated financial statements). Rules and regulations directly affect the Group's institutions, Clearstream and Eurex Clearing AG, especially the Mindestanforderungen an das Risikomanagement (MaRisk, Minimum Requirements for Risk Management) issued by the Bundesanstalt für Finanzdienstleistungsaufsicht (BaFin, German Federal Financial Supervisory Authority), as well as Circular 12/552 (Central Administration) issued by the Commission de Surveillance du Secteur Financier (CSSF, Luxembourg Financial Supervisory Authority). The so-called second pillar of Basel III contains requirements on how banks must manage their risks; accordingly, this applies to Clearstream and Eurex Clearing AG. Moreover, pursuant to the Gesetz zur Abschirmung von Risiken und zur Planung der Sanierung und Abwicklung von Kreditinstituten und Finanzgruppen (RiskAbschG, German Act on Ringfencing and Recovery and Resolution Planning for Credit Institutions and Financial Groups), which was amended to implement the EU Banking Recovery and Resolution Directive (BRRD), Clearstream and Eurex Clearing AG have prepared recovery plans. Over and above this requirement, Deutsche Börse Group has also voluntarily prepared a Group-wide recovery plan – in particular, in the event that a restructuring might become necessary for Clearstream and/or Eurex Clearing AG. At the request of the national supervisory authorities, Clearstream and Eurex Clearing AG made a substantial contribution to the resolution plans to be developed by the supervisory authorities. Management expects this work to continue in 2017. All other companies in the Group comply with best-in-class standards for comparable companies. As a result, risk management across the Group aims to meet the highest standards.

With its range of risk management services, Deutsche Börse Group strives to make a sustainable contribution – primarily through its role as an organiser of capital markets, securing market integrity and security; and also by enhancing market efficiency in distribution, through its price discovery function. On top of this, Deutsche Börse Group assumes key risk management functions for its clients – for example, through the centralised management of their market price risk exposure via the Group's clearing house, Eurex Clearing AG. In this way, Deutsche Börse Group contributes to the efficiency and systematic stability of the capital markets.

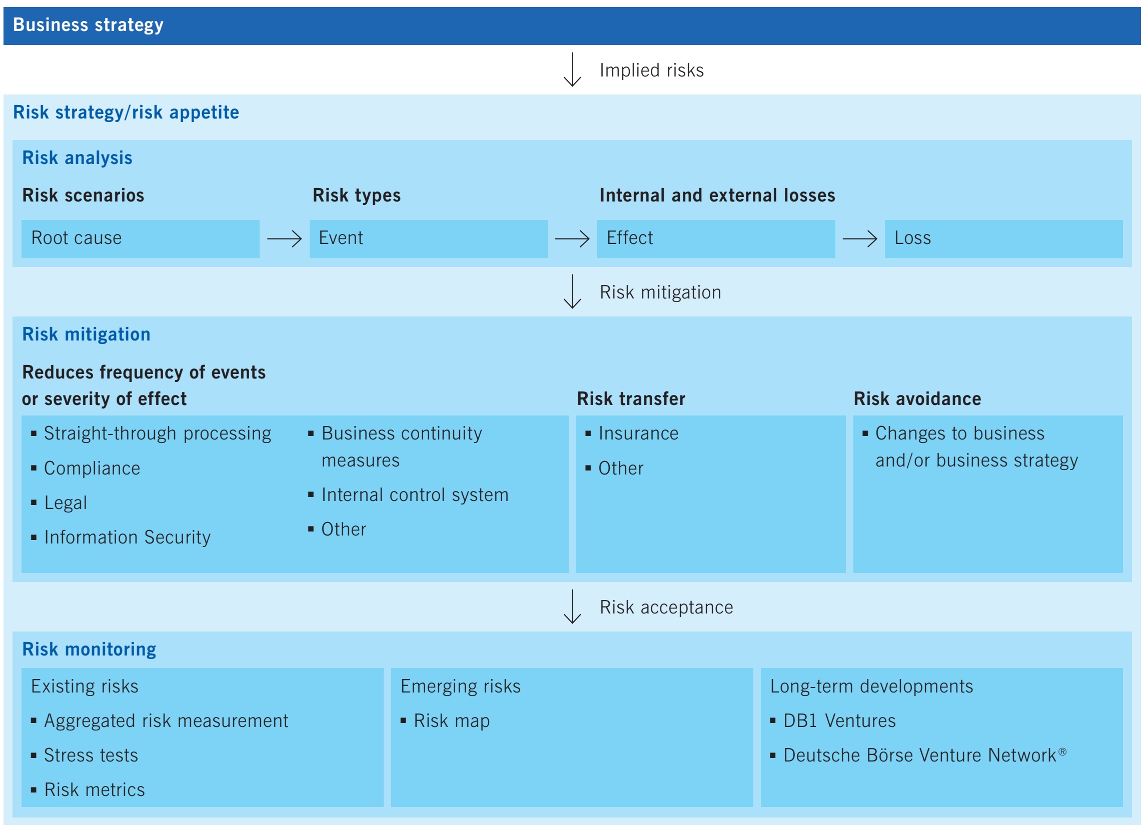
Risk strategy and risk management

Deutsche Börse Group's risk strategy is aligned with its business model and business strategy. The Group provides the infrastructure for reliable and secure capital markets, assists constructively in their regulation and plays a leading role in all of the areas in which it does business. Deutsche Börse Group's risk strategy is based on three core principles:

1. Risk limitation – protecting the company against liquidation and ensuring its continued operation
"Capital exhaustion should not occur more than once in 5,000 years and an operating loss may not be generated more than once every hundred years." This means that one goal is to ensure a probability of 99.98 per cent or more that the total capital will not be lost within the next twelve months. Another objective is to guarantee for a probability of 99.0 per cent or more that Deutsche Börse will at least break even, expressed in terms of its EBIT. In other words, this principle establishes how much risk the Group must be able to withstand while also determining its risk appetite.

2. Support for growth in the various business segments
"Risk management supports the business areas in expanding their business by working together to comprehensively identify and communicate risks." This principle aims to permit the Group to make informed strategic decisions within the scope of the risk appetite that it has defined.

Interlocking business strategy and risk strategy



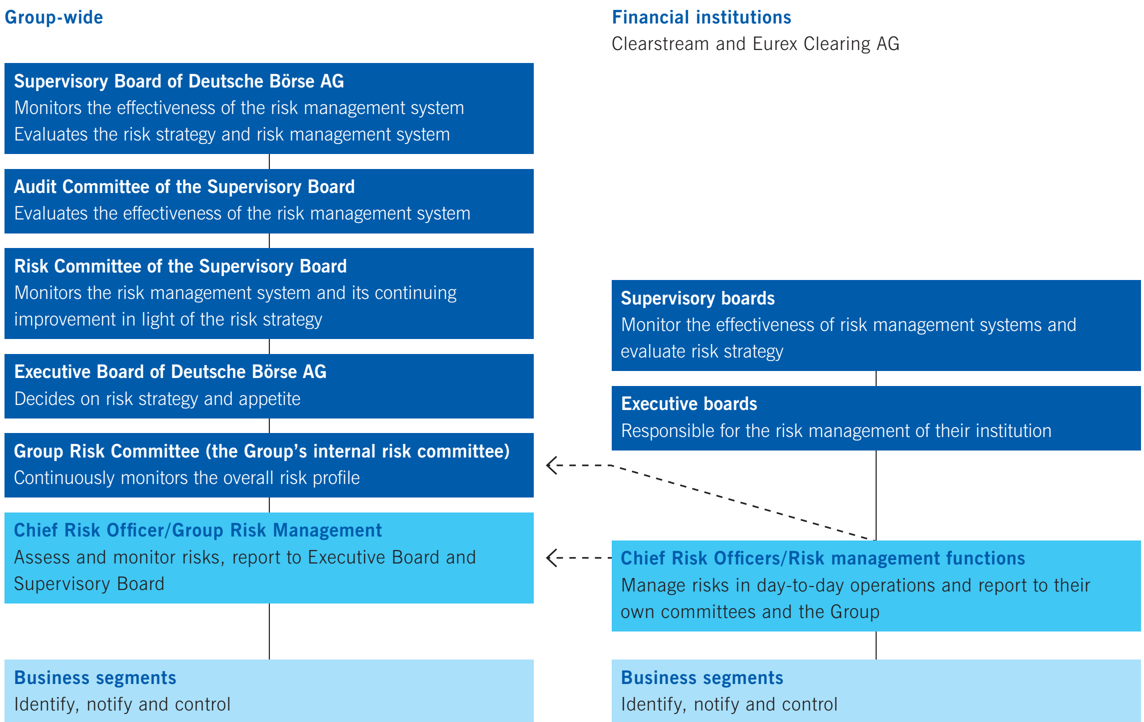
3. Appropriate risk/return ratio
"The return on equity should exceed the cost of equity." Deutsche Börse Group has set itself the goal of ensuring that risk and return should be reasonably balanced, both for specific business are-as in general and for individual regions, products and customers.

Internal risk management is based on the Group-wide detecting and managing of risk, which is focused on its risk appetite, see the "Interlocking business strategy and risk strategy" chart. Deutsche Börse AG's Executive Board has overall responsibility, and defines the framework, for risk management throughout the Group. Under these Group-wide risk management requirements, each business segment and each regulated company is responsible for managing its own risk. This coordinated process ensures, for example, that the Group and its companies can act just as quickly and effectively in the event that several systems fail simultaneously as if a single system fails.

Implementation in the Group's organisational structure and workflow
The risk strategy applies to the entire Deutsche Börse Group. Risk management functions, processes and responsibilities are binding for all Group employees and organisational units. To ensure that all employees are risk-aware, risk management is firmly anchored in the Group's organisational structure and workflows and is flanked by measures such as risk management training. The Executive Board is responsible for risk management overall, whereas within the individual companies it is the responsibility of the management. The boards and committees given below regularly receive comprehensive information on risks.

Deutsche Börse AG's Supervisory Board evaluates the effectiveness of the risk management system, its continuing development and oversees the monitoring of risks. The Supervisory Board has delegated the regular evaluation of the appropriateness and the effectiveness of the risk management

Risk management – organisational structure and reporting lines



system to the Risk Committee. The Risk Committee reviews the risk management system, its continuing improvement and oversees the monitoring of risks. In addition, it examines the risk strategy and risk appetite on an annual basis.

Deutsche Börse AG's Executive Board determines the Group-wide risk strategy and risk appetite and allocates the latter to the company's individual business segments and business units, respectively. It ensures that the Group's risk appetite is and remains compatible with its short- and long-term strategy, business and capital planning, risk-bearing capacity and remuneration systems. It also determines what parameters are used to assess risks, how risk capital is allocated and what procedures apply. It ensures that all business units comply with these requirements for the risk strategy, risk appetite and risk limits.

The Group Risk Committee (GRC) reviews the risk position of the Group every two months and involves the Executive Board in all decisive questions. The GRC is an internal Group committee, chaired by the Chief Financial Officer. In addition, the GRC regularly checks the levels of all parameters for appropriateness and, where necessary, makes recommendations to the Chief Risk Officer (CRO) or the Executive Board, as to any adjustments that should be made.

Group Risk Management (GRM) is headed by the CRO. This unit prepares the proposals to be adopted for risk levers, i.e. the Group's risk strategy, appetite, parameters, capital allocation and procedures. GRM continuously analyses and evaluates risks and produces quantitative and qualitative reports. These are submitted six times a year to the GRC, once a month to the Executive Board, once a quarter to the Risk Committee of the Supervisory Board and twice a year to the Supervisory Board. This system means that the responsible bodies can regularly check whether the defined risk limits are being adhered to consistently. In addition, GRM recommends risk management measures.

The Group's regulated subsidiaries act in the same way, always ensuring that they meet the requirements of the Group. In particular, they adhere to the risk appetite framework allocated to them by Deutsche Börse Group. The relevant supervisory boards and their committees are involved in the process, as are the executive boards and the risk management functions within the various business areas. Clearstream and Eurex Clearing AG, the Group's institutions, implement customised versions of the risk strategy, using parameters and reporting formats that are compatible with the higher-level, Group-wide structure. At Clearstream, responsibility lies with the executive boards of Clearstream Holding AG and Clearstream Banking S.A., which are supervised by their supervisory boards; at Eurex Clearing AG, responsibility lies with the executive board, which is also monitored by the supervisory board.

Centrally coordinated risk management – a five-stage process

Risk management is implemented in a five-stage process. The objective is to identify all potential losses in good time, to record them centrally and to evaluate them in quantitative terms as far as possible; if necessary, management measures must then be recommended and their implementation monitored (see the "The five-stage risk management system" chart). The first stage identifies the risks and the possible causes of losses or operational hitches. In the second stage, the business areas regularly – or immediately, in urgent cases – report to GRM the risks that they have identified and quantified. In the third stage, GRM assesses the risk exposure, while in the fourth stage, the business areas manage the risks by avoiding, mitigating or transferring them, or by actively accepting them. The fifth and final stage involves, for example, monitoring different risk metrics and, where necessary, informing the responsible Executive Board members and committees of significant risks, their assessment and possible emergency measures. In addition to its regular monthly and quarterly reports, GRM compiles ad hoc reports for members of the executive and supervisory boards. The risk management functions at Clearstream and Eurex Clearing AG report to the respective executive boards and supervisory boards. Internal Auditing is responsible for monitoring compliance with the risk management system.

Approaches and methods for risk monitoring

Deutsche Börse Group uses quantitative and qualitative approaches and methods for risk monitoring, with the objective of providing as complete a picture as possible of its risk situation at all times. To this end, the Group continuously reviews internal events with regard to their risk properties, whilst also considering regional as well as global developments. The Group is thus able to recognise and analyse existing risks; at the same time, it is able to swiftly and adequately respond to emerging risks, as well as to changes in the market and the business environment.

Existing risks

Deutsche Börse Group employs a range of tools to monitor and evaluate its operational, financial and business risks on a continuous basis. Applying the liquidation principle, the going-concern principle, and the regulatory capital requirements of the Group's credit institutions, risks are aggregated at a Group level and quantified using the concept of value at risk (VaR). Moreover, so-called stress tests are carried out in order to simulate extreme, yet plausible, events and their impact upon the Group's risk-bearing capacity. Risk metrics, which are used as an early-warning system for quantified [internal] risks, represent an additional risk monitoring method.

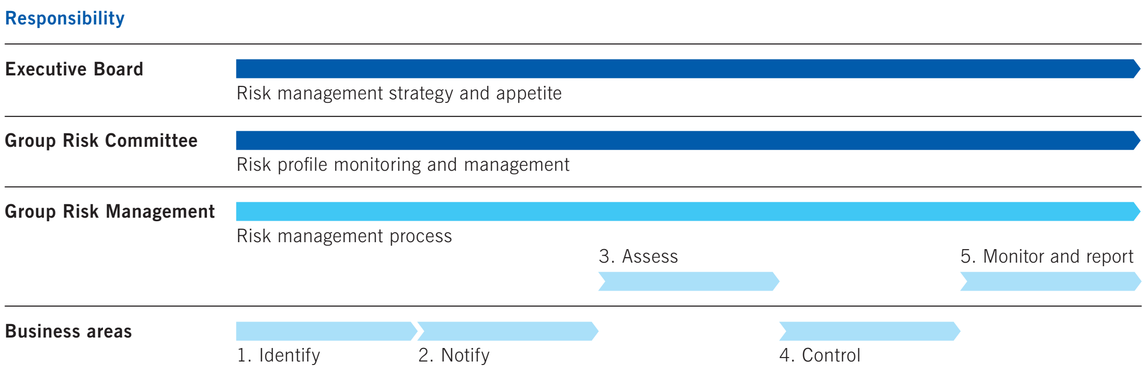
Aggregate risk measurement

The purpose of the VaR model is to determine the amount of capital – given a confidence interval defined *ex ante* – required to cover potential losses incurred within one year. In this context, economic capital (EC) in accordance with the liquidation principle, as well as regulatory capital (RC) for credit institutions within Deutsche Börse Group are calculated. Conversely, the going-concern principle is based on earnings at risk (EaR).

1. Liquidation principle: what risk can the capital cover?

The first part of Principle 1 of its risk strategy specifies that Deutsche Börse Group is not expected to exhaust its risk-bearing capacity in more than 0.02 per cent of all years. For Clearstream and Eurex Clearing AG, EC calculated in this manner also complies with the requirements of the second pillar of Basel III. Deutsche Börse Group determines its risk-bearing capacity on the basis of its reported equity in accordance with International Financial Reporting Standards (IFRSs). It adjusts this figure for precautionary reasons, for example to take into account the fact that it may not be possible to dispose of intangible assets at their carrying amounts in cases of extreme stress. Clearstream and Eurex Clearing AG determine their risk-bearing capacity on the basis of their regulatory capital (for details, see note 20 to the consolidated financial statements).

The five-stage risk management system



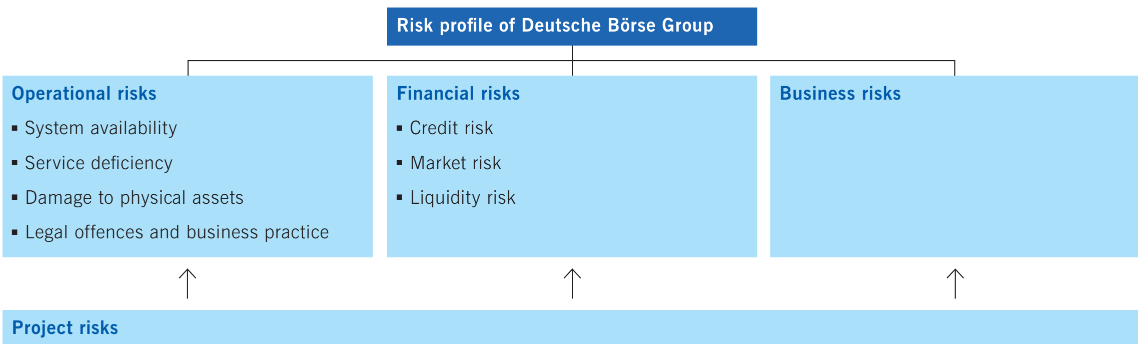
For management purposes, GRM regularly determines the ratio of the EC to the risk-bearing capacity. This indicator is known as the utilisation of risk-bearing capacity and it answers a key risk management question: how much risk can the Group afford and what risk is it currently exposed to? The ratio of EC to risk-bearing capacity remained within the stipulated maximum risk throughout the reporting period. If this were not the case, the Group would in a worst-case scenario exhaust its entire risk-bearing capacity and would have to be liquidated ("gone concern"). The liquidation concept therefore assumes that the Group will not have to be liquidated.

2. Going-concern principle: what risks can be absorbed by earnings?
Deutsche Börse Group employs the going-concern principle that assumes an orderly continuation of the Group in the event of a crisis, and that uses EaR as an indicator. This indicator corresponds to the second part of Principle 1 of the Group's risk strategy, i.e. that an operating loss may occur no more than once in a hundred years. In other words, there should be a probability of 99.0 per cent or more that Deutsche Börse should at least break even (net profit/loss expressed in terms of earnings before interest and taxes (EBIT)). Under the going-concern principle, EaR determined in this way is compared with the Group's risk appetite – which is, in turn, measured in terms of projected EBIT.

3. Regulatory capital requirements
In addition, Clearstream and Eurex Clearing AG must calculate their capital requirements for various risk types (see the "Deutsche Börse Group's risk profile" chart) in line with the Pillar I requirements under Basel II and Basel III. In addition, Eurex Clearing AG must fulfil European Market Infrastructure Regulation (EMIR) requirements. A standardised approach is used for analysing and evaluating credit and market risk; risk weightings are applied on the basis of the relevant counterparty ratings.

The approach taken for operational risk is different: Clearstream has used the significantly more complex advanced measurement approach (AMA) for this in all business units since 2008. This means that it meets the regulatory capital requirements for operational risk set out in the EU's Capital Requirements Regulation (CRR). Similar to EC calculations, the model employed was fundamentally revised and improved during 2016. The method – which has been approved and is regularly tested by BaFin – allows required capital to be allocated to the regulated units. In contrast, Eurex Clearing AG employs the basic indicator approach in order to calculate regulatory capital requirements (for details, see note 20 to the consolidated financial statements).

Deutsche Börse Group's risk profile



Stress tests

Stress tests are being carried out in order to simulate extreme, yet plausible, events for all material types of risk. Using both hypothetical as well as historical scenarios, stress tests simulate the occurrence of extreme losses, or an accumulation of large losses, within a single year. In addition, liquidity risk is evaluated by way of liquidity stress tests as well as so-called inverse stress tests; the latter analyse which loss scenarios would exceed the risk-bearing capacity.

Risk metrics

Risk metrics are used to quantify the exposure to the most important internal operational risks against set limits. Any breach of these limits serves as an early warning signal, which is reported to the Executive Board and other boards and committees on a monthly basis. Furthermore, any such breach will immediately trigger the requisite risk mitigation processes.

Emerging risks

With regard to risk management, Deutsche Börse Group pursues a sustainable, long-term strategy by also evaluating risks beyond a twelve-month horizon. For this purpose, the Group has developed so-called risk maps covering impending regulatory requirements, business risks, as well as IT and information security risks. Risk maps classify risks by their probability of occurring – and by their financial impact, should they materialise. This is based on a five-year planning horizon, which is equivalent to the development cycle for the operational risks relevant to Deutsche Börse Group: regulation and IT. Typically, regulatory requirements evolve over a period of up to five years, from the first draft to implementation. This horizon is also appropriate for the evaluation of IT risks, given that technology is subject to ongoing change.

Long-term developments

For Deutsche Börse Group, risks that prevail throughout longer consideration periods mainly comprise the failure to respond to global changes in, or mega-trends on, the financial markets and the business environment, or a late response to such developments. In order to compensate for such risks, Deutsche Börse Group aspires to think ahead, and to set standards applicable throughout the industry. The Group pursues its targets by promoting mutual exchange with regulators and market participants (e.g. White Paper). A further trend worth noting is the potential of start-up companies to come up with innovations that may have a disruptive effect upon markets. Deutsche Börse Group not only actively invests in such enterprises, through its DB1 Ventures subsidiary – it also offers them a platform. Deutsche Börse Venture Network provides an opportunity to exchange ideas and experience, and also to find investors.

Risk description

The following section describes the types of risk that Deutsche Börse Group generally has to manage and presents the risks it actually faces. It also explains the measures that Deutsche Börse Group uses to reduce the loss event and to minimise their financial effects. Firstly, however, what follows is a brief explanation of the risk profile, which differs from most other financial services providers, since financial risk plays a significantly smaller role for Deutsche Börse Group.

Risk profile

Deutsche Börse Group differentiates between the three standard types of risk: operational, financial and business risk. Project risks also exist but the Group does not specifically quantify these as their impact is already reflected in the three traditional risk types.

Low level of typical bank risk

The risks faced by Deutsche Börse Group's institutions differ fundamentally from those of other financial service providers. Clearstream and Eurex Clearing AG have a structurally lower risk in comparison with other banks because they act as intermediaries rather than, for example, having an own distinct business area that trades on the financial markets. Consequently, Deutsche Börse Group's institutions do not bear the associated market price risks. On the contrary, they offer market participants services such as collateral and risk management to reduce their risk from trading activities. The Group's banking business mainly consists of providing reliable clearing, settlement and custody services, as well as collateral management.

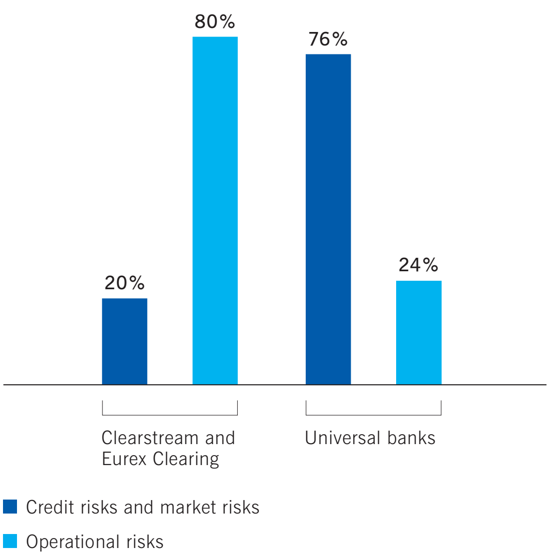
The regulatory capital requirements for Clearstream and Eurex Clearing AG are primarily due to operational risk (see the "Regulatory capital requirements for Clearstream and Eurex Clearing AG" chart). Information on the additional capital requirements under EMIR for Eurex Clearing AG and European Commodity Clearing AG is provided in note 20 to the consolidated financial statements.

Operational risk greater than financial and business risk

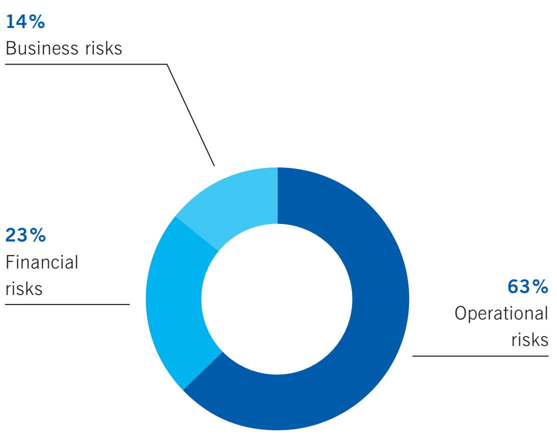
Utilisation of risk-bearing capacity in the liquidation principle and of risk appetite in the going concern principle are used as internal management indicators throughout Deutsche Börse Group (see the "Approaches and methods for risk monitoring" section for an explanation of these terms). In addition to the financial and operational risk already mentioned, business risk is also identified and assessed. This relates in particular to potential threats to revenue such as price pressure or loss in market share as well as cost risks. Under the liquidation principle, financial risk amounts to approximately 23 per cent of Deutsche Börse Group's total risk, while business risk represents 14 per cent of the total. This makes the third typical risk type all the more important for Deutsche Börse Group: at 63 per cent, operational risk accounts for more than half of the total risk (see the "Required economic capital for Deutsche Börse Group, by risk type" chart).

A larger part of the risk is associated with the Clearstream and Eurex segments (see the "Required economic capital by segment" chart), in keeping with the proportion of sales revenue and earnings accounted for by this business. In contrast to the regulatory capital requirements, this calculation also includes business areas that are not covered by banking regulations.

Regulatory capital requirements for Clearstream and Eurex Clearing AG as at 31 December 2016



Required economic capital for Deutsche Börse Group, by risk type as at 31 December 2016



A similar split can be seen for EaR. Here, too, the business segments with the largest proportions of revenues and earnings – Clearstream and Eurex – have the largest shares of earnings at risk (see the "Earnings at risk by segment" chart).

Deutsche Börse Group assigns indicators to each risk exposure to estimate how likely it is to occur and what financial effect it could have. It distinguishes four probability levels (very low, low, medium and high) and four financial impact levels (low, medium, substantial and a risk to the company as a going concern). However, none of the risks assessed reach the fourth impact level either individually or in total; in other words, none jeopardises the existence of the entire Group as a going concern.

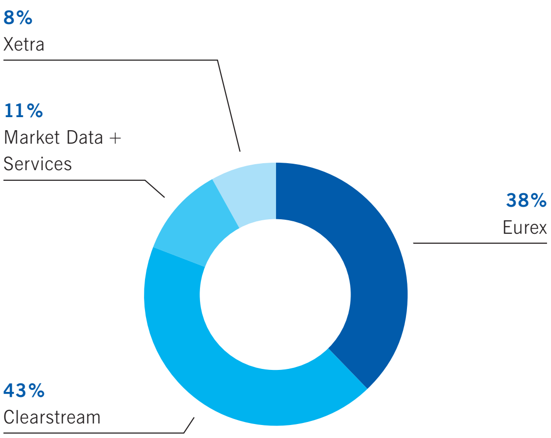
These categories can be used to assess the risk types given below as examples. The estimated probabilities of the risks occurring are categorised as follows:

- very low (the probability of the risk occurring is less than 1 per cent)
- low (the probability of the risk occurring is equal to or greater than 1 per cent but less than 10 per cent)
- medium (the probability of the risk occurring is equal to or greater than 10 per cent but less than 50 per cent)
- high (the probability of the risk occurring is equal to or greater than 50 per cent)

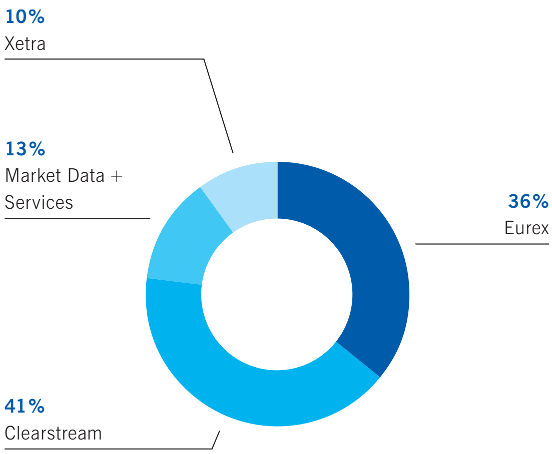
The estimated financial effects can be classified into the following four categories:

- low (the financial loss could be up to 10 per cent of EBIT)
- medium (the financial loss could be up to 50 per cent of EBIT)
- substantial (the financial loss could be up to 100 per cent of EBIT)
- risk to the business as a going concern (the financial loss of Deutsche Börse AG could be up to the available risk cover amount)

Required economic capital by segment
as at 31 December 2016



Earnings at risk by segment
as at 31 December 2016



In the following, the risk types are first illustrated with specific examples and then explained in detail.

1 Operational risk
- failure of a trading system
- cyber attacks
- incorrect processing of client instructions (e.g. corporate actions)
- incorrect handling of the default of a large customer
- losses from ongoing legal disputes
- conflicting laws of different jurisdictions

2. Financial risk
- default of a credit counterparty
- losses arising from the impairment of pension fund assets
- default by a customer and an associated liquidity squeeze

3. Business risk
- market share loss in European trading markets
- the return of the European government debt crisis
- implementation of a financial transaction tax

Risks which could jeopardise the Group's continued existence could arise only from a combination of extreme events that have a very low probability:

- failure of a trading system for several days in a highly volatile market environment
- simultaneous failure of several large systemically important banks
- deliberate breaches of sanctions

These extreme events that could lead to a loss corresponding to more than 100 per cent of annual EBIT are rated as having a probability of less than 0.1 per cent. Such extreme events, also known as "tail risks", have not occurred to date. Tail risks may represent going concern threats for certain subsidiaries, for example if sanctions were to be deliberately contravened. Group Risk Management (GRM) assesses these risks continuously and reports regularly to the Executive Board of Deutsche Börse Group on the results.

Operational risk

Operational risk for Deutsche Börse Group relates to availability, processing, material goods, litigation and business practice (see the "Operational risks at Deutsche Börse Group" chart). Human resources risks are quantified just like other operational risks. Operational risk accounts for 63 per cent of the total Group risk.

System availability

Operational resources such as the Xetra® and T7® trading systems are essential for the services offered by Deutsche Börse Group. They should never fail, in order to ensure that market participants can trade securities or derivatives at any time and without delay. The Group therefore calculates the availability of these systems as an important risk indicator. In line with the Group's risk strategy, the business areas are responsible for monitoring the indicators.

The longer the downtime for one of these systems, the larger the potential loss. An outage could be caused by software or hardware issues, or in unlikely cases, the availability of the systems could be affected by acts of cyber crime or terrorist attack. In the past, only limited failures have occurred both with Xetra and with T7 and its predecessor system. In practice, there has never been a system failure lasting longer than one day. Deutsche Börse Group has taken a number of measures to further minimise the risk of failure lasting an entire day or longer. This supports the view that the probability of a system failure lasting longer than a week in an extremely volatile market is very low. However, the potential financial effect of such an event could be significant if claims are justified and asserted.

In general, availability risk represents the largest operational risk for Deutsche Börse Group. The Group therefore subjects it to regular stress tests, which check not only what happens when its own systems fail but also when suppliers fail to deliver.

Service deficiency

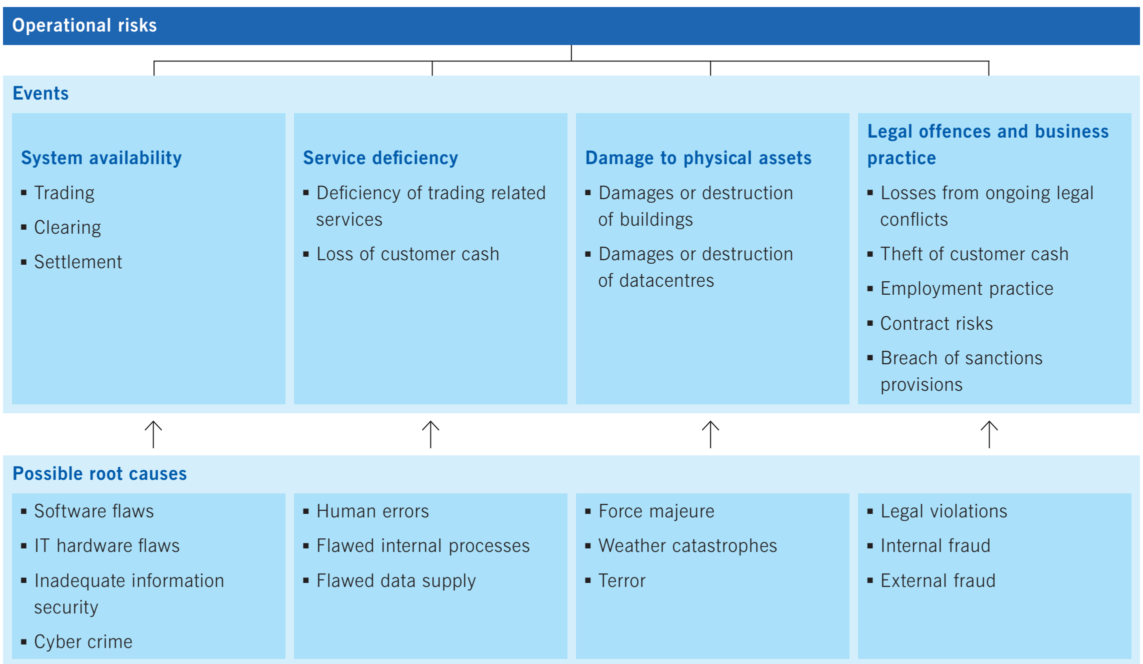
Risks can also arise if a service provided to a customer is inadequate and this leads to complaints or legal disputes. One example would be errors in the settlement of securities transactions due to defective products and processes or mistakes in manual entries. A second example is errors in handling the default of a large clearing customer. To date, defaults are rare, no such handling errors have occurred and related processes are tested at least annually, which is why the probability is considered to be very low. The potential financial loss is put at medium.

Other sources of error may be attributable to suppliers or to product defects or mistakes that may lead to the loss of client assets or mistakes in accounting processes. The Group registers all complaints and formal objections as a key indicator of processing risk.

Damage to physical assets

Natural disasters, accidents, terrorism or sabotage are other operational risks that could, for example, cause the destruction of, or severe damage to, a data centre or office building. Business continuity management (BCM) aims at averting significant financial damage (see the “Business continuity management” chart).

Operational risks at Deutsche Börse Group



Legal offences and business practice

Losses can also result from ongoing legal proceedings. Deutsche Börse judges the probability that this operational risk will occur to be medium, although the losses involved could be substantial. As a result, GRM continually monitors ongoing legal proceedings. These can be brought if Deutsche Börse Group breaches laws or other requirements, enters into inadequate contractual agreements or fails to monitor and observe case law to a sufficient degree. Legal risk also includes losses due to fraud and labour law issues. This could entail, for example, losses resulting from insufficient anti-money laundering controls or breaches of competition law or of banking secrecy. Such operational risks can also arise if government sanctions are not observed, e.g. in case of conflicting laws of different jurisdictions, or in the event of breaches of other governmental or higher-order regulations.

In its 2012 corporate report, Deutsche Börse Group informed about proceedings, Peterson vs Clearstream Banking S.A., the first Peterson proceeding, initiated by various plaintiffs seeking turnover of certain customer positions held in Clearstream Banking S.A.'s securities omnibus account with its US depository bank, Citibank NA, and asserting direct claims against Clearstream Banking S.A. for damages of US$250 million. That matter was settled between Clearstream Banking S.A. and the plaintiffs and the direct claims against Clearstream Banking S.A. were abandoned.

In July 2013, the US court ordered turnover of the customer positions to the plaintiffs, ruling that these were owned by Bank Markazi, the Iranian central bank. Bank Markazi appealed, and the decision was affirmed on 9 July 2014 by the Second Circuit Court of Appeals, and then by the US Supreme Court on 20 April 2016. Once the process of distribution of funds to the plaintiffs is complete, a related case, Heiser vs Clearstream Banking S.A., also seeking turnover of the same assets, should be dismissed.

On 30 December 2013, a number of US plaintiffs from the first Peterson case, as well as other US plaintiffs, filed a complaint targeting restitution of certain assets that Clearstream Banking S.A. holds as a custodian in Luxembourg. In 2014, the defendants in this action, including Clearstream Banking S.A., moved to dismiss the case. On 19 February 2015, the US court issued a decision granting the defendants' motions and dismissing the lawsuit. On 6 March 2015, the plaintiffs appealed the decision to the Second Circuit Court of Appeals, which heard oral arguments in the case on 8 June 2016.

On 14 October 2016, a number of US plaintiffs filed a complaint naming Clearstream Banking S.A. and other entities as defendants. The complaint in this proceeding, Havlish vs Clearstream Banking S.A., is based on similar assets and allegations as in the Peterson proceedings. The complaint seeks turnover of certain assets that Clearstream Banking S.A. holds as a custodian in Luxembourg. The complaint also asserts direct claims against Clearstream Banking S.A. and other defendants and purports to seek damages of up to approximately US$6.6 billion plus punitive damages and interest.

On 2 April 2014, Clearstream Banking S.A. was informed that the United States Attorney for the Southern District of New York has opened a grand jury investigation against Clearstream Banking S.A. due to Clearstream Banking S.A.'s conduct with respect to Iran and other countries subject to US sanction laws. Clearstream Banking S.A. is cooperating with the US attorney.

A dispute has arisen between MBB Clean Energy AG (MBB), the issuer of a bond eligible in Clearstream Banking AG, and end investors. MBB issued a first tranche of the bond in April 2013 and a second tranche of the bond in December 2013. The global certificates for the two tranches of the bond were delivered into Clearstream Banking AG by the paying agent of the issuer. The dispute relates to the non-payment of the second tranche of the bond with a nominal value of €500 million and the purported lack of validity of the bond. Clearstream Banking AG's role in the dispute on the purported lack of validity of the MBB Clean Energy AG bond is primarily to safekeep the global note, deposited by the paying agent of the issuer, as national central securities depository. At this stage, it is unclear if and to what extent potential damages exist and if so who would ultimately be responsible. Provisional insolvency proceedings have meanwhile been opened in respect of the issuer, MBB Clean Energy AG.

Measures to mitigate operational risk

Deutsche Börse Group takes specific measures to reduce its operational risk. Among them are emergency and contingency plans, insurance policies, measures concerning information security and the physical safety of employees and buildings as well as precautions to ensure that the applicable rules are observed (compliance).

Emergency and contingency plans

It is essential for Deutsche Börse Group to provide its products and services as reliably as possible. The Group has to maintain its business operations and safeguard against emergencies and disasters. If its core processes and resources are not available, this represents not only a substantial risk for the entire Group but also even a potential systemic risk for the financial markets in general. As a result, Deutsche Börse Group has set up a system of emergency and disaster plans covering the entire Group (business continuity management, BCM). This covers all processes designed to ensure continuity of operations in the event of a crisis and significantly reduces availability risk. Measures include precautions relating to all important resources (systems, workspaces, employees, suppliers), including the redundant design of essential IT systems and the technical infrastructure, as well as emergency measures designed to mitigate the unavailability of employees or workspaces in core functions at all important locations. Examples of such precautions are listed in the "Business continuity management" chart.

Business continuity management

Emergency and crisis management process

Systems
- Trading, clearing and settlement systems designed to be available at all times
- Duplication of all data centres to contain failure of an entire location

Workstations
- Emergency arrangements for all essential functions
- Fully equipped emergency workspaces, ready for use at all times
- Remote access to systems by numerous employees

Employees
- Option to move essential operational processes to other sites if staff in one site are not able to work
- Additional precautions to ensure that operations remain active in the event of a pandemic

Suppliers
- Contracts and agreed plans of action for suppliers and service providers to specify emergency procedures
- Careful and continuous check of suppliers' emergency preparations
- Utilisation of multiple suppliers

Preparations for emergencies and crises

The Group has introduced and tested a management process for emergencies and crises that enables it to respond quickly and in a coordinated manner. This is intended to minimise the effects on business processes and on the market and to enable a quick return to regular operations. All business segments have appointed emergency managers to act as central contacts and take responsibility during emergencies and crises. The emergency managers inform the Executive Board or raise the alarm with them in the case of severe incidents. In the event of a crisis, the Executive Board member responsible acts as the crisis manager. The emergency and contingency plans are tested regularly by realistically simulating critical situations. Such tests are generally carried out unannounced. The test results are evaluated based on the following criteria:

- Functionally effective: the measures must be technically successful.
- Executable: the employees must be familiar with the emergency procedure and be able to execute it.
- Timely: emergency measures must ensure that operations restart within the intended time period.

Information security

Information security attacks and cybercrime represent operational risks for Deutsche Börse Group. Cybercrime is increasingly becoming a focus for organised crime and now features high on the list of crime statistics year after year. It is a threat to all financial services providers, to credit institutions and to Deutsche Börse Group. Due to the growing danger from cyber criminals and increasing regulatory requirements, the Group is focused on mitigating these specific risks and expanding its information security measures. Besides mitigating availability risks, these serve in particular to reduce the risk of loss of confidential information and hence, to preserve Deutsche Börse Group's integrity as a transaction services provider. In this connection, the Group has extended its procedures to quantify cyber risks and has specified them in more detail, in order to facilitate implementation of targeted countermeasures.

The Group operates a situation centre (Computer Emergency Response Team, CERT), which detects and assesses threats from cybercrime in cooperation with national and international financial intelligence units at an early stage and coordinates risk mitigation measures in cooperation with the business areas. Moreover, procedures based on industry standards ISO 27001 and NIST 800-53 were established in order to bring Deutsche Börse Group's information security measures continuously into line with growing – and permanently changing – requirements, and to anticipate regulatory requirements at an early stage. In 2015, Group Information Security launched an extensive Group-wide programme designed to raise staff awareness for the responsible handling of information and to improve staff conduct in this aspect. Furthermore, Deutsche Börse Group has been a full member of national associations since 2016 (Cyber Security Sharing and Analytics, CSSA) and international networks (Financial Services Information Sharing and Analysis Center, FS-ISAC) which contribute significantly towards a forward-looking stance vis-à-vis cyber threats, and the development of strategies to fend off such threats.

Physical security

Deutsche Börse Group places great importance on physical security issues. Corporate Security has developed an integral security concept to protect the company, its employees and values from external attacks. A highly qualified security staff assess the security situation permanently and are in close contact with local authorities and security departments of other companies.

In an increasingly competitive global market environment, know-how and confidential company information bear the potential of a major financial advantage to outsiders or competitors. Deutsche Börse applies state-of-the-art technology to prevent its knowledge from being obtained illegally, e.g. through wiretapping. Furthermore, Corporate Security is tasked with providing support to employees while they are travelling or on foreign assignment. In this context, a world-wide travel security programme was established, supported by a travel-tracking system.

Insurance policies

Operational risks that Deutsche Börse Group cannot or does not wish to bear itself are transferred to insurance companies, if this is possible at a reasonable price. The insurance policies are checked individually and are approved by Deutsche Börse AG's Chief Financial Officer.

Compliance

The compliance function, in cooperation with the individual business segments, has the task of protecting the Group against a variety of monetary and nonmonetary risks, such as reputational damage in the markets it serves, in the view of supervisors, or the general public. While endowed with appropriate autonomy from the business units, the compliance function nonetheless fulfils its mandate as an enabler of business to focus on the customers and markets the Group wishes to serve, while taking informed steps to mitigate compliance risks.

Deutsche Börse Group pursues an enterprise-wide approach to its compliance function, ensuring that applicable laws and regulatory requirements are followed with respect to individual legal entities, while aligning dedicated legal entity compliance and regulatory personnel through a common reporting structure to the Group Chief Compliance Officer. Wherever efficient and practical, the Group pursues the development of common compliance policies and supporting tools. As an example of adopting to evolving requirements, policies and procedures were revised in 2016 to implement provisions of the EU Market Abuse Regulation, which are of natural interest to the Group as a provider of reliable financial market infrastructures.

As a further step in the enhancement of Group compliance over the past few years, in the course of 2016, the Group significantly increased its dedicated compliance personnel in major offices around the world. The compliance officers closely align their work with the business areas and other control functions to form a solid second line of defence. Further investments continue to be made into compliance IT systems that provide for a more consistent and data driven approach to risk mitigation, with a current focus on review of trends and patterns as well as statistical anomalies that could be indicators of compliance risk.

Deutsche Börse Group has significantly enhanced its due diligence procedures with respect to its customers, members and counterparties, and in 2016, completed an enhanced review of all pre-existing relationships. In connection with evolving regulatory expectations, in particular the pending implementation of the EU 4th Anti-Money Laundering Directive, the Group is developing, where practicable, more centralised approaches to compliance risk management of customers served by multiple Group legal entities.

Since its products and services as a provider of financial market infrastructures are often focused on other financial intermediaries at the wholesale level, its cooperative approach seeks to raise the standards throughout the industry and enhance the integrity of financial markets for all participants. Among the notable efforts that continue to be championed by Deutsche Börse Group and Clearstream is the development by the International Securities Services Association (ISSA) of the Financial Crime Compliance Principles for Securities Custody and Settlement together with practical guidance for implementation. Senior Group Compliance officers are active participants in national and international industry groups such as this seeking to define and promote adoption of consistent industry standards.

The compliance function will continue its efforts to strengthen the compliance culture throughout the Group. It pursues a best-in-class approach and contributes to the business strategy through an advisory role to develop solutions for our customers in the ever evolving financial regulatory environment.

Financial risks

Deutsche Börse Group classifies its financial risk into credit, market and liquidity risk (see the "Financial risks at Deutsche Börse Group" chart). At Group level, these risks account for about 23 per cent of the entire risk profile (this information only includes credit and market risk; liquidity risk is not quantified as part of the EC; see note 36 to the consolidated financial statements). They primarily apply to the Group's institutions. As a result, the following explanation focuses on Clearstream and Eurex Clearing AG.

Credit risk

Credit risk describes the danger that a counterparty might not meet its contractual obligations, or not meet them in full. Measurement criteria include the degree to which the credit line has been utilised, the collateral deposited and concentration risk. Although Clearstream and Eurex Clearing AG often have short-term claims against counterparties totalling several billion euros overall, these are secured in most cases by collateral deposited by the market participants. Moreover, the Group regularly evaluates the reliability of its emergency plans at Clearstream and Eurex Clearing AG in the event of client defaults, and the resulting credit risk.

Furthermore, Clearstream Banking S.A. is exposed to credit risk arising from its strategic securities lending transactions (ASLplus). Only selected banks act as borrowers. All borrowing transactions are fully collateralised. Only selected bonds may be used as collateral; these must be rated at least A+ by the Standard & Poor's rating agency or the equivalent from other agencies. In the case of short-term securities without individual ratings, the issuers must be rated at least A–1.

Clearstream grants credits to its customers in order to make settlement more efficient. This type of credit business is, however, fundamentally different from the classic lending business. First, credit is extended solely on a very short-term basis, normally for less than a day. Second, it is largely collateralised and granted to clients with high creditworthiness. Furthermore, the credit lines granted can be revoked at any time.

Financial risks at Deutsche Börse Group

Under its terms and conditions, Eurex Clearing AG only enters into transactions with its clearing members. Clearing mainly relates to defined securities, rights, derivatives and emission allowances that are traded on specific stock exchanges. Eurex Clearing AG also offers this service for some over-the-counter (OTC) products such as interest rate swaps and forward rate agreements. As a central counterparty, it steps in between transactional counterparties. Through offsetting mutual claims and requiring clearing members to post collateral, Eurex Clearing AG mitigates its clients' credit risk exposure.

To date, no default by a borrower with a secured credit line has resulted in material financial losses. Deutsche Börse Group continues to view the probability that one of its counterparties could become insolvent and that this could lead to losses for the Group as low. It considers the impact of such an event to be low if the credit line in question is collateralised and medium if it is uncollateralised. The probability of a counterparty to an uncollateralised credit defaulting is considered to be very low. If several large, systemically relevant banks were to default simultaneously, the financial impact might be significant. The probability of this scenario is considered to be very low.

Credit risk can also arise from cash investments. The Treasury department is responsible here, and has Group-wide authority. Treasury largely makes collateralised investments of funds belonging to Group companies as well as Clearstream and Eurex Clearing AG customers. To date, counterparty default has not led to any material loss for the Group. The probability that the default of a counterparty to an uncollateralised cash investment could lead to a loss is considered to be low, the financial loss itself could have a medium impact.

Investment losses on currencies for which Eurex Clearing AG has no access to the respective central banks will be borne, on a pro-rata basis, by Eurex Clearing AG and by those clearing members active in the currency where losses were incurred. The maximum amount which each clearing member will have to contribute in this manner is the total amount such clearing member has pledged with Eurex Clearing AG as cash collateral in this currency. The maximum amount to be borne by Eurex Clearing AG is €50 million.

Reducing credit risk

Clearstream and Eurex Clearing AG assess the creditworthiness of potential customers or counterparties to an investment before entering into a business relationship with them. The companies do this in the same way: they determine the size of individual customers' credit lines based on regular creditworthiness checks, which they supplement with ad hoc analyses if necessary. They define haircuts for securities posted as collateral depending on the risk involved, and continually review their appropriateness. They include all relevant risk factors when determining the haircut and allocates a specific deduction to each. The total haircut is calculated by adding together the individual margins for the risk factors concerned.

In addition, in order to identify potential concentration risks from individual counterparties, Clearstream analyses the VaR at the level of the Clearstream Holding group. For this purpose, a credit risk VaR is calculated at the level of individual counterparties and compared with the overall credit risk VaR. Due to its business model, Clearstream focuses almost exclusively on financial sector customers. However, there is no material concentration of credit risk either on individual counterparties or on individual countries.

Given the size and volatility of its clients' liabilities, Eurex Clearing AG has developed a leading-edge collateral management system, which is described in detail in the following section.

Safety for both participants and the clearing house

Each clearing member must prove that it has capital equal to at least the amounts that Eurex Clearing AG has defined for the different markets. The amount of capital for which evidence must be provided depends on the risk. To mitigate Eurex Clearing AG's risk that clearing members might default before settling open transactions, members are obliged to deposit collateral in the form of cash or securities (margins) on a daily basis and, if required, to meet additional intraday margin calls.

Eurex Clearing AG only permits securities with a high credit quality to be used as collateral. It continually reviews what collateral it will accept and uses haircuts with a confidence level of at least 99.9 per cent to cover market risk. It applies an additional haircut to collateral from issuers in high-risk countries or excludes them from being furnished as collateral altogether. Risk inputs are checked regularly and the safety margins are calculated daily for each security. In addition, a minimum safety margin applies to all securities.

Margins are calculated separately for clearing member accounts and client accounts. Gains and losses resulting from intraday changes to the value of financial instruments are either settled in cash by the counterparties (variation margin) or deposited with Eurex Clearing AG as collateral by the seller due to the change in the equivalent value of the item (premium margin). In the case of bond, repo or equity transactions, the margin is collected from either the buyer or the seller (current liquidating margin), depending on how the transaction price performs compared to the current value of the financial instruments. The purpose of these margins is to offset gains and losses.

In addition, Eurex Clearing AG uses additional collateral to protect itself in the case of default by a clearing member against any risk that the value of the positions in the member's account will deteriorate in the period before the account is settled. This additional collateral is known as the initial margin. The target confidence level here is at least 99.0 per cent (with a minimum two-day holding period) for exchange-traded transactions, or 99.5 per cent (with a five-day holding period) for OTC transactions. Eurex Clearing AG checks regularly whether the margins match the requested confidence level: initial margin is currently calculated using the legacy risk-based margining method, and the new Prisma method, which is already available for all derivative contracts traded. The new method takes the clearing member's entire portfolio – as well as historical and stress scenarios – into account when calculating margin requirements. The objective is to cover market fluctuations for the entire liquidation period until the account is settled. At present, the risk-based margining method is still used for cash market products, physical deliveries, as well as for securities lending and repo transactions. The Prisma method is set to fully replace risk-based margining in the future.

In addition to the margins for current transactions, each clearing member contributes to a clearing fund, with the contributions based on its individual risk profile. This fund is jointly liable for the financial consequences of a default by a clearing member to the extent that this cannot be covered by the member's individual margin, and its own and Eurex Clearing AG's contributions to the clearing fund. Eurex Clearing AG uses regular stress tests to check whether its clearing funds match the risks. This involves subjecting all current transactions and their collateral to market price fluctuations at a confidence level of at least 99.9 per cent. In order to be able to determine potential losses in excess of a clearing member's individual margins, the impact on the clearing fund of a potential default is simulated. Eurex Clearing AG has defined limits which, when exceeded, trigger an immediate adjustment to the size of the clearing fund if necessary. The following lines of defence are available for the case that a clearing member is unable to meet its obligations to Eurex Clearing AG due to a delay in performance or a default:

- First, the relevant clearing member's outstanding positions and transactions can be netted and/or closed from a risk perspective by entering into appropriate back-to-back transactions, or they can be settled in cash.
- Any potential shortfall that might be incurred in connection with such a closing or cash settlement, as well as the associated costs, would be covered in the first instance by the collateral provided by the clearing member concerned. As at 31 December 2016, collateral amounting to €49,431.6 million had been provided for the benefit of Eurex Clearing AG (after haircuts).
- After this, the relevant clearing member's contribution to the clearing fund would be used to cover the open amount. Contributions ranged from €1 million to €432 million as at 31 December 2016.
- Any remaining shortfall would initially be covered by a contribution to the clearing fund by Eurex Clearing AG. Eurex Clearing AG's contribution amounted to €100 million as at 31 December 2016.
- Only then would the other clearing members' contributions to the clearing fund be used proportionately. As at 31 December 2016, aggregate clearing fund contribution requirements for all clearing members of Eurex Clearing AG amounted to €3,002.7 million. After the contributions have been used in full, Eurex Clearing AG can request additional contributions from each clearing member, which can be maximum twice as high as their original clearing fund contributions. In parallel to these additional contributions, Eurex Clearing AG provides additional funds of up to €300 million, provided via a Letter of Comfort from Deutsche Börse AG (see below). These additional funds will be realised together with the additional clearing member contributions, on a pro-rata basis.
- Next, the portion of Eurex Clearing AG's equity which exceeds the minimum regulatory equity would be realised.
- Finally, the remaining minimum regulatory equity of Eurex Clearing AG would be drawn upon.
- In addition, Deutsche Börse AG has issued a Letter of Comfort in favour of Eurex Clearing AG. With this Letter of Comfort, Deutsche Börse AG commits to provide the funds to Eurex Clearing AG required to fulfil its duties – including the duty to provide additional funds of up to €300 million, as mentioned before. The maximum amount to be provided under the Letter of Comfort amounts to €600 million, including the payments made already. Third parties are not entitled to any rights under the Letter of Comfort.

As at 31 January 2017, Eurex Clearing AG increased its contribution to the clearing fund by €50 million, to €150 million.

In the event of default by a clearing member, Eurex Clearing AG triggers the Default Management Process (DMP). Its purpose is to rebalance the CCP, and thus to protect the non-defaulting participants from any negative consequences resulting from the default. Every product cleared by Eurex Clearing AG is clearly assigned to a so-called liquidation group. Products within a single liquidation group share similar risk characteristics, and can be liquidated using the same process if a clearing member defaults. The DMP is conducted at liquidation group level; all positions held by the defaulted clearing member and belonging to the same liquidation group are jointly transferred to other participants via an auction or an independent sale. The clearing fund is segmented along these liquidation groups, based on their respective margin requirements. Should the cost of liquidation exceed the defaulter's resources, Eurex Clearing AG will always make a contribution itself before the mutual clearing fund is utilised. During the DMP, Eurex Clearing AG can convene committees of market experts (default management committees) to advise on and support all liquidation activities.

Eurex Clearing AG has dealt with four defaults of clearing members to date: Gontard & MetallBank (2002), Lehman Brothers (2008), MF Global (2011) and Maple Bank (2016). In all cases, the non-defaulters were fully protected, as the liquidation costs were met without resort to Eurex Clearing AG's own capital or the clearing fund. A substantial portion of the defaulters' margin remained unused and was returned to them.

Deutsche Börse Group reduces its risk when investing funds belonging to Group companies and client funds by distributing investments across multiple counterparties, all with a high credit quality, by de-fining investment limits for each counterparty and by investing funds primarily in the short term and in collateralised form if possible. Investment limits are established for each counterparty on the basis of regular credit checks and using ad hoc analyses, as necessary. Since extending its licence as an investment and credit institution under the Kreditwesengesetz (German Banking Act), Eurex Clearing AG can also use Deutsche Bundesbank's permanent facilities.

Clearstream and Eurex Clearing AG run stress tests to analyse scenarios such as the default of their largest counterparty. The figures determined in this way are compared with the limits defined as part of the companies' risk-bearing capacity. In addition, the impact of several clearing counterparties defaulting at the same time is calculated for Eurex Clearing AG. A special stress test examines Clearstream Banking S.A.'s credit risk exposure from the settlement procedure with Euroclear. Moreover, inverse stress tests are calculated to determine the number of counterparties that would have to default for losses to exceed the risk cover amount. In the course of the stress tests run in financial year 2016, the identified risks have been further analysed and appropriate measures to reduce risk have been implemented.

Deutsche Börse Group tracks a variety of risk indicators in addition to its risk measures (EC, EaR and the credit risk stress tests performed). These include the extent to which individual clients utilise their credit lines, and credit concentrations.

Market risk

Market risk in the operating business results from interest rate or currency fluctuations. Deutsche Börse Group measures this risk using earnings-based sensitivity analyses for extreme interest rate or exchange rate fluctuations. It avoids open currency positions whenever possible. Additional market risk could result from Deutsche Börse Group's ring-fenced pension plan assets (Contractual Trust Agreement, Clearstream pension plan in Luxembourg). The Group reduced its market risk exposure by deciding to invest a predominant proportion of the pension fund on the basis of a value preservation mechanism. The probability of a significant market risk occurring in this context is low, and the Group also considers the impact to be low.

Liquidity risk

Liquidity risk applies if a Deutsche Börse Group company is unable to meet its daily payment obligations or if it can only do so at a higher refinancing cost. Operational liquidity requirements are met primarily internally by retaining funds generated. The aim is to maintain enough liquidity to meet operating costs for one quarter (currently between €150 million and €250 million). An intra-Group cash pool is used to pool surplus cash from subsidiaries on a Deutsche Börse AG level, as far as regulatory and legal provisions allow. Liquid funds are invested exclusively in the short term in order to ensure that they are available. Short-term investments are also largely secured by liquid bonds from first-class issuers. Deutsche Börse AG has access to short-term external sources of financing, such as agreed credit lines with individual banks or consortia, and a commercial paper programme. In recent years, Deutsche Börse AG has leveraged its access to the capital markets to issue corporate bonds in order to meet its structural financing needs.

Since Clearstream's investment strategy aims to be able to repay customer deposits at all times, liquidity limits are set carefully. In addition, extensive sources of financing are available at all times, such as ongoing access to the liquidity facilities at Deutsche Bundesbank and Banque Centrale du Luxembourg.

Due to its role as a central counterparty, Eurex Clearing AG has strict liquidity guidelines and its investment policy is correspondingly conservative. Regular analyses ensure the appropriateness of the liquidity guidelines. In addition, Eurex Clearing AG can use Deutsche Bundesbank's permanent facilities.

The key liquidity risk for Deutsche Börse Group lies in customer default. If a clearing member of Eurex Clearing AG defaults, its member position is liquidated. If a Clearstream customer defaults, the – generally collateralised and intraday – credit line granted to increase settlement efficiency would be called in, and the collateral provided by the client could then be liquidated. Deutsche Börse Group estimates the probability of this liquidity risk to be low, with the possibility of medium financial losses. A decline in market liquidity, following a counterparty default, would further increase Deutsche Börse Group's liquidity risk exposure. On a daily basis, Clearstream and Eurex Clearing AG calculate their liquidity needs which would result from a default of their two biggest clients, and maintain sufficient liquidity in order to cover the liquidity needs determined.

To consider different scenarios, regular stress tests are being carried out to examine the liquidity risk exposure of Clearstream and Eurex Clearing AG. Risks identified in the course of stress tests carried out during the 2016 financial year were analysed further, and corresponding risk-reduction measures initiated.

Business risk

Business risk reflects the fact that the Group depends on macroeconomic developments and is influenced by other external events, such as changes in the competitive environment or regulatory initiatives. It therefore expresses the risks associated with the Group's business environment and sector. It also includes business strategy risk, i.e. the impact of risks on the business strategy and possible adjustments to it. These business risks are represented as variance analyses of planned and actual EBIT, and are monitored constantly by the divisions. Their weighting for the Group accounts for about 14 per cent of the total risk. Business risk may result in revenues lagging budget projections or in costs being higher.

Business risk includes the risk that competitors, such as the CurveGlobal, Chicago Mercantile Exchange (CME) and Intercontinental Exchange (ICE) derivatives exchanges or the Nasdaq OMX stock exchange or Euronext, might increase their market shares on the European trading markets (both on- and off-exchange). Deutsche Börse Group estimates the probability of a minor loss in market share as medium but the resulting impact to be relatively low.

If a state were to leave the eurozone or if a state were to become insolvent, this could mean that government bonds would not be redeemed or only would be redeemed in part. This might have a negative influence on Deutsche Börse Group's customers and reduce their trading volume in the future. Currently, the Group still views the probability of this risk occurring as low, and the possible consequences as medium.

Additional business risk may arise from regulatory requirements, or from the economic environment. For example, the introduction of a financial transaction tax, which continues to be supported by ten European states, might have a negative impact upon Deutsche Börse AG's business activities. Moreover, the UK's exit from the European Union might negatively affect our customers' trading activity. A sustained period of weak trading activity on the market also represents a risk to the Group. Deutsche Börse Group simulates different scenarios in stress tests. These take into account the simultaneous occurrence of different business risks, such as the negative effects of stronger competition combined with a simultaneous loss of business due to new regulations.

Project risk

Project risk could result from the implementation of ongoing projects (such as the launch of new products, processes or systems) and could have a material impact on one or more of the three other risk categories (operational, financial and business risk). Project risk is not broken down further. Such risks are evaluated by the project owner and GRM and are already taken into account in the initial phase of substantial projects. For example, the implementation of the TARGET2-Securities settlement system is an important project for Clearstream at present. The realisation of the projected revenue synergy potential identified with the acquisition of 360T, the migration of equity trading onto the T7 market architecture as well as the activities in connection with regulatory changes, especially MiFID II, are other important projects. Ultimately, project risk has an operational, financial or business impact, which is why it is quantified as part of these risk types. Ongoing monitoring and controls ensure that project delivery risks are continually analysed and evaluated.

Overall assessment of the risk situation by the Executive Board

Deutsche Börse AG's Executive Board is responsible for risk management throughout the Group and regularly reviews the entire Group's risk situation. Its summary of the situation in 2016 is given here, and is followed by a brief look at the coming financial year.

Summary

Additional external risk factors emerged for Deutsche Börse Group's business in the past financial year. Despite the increasing threat of cyber crime, overall operational risk declined, given that availability risks decreased. All in all, the Group's risk profile remained stable. Deutsche Börse Group's risks were covered by sufficient risk-bearing capacity at all times during the reporting period, i.e. the allocated risk appetite limits were complied with.

As at 31 December 2016, the Group's EC amounted to €2,056 million, a 5 per cent decrease year-on-year (31 December 2015: €2,159 million). In contrast, the available risk-bearing capacity increased by 27 per cent to €3,810 million year-on-year (31 December 2015: €2,999 million). EaR as at 31 December 2016 were €678 million, while risk appetite was €1,230 million, based on the adjusted budgeted EBIT in 2016.

Deutsche Börse AG's Executive Board is convinced that the risk management system is effective. The Board continues to strengthen the system and the control function responsible for it. The Group-wide strategy to capture and manage risk, which focuses on risk appetite, forms the basis for internal risk management. It is codified in the three principles described in the "Risk strategy and risk management" section.

Outlook

The Group continually assesses its risk situation. Based on stress tests, on the required EC, which was calculated, and on the risk management system, Deutsche Börse AG's Executive Board concludes that the available risk cover amount is sufficient. Furthermore, it cannot identify any risk that could endanger the Group's existence as a going concern.

In 2017, the aim is to further strengthen Group-wide risk management. For instance, the Group plans to concentrate on the digitisation of information in order to improve quality and efficiency. In addition, the data made available with these efforts will be used to identify risks and opportunities, and to improve our services. Moreover, the Group launched an initiative aimed at a streamlined cooperation between the different control functions through the Group-wide standardisation of documentation and control processes. The Group also plans to extend its business continuity measures in the event of emergencies (or crises), to include additional functions over and above business-critical units.

Report on opportunities

Organisation of opportunities management

Deutsche Börse Group's opportunities management aims to identify, evaluate and assess opportunities as early as possible and to take appropriate measures in order to transform opportunities into business success.

Deutsche Börse Group evaluates organic growth opportunities both on an ongoing basis throughout the year in the individual business areas and systematically at Group level as part of its annual budget planning process. Suggestions from the Group's business areas for new products, services or technologies serve as the starting point. The process begins with a careful analysis of the market environment: this considers both customer wishes and factors such as market developments, competitors and regulatory changes.

Ideas for growth initiatives are developed further using uniform, Group-wide templates and subjected to a profitability analysis. Qualitative aspects are documented in a business plan, and expenses and revenues are projected in detail for multiple years.

Once a business plan and profitability analysis have been prepared for a specific growth initiative, the Executive Board of Deutsche Börse AG decides on its implementation. This decision is taken as part of the annual budget planning process. The initiatives that, after taking into consideration the associated risks, add the most value and that can be financed from the budget allocated are selected by the Executive Board and included in the budget.

Budgeting for growth initiatives involves reserving a full-year budget comprising expenditures and expenses for each selected growth initiative included in the investment portfolio. The Group Project Committee (GPC) monitors progress of growth initiatives throughout the year, checking and overseeing projects on a regular basis. In this context, the GPC focuses on whether defined milestones have been reached, on the potential impact of changes in the competitive environment on commercial performance, and on the utilisation of budgets compared to planning.

Where budget adjustments are required during the course of the year, project management must first submit a corresponding application to the GPC. Following a discussion of the application, the GPC will submit a recommendation for a resolution to the Group Management Committee (GMC), which also comprises the members of Deutsche Börse AG's Executive Board. On this basis, the GMC will decide upon whether to increase the budget. The GPC may also recommend adjustments to full-year budgeted funds, to bring them into line with general business developments. Where needed, this also provides for the opportunity to approve new growth initiatives during the course of the year.

Furthermore, supervision of growth initiatives is supported by regular reporting. GPC and GMC receive a monthly report on the status and progress of initiatives that are currently being implemented. This report is coordinated by central functions and created in cooperation with the individual projects from the business areas and compares planned costs with actual budget utilisation. In addition, the financial planning is adjusted, forecasts are updated and changes to the scope of the project are made transparent. Checks are made to establish whether milestones have been reached and project-specific risks, and the countermeasures taken are described.

Organic growth opportunities

When assessing organic growth opportunities, Deutsche Börse Group makes a basic distinction between structural and cyclical opportunities. Structural opportunities arise, for example, as a result of regulatory changes or new customer requirements, and can be influenced directly by the company. Cyclical opportunities, which cannot be influenced directly by the company and are driven by macroeconomic changes.

Structural growth opportunities

The focus of Deutsche Börse Group's structural growth potential is on product- and service-driven initiatives designed to satisfy new client needs as well as regulatory requirements. In order to ensure the Group is optimally positioned and in order to explore new opportunities, the Group has gradually realigned its organisational structure since announcing the "Accelerate" growth programme in 2015. Moreover, it regularly examines options for growth in high-potential asset classes, products or services – organically or through external acquisitions and cooperations.

Organisational measures supporting the Group's growth ambitions include the global coordination of sales activities, as well as cross-divisional product development. In addition, Deutsche Börse AG realigned the distribution of responsibilities in its Group Executive Board at the beginning of 2016 – placing client focus at the heart of its organisation, as announced upon the launch of "Accelerate". With the steps taken, Deutsche Börse Group has bundled related areas in Executive Board portfolios, thus accelerating process flows and simplifying them – in the interest of the Group's clients. Within the framework of "Accelerate" and the related organisational changes, the Group anticipates realising potential for additional new business – especially through bundling Group-wide product development as well as sales activities. These opportunities will develop over time, which is why they have not been quantified in expected additional revenue.

Overall, the Group anticipates the strongest revenue increases in its Eurex segment. Besides the initiatives of the "Accelerate" programme, this includes clearing of over-the-counter (OTC) derivatives and further growth in the trading of power and gas products. 360 Treasury Systems (360T) will also provide a contribution to net revenue growth in this segment. In the Clearstream segment, the focus is on developing the investment funds business, cross-border securities settlements via TARGET2-Securities (T2S), as well as collateral and liquidity management. The growth focus in the MD+S segment is on the expansion of the index business. While building its business in growth regions, Deutsche Börse continues to focus on Asia; developments there will impact all reporting segments. The business potential of the above-mentioned initiatives are described in more detail below.

Clearing of OTC derivatives

The liquidity problems experienced by major market participants during the financial crisis were triggered by the failure to settle bilateral OTC transactions that were mainly entered into on an unsecured basis. In light of this, the leading industrialised nations (G20) agreed to create an effective regulatory environment to make off-exchange derivatives transactions more transparent and more secure. In response, the European Union developed the European Market Infrastructure Regulation (EMIR), which is aimed at regulating OTC trading in derivatives. EMIR includes the following regulatory requirements:

- an obligation to clear standardised OTC derivatives transactions using a central counterparty
- special risk management requirements for transactions in non-standardised derivatives
- an obligation to report the transactions to a trade repository

The obligation for market participants to comply with EMIR requirements kicked in on 21 June 2016, with the first of four phases. Preparing for mandatory clearing, Eurex Clearing AG has developed a central counterparty to clear OTC derivatives. The offering, which may later be extended to other asset classes, is aimed primarily at institutional customers and the interest rate swaps they enter into. It especially focuses on security and efficiency, allowing customers to gain the full benefit of Eurex Clearing's risk and collateral management services for their OTC transactions as well. The majority of transactions entered into by these clients has been subject to mandatory clearing since the start of phase 2 on 21 December 2016.

Trading and clearing of power and gas products (EEX)

With the acquisition of a majority stake in the European Energy Exchange AG (EEX), based in Leipzig, Deutsche Börse Group expanded its product range to include trading and clearing of spot and derivatives contracts on power and gas as well as emission certificates – in order to benefit from markedly higher demand for energy trading and clearing services. The double-digit growth rates which the Group has achieved since then have been the result of external growth but also reflect structural organic growth which Deutsche Börse Group has been able to exploit, thanks to its good position. For instance, EEX has evolved into the central marketplace for energy, energy-related and commodities products in Continental Europe; its product range includes the markets in Germany, France, the Netherlands, Belgium, Italy and Spain. EEX also generated organic growth, especially in the power and gas business. Whilst this growth momentum is based on the changing importance of renewable energy sources – wind power in particular – for power generation, the resulting gains are difficult to predict, also due to the strong fragmentation of the European energy market, and the fact that market participants predominantly trade off-exchange. Given this high degree of fragmentation, as well as the inefficiency of OTC markets, demand for on-exchange trading and clearing solutions for such transactions has been growing over recent years. Whilst OTC trading clearly continues to be the bigger market, EEX was able to significantly increase market share, to around 30 per cent in 2016. EEX continues to anticipate strong demand for efficient trading and clearing solutions for the energy markets, and resulting structural growth.

Expansion into foreign exchange trading (360T)

Deutsche Börse AG successfully explored a new asset class – foreign-exchange trading – with the full acquisition of 360T. 360T® is a leading, globally active foreign-exchange trading platform which has generated double-digit annual growth rates since its inception in 2000. The broad client base of 360T includes corporate and buy-side clients as well as banks. The acquisition of 360T by Deutsche Börse is expected to further boost the company's organic growth momentum. On a medium-term horizon, the combination offers the potential for revenue synergies in a double-digit million euro amount, with 360T using Deutsche Börse Group's international sales network and expertise for growing business, especially through the introduction of electronic trading in order to further improve liquidity and transparency. To date, regulatory obligations such as EMIR have not yet been expanded to cover the foreign exchange market. If this were to happen, Deutsche Börse Group would be able to tap further growth opportunities from its extensive portfolio of products and services it offers in the context of regulatory requirements. For instance, the Group plans to establish a foreign exchange clearing house in order to service the fundamental demand for capital-efficient solutions. Thanks to its leading position, 360T further benefits from a structural trend. Even though, at present, the vast majority of daily foreign-exchange trading volumes are executed off-exchange, demand for transparent, electronic multi-bank trading platforms such as 360T is rising. By combining the skills and experience of 360T in foreign-exchange trading with Deutsche Börse's IT competence, the Group will be able to explore the resulting revenue potential.

Cross-border settlement of investment funds

Clearstream completed the integration of the hedge fund custody business, acquired from Citco. This enables clients of Deutsche Börse Group to use Clearstream's settlement and custody services for their entire fund portfolio – covering traditional investment funds, exchange-traded index funds (ETFs) as well as hedge funds. Given that regulatory authorities demand more efficient settlement and custody solutions in order to achieve a maximum safety level for customer assets, the Group anticipates that it will acquire additional client portfolios.

Cross-border securities settlement (T2S)

Initiated by the ECB, the purpose of the T2S project is to harmonise cross-border securities settlement using central bank funds across Europe. Clearstream has undertaken substantial investments over recent years to bring its systems into line with the new settlement structure. For Deutsche Börse Group, this holds the opportunity of winning new clients for Clearstream's innovative services, such as global liquidity management. Furthermore, the Group expects higher custody volumes and new services from T2S, which can only be provided through Clearstream via its integrated international central depository (ICSD). Clearstream has been connected to T2S within the scope of the fourth migration wave in February 2017. Once this connection is in place, clients will be able to use Clearstream as a central point of access for domestic and international settlements, both in central bank and commercial bank funds. National central securities depositories (CSDs) – Clearstream in Germany and LuxCSD S.A. in Luxembourg – will offer their clients T2S settlements at ECB terms, without any mark-up. Full interoperability between national and international CSDs will enhance liquidity and collateral management.

Collateral and liquidity management

Clearstream's collateral and liquidity management offering, developed as part of its Global Liquidity Hub growth initiative, helps customers cope with the structural changes they are facing, such as those resulting from the additional liquidity requirements under Basel III and the clearing obligations under EMIR which came into force in December 2015. The Global Liquidity Hub allows banks to use the assets held in custody by Clearstream on their behalf more efficiently across different platforms and countries.

Expansion of the index business

Deutsche Börse Group's objective in its index business is to re-position its established European index provider STOXX with a global profile, in order to develop further indices (on top of its DAX® and STOXX® index families) and to market them on a worldwide basis. The goal is to acquire new client groups, both within Europe as well as in Asia and the Americas, through diversification. In addition, we will position our index business to better exploit the structural trend towards passive investment products (ETFs). An increasing number of private clients and asset managers now follow this trend; not only are the costs lower, but many active investment strategies have been returning under-average performance.

Expansion in Asia

In addition to growth in its core markets and products, the Group is focusing on expanding its business in growth regions. A particular emphasis is on Asia, where the Group is already successfully represented by Clearstream subsidiaries in particular. Among other things, Clearstream has been operating a permanent establishment with its own banking licence in Singapore since 2009. The China Europe International Exchange (CEINEX) commenced trading in November 2015, initially with cash market products such as ETFs based on Chinese underlyings, and renminbi-denominated bonds. CEINEX is a joint venture between Deutsche Börse and the Shanghai Stock Exchange (holding 40 per cent each) and the Chinese Financial Futures Exchange (holding a 20 per cent stake). CEINEX provides international investors with access to investment products based on Chinese underlying instruments. The marketplace is the first regulated and authorised trading platform outside China for financial products denominated in renminbi, the Chinese currency. CEINEX thus offers investors new opportunities for efficiently trading Chinese securities; at the same time, it effectively promotes the renminbi's internationalisation.

Other structural growth opportunities

In addition to these initiatives, the Group has identified a number of other structural factors that should have a positive impact on its business success.

- In January 2014, agreement was reached at a European level on the MiFID II Directive: among other things, OTC derivatives transactions will in future have to be settled via organised trading facilities, a requirement that is expected to benefit Eurex. In addition, a decision was taken to limit the volume of equities traded in dark pools. The Group expects this restriction to have a positive impact on the volumes traded on Xetra®. The Group will apply MiFID II as from January 2018.
- Risk management is becoming more important in the wake of the financial crisis. The company expects market participants to make greater use of Eurex Clearing's clearing services to net out transactions in different asset classes and hence to eliminate counterparty risk.
- In line with the European legal and administrative framework governing certain undertakings for collective investment in transferable securities (UCITS V), the company expects that traditional investment funds will increasingly include derivatives in their portfolio strategies. This could result in additional business for the Eurex segment.
- With respect to Clearstream's post-trade activities, the company anticipates a long-term increase in capital raising through equity and debt financing on the capital markets. This ties in with the higher capital and liquidity requirements for banks and the resulting negative impact on the total volume

of available credit. For Clearstream, this could have a positive effect on custody volumes, especially in the international bond segment. In addition, given the growing internationalisation of the capital markets, the company is continuing to expect a sharper rise in the bond volume issued internationally compared with national bond issues.

Cyclical opportunities

In addition to its structural growth opportunities, Deutsche Börse Group has cyclical opportunities, for instance as a result of positive macroeconomic developments. Although the company cannot influence these cyclical opportunities directly, they could lift Deutsche Börse Group's net revenue and net profit for the period attributable to Deutsche Börse AG shareholders significantly in the medium term:

- In the cash and derivatives market segments (Xetra and Eurex), sustained positive economic development, a lasting rise in investor confidence in the capital markets leading to a renewed rise in risk appetite among market participants and a sustained increase in market volatility could again stimulate trading activity by market participants and boost trading volumes.
- The volumes of interest rate derivatives traded on the Group's derivatives markets could rise if speculation on trends in long-term yields on German and other European government bonds grows, and if the spread between the various European government bonds continues to narrow.
- While the company does not expect the ECB to change its low interest rate policy during the forecast period, the US Federal Reserve could incrementally continue to raise interest rates. Among other things, this would positively impact Clearstream's net interest income from banking business as some 49 per cent of its daily cash balances are denominated in US dollars. A rise in key interest rates of one basis point affecting all customer cash deposits could lift income by some €100 million.
- In the market data business, an increase in the number of employees at companies active on the financial markets could lead to growing demand for data packages.

External growth opportunities

In addition, the company regularly explores external growth opportunities, which are subject to the same kind of stringent analysis as its organic growth initiatives. For this reason, only a small number of the opportunities analysed are ultimately realised. Examples of external growth in the past few years include the takeover of Citco's hedge fund custody business, the majority interests in EEX and Powernext, the full acquisition of the joint ventures STOXX including Indexium, as well as the full acquisition of 360T. Furthermore, the planned merger with London Stock Exchange Group plc was pursued in 2016 (see the "Planned merger with London Stock Exchange Group" section for details).

Report on expected developments

The report on expected developments describes Deutsche Börse Group's expected performance in financial year 2017. It refers to the Group's standalone business operations. It does not refer to either the new HoldCo established in the context of the merger with London Stock Exchange Group (LSEG), nor does it refer to Deutsche Börse AG as a subsidiary of the new HoldCo. It contains statements and information on events in the future and is based on the company's expectations and assumptions at the time of publication of this corporate report. In turn, these are subject to known and unknown opportunities, risks and uncertainties. Numerous factors influence the Group's success, its business strategy and its financial results, many of them outside the company's control. Should opportunities, risks or uncertainties materialise or should one of the assumptions made turn out to be incorrect, the Group's actual performance could deviate either positively or negatively from the expectations and assumptions contained in the forward-looking statements and information contained in this report on expected developments.

Developments in the operating environment

Macroeconomic environment

Deutsche Börse Group anticipates that the global economy will grow moderately during the forecast period. In the case of the emerging markets, the Group expects that countries with a current account surplus will expand at an above-average rate. Due to cyclical as well as structural factors, these countries will no longer be able to match the high growth rates seen in the past. Furthermore, the Group expects the economies of industrialised nations to recover slowly following a series of challenging years in the aftermath of the financial crisis, with economic growth picking up slightly over the previous years. Looking at Europe, the Group expects an improvement of the economic situation, driven by developments in Germany and France, the two largest economies. Against this generally positive background, we are assuming that market participants will have more confidence in the capital markets compared to the previous year, which was marked events, such as the Brexit referendum and the US presidential elections. However, current uncertainties could once again unsettle the markets. These include geopolitical crises, the development of commodity prices, monetary policy moves by the Fed in the US and the ECB in Europe, or a crisis of confidence in the growth of certain emerging market countries, especially in Asia. Regarding interest rate trends, the Group does not expect to see any fundamental departure from the current low interest rate policy in Europe. While the monthly volumes of the ECB's bond-buying programme will be slightly reduced, the deposit rate is expected to remain at –0.4 per cent. Now that the positive effects during 2016 of this monetary policy on cash and derivatives markets trading volumes have largely run their course, the Group does not expect any such stimulus for 2017. The turnaround in US interest rates continued at the end of 2016, and we expect further hikes in 2017 – provided that the economy (and inflation) accelerate further.

In its economic development forecast for 2017 published in January 2017, the International Monetary Fund (IMF) predicts an increase of around 1.6 per cent in the euro zone and growth of around 1.5 per cent in Germany. Expectations for the United States are slightly higher than for the euro zone: the US economy is forecast to grow by around 2.3 per cent. The highest growth by far in 2017 – approximately 6.5 per cent – is again expected in Asian countries (and especially China), due to expected high domestic demand. Given the extremely varied estimates for the different economic regions, global economic growth is projected to be around 3.4 per cent in 2017.

Regulatory environment

Governments and central banks are currently working to enhance regulation of the financial markets so as to stabilise the financial sector and prevent future crises of the magnitude experienced. The measures planned, and in some cases already initiated, range from revising the legal framework for banking business and capital adequacy requirements through rules for clearing over-the-counter (OTC) derivatives transactions down to improving financial market supervision (for more information, please see the "Regulatory environment" section of the report on economic position). For Deutsche Börse Group's customers, the ultimate impact of these far-reaching regulatory reform projects on market structures and business models is difficult to gauge accurately at present. Deutsche Börse anticipates that this uncertainty will continue to weigh on market participants' business activities during the forecast period. For the Group itself, the various regulatory projects will have both positive and negative consequences. Overall, however, the Group sees the changing regulatory environment as an opportunity to expand its business further; see the report on opportunities for further details.

In addition to the structural opportunities arising from regulation, the Group expects to see further debate in the forecast period on the potential introduction of a financial transaction tax. The introduction of a financial transaction tax will continue to be pursued in 2017 by a number of EU Member States, which have formed an alliance to achieve greater cooperation. The introduction of such a tax would negatively impact Deutsche Börse Group's business performance. Since the ten Member States concerned have been unable to date to reach agreement on the tax base, tax rates and technical collection and remittance methods, it is not possible to gauge the concrete impact on the Group's business.

Future development of results of operations

Given its diversified business model and multiple sources of revenue, Deutsche Börse Group continues to consider itself very well positioned and expects to see a positive trend in its results of operations over the medium and long term. This expectation is based on, among other things, the growth opportunities that the company intends to exploit over the same period. The Group expects net revenue to increase further in the forecast period. This assumption is based on two main factors. Firstly, a further slight increase in economic growth could improve investor confidence, and motivate US investors to return to European markets. Against the background of the UK's exit from the EU, the general elections to be held in a series of European countries, and the development of US policies, we anticipate elevated stock market volatility in 2017, at least temporarily. Both of these factors, i.e. returning US investors and elevated equity market volatility, would have positive effects on trading volumes in equities and equity index derivatives. Moreover, market speculation on interest rate developments in the US and Europe may boost trading activity in interest rate derivatives at Eurex derivatives exchange – whilst higher, or increasing US interest rates could lead to a further increase in net interest income from the banking business in 2017. Secondly, the Group expects a further increase of the contribution from its structural growth initiatives as well as from new growth opportunities being explored within the scope of its "Accelerate" growth programme launched in 2015 (for details, please refer to the report on opportunities).

Depending on developments in the operating environment, the impact of both cyclical and structural growth drivers and the success of new products and functionalities, Deutsche Börse Group expects net revenue to increase by approximately 5 per cent to 10 per cent during the forecast period. Net revenue growth expected during the forecast period is based on net revenue of around €2,389 million achieved in 2016.

Even if, contrary to expectations, the operating environment turns out to be worse than described above, and clients were to scale back their business activities, particularly in the Group's business divisions which depend upon trading, Deutsche Börse Group believes it is in a position to continue to do business profitably thanks to its successful business model and its cost discipline.

Within the scope of its "Accelerate" growth strategy, in 2015 Deutsche Börse Group introduced principles for managing operating costs. The core element of these principles is to ensure the scalability of the Group's business model. To this end, the Group continuously manages operating costs adjusted for non-recurring effects relative to the development of net revenue. Accordingly, the lower end of the net revenue growth range during the forecast period and the following years, of approximately 5 per cent, would imply stable operating costs compared to the previous year. If net revenue reaches the upper end of the growth range, at around 10 per cent, operating costs would be permitted to rise by up to 5 per cent per annum during the period under review and the following years – for instance, for the purpose of increasing investment in growth initiatives. Operating costs expected during the forecast period are based on adjusted operating costs of €1,174.2 million in 2016.

Essentially, the Group achieves the necessary flexibility in managing operating costs through two different initiatives designed to enhance operating efficiency. Firstly, the Group has implemented a continuous process to improve operating efficiency by focusing even more on client needs in order to further enhance quality and efficiency of the services offered. At the same time, Group-internal processes are simplified, generating costs savings. Secondly, the Group resolved a series of structural cost reduction measures during the reporting period, and has already commenced implementation. For instance, we started to reduce the number of external service providers. This included the shift of tasks from external to internal staff, or the hiring of external service providers as internal staff. As at the publication date of this combined management report, the company expects that operating costs will be affected by non-recurring effects of some €80 million. The majority of these is due to mergers and acquistions (excluding performance-related components) but also due to efficiency measures and costs incurred in connection with criminal proceedings against Clearstream Banking S.A. in the US.

Given the expected increase in net revenue of approximately 5 to 10 per cent, with operating costs rising by between 0 and 5 per cent as a result, the Group anticipates a growth rate of between approximately 10 and 15 per cent (excluding non-recurring effects) for net profit for the period attributable to Deutsche Börse AG shareholders during the forecast period. This assumption is based on an adjusted figure of €810.8 million for 2016.

With regard to the cyclical environment and structural growth initiatives, Deutsche Börse AG's expected business development is based on the same factors that influence the expected business development of Deutsche Börse Group as a whole. These are described in this report on expected developments. For 2017, the company expects sales revenue to be above the 2016 level (2016: €1,300.2 million) and to rise by approximately 5 to 10 per cent depending on how the factors described above develop.

Given the expected increase in sales revenue of approximately 5 to 10 per cent, with operating costs rising by between 0 and 5 per cent as a result, the Group anticipates a growth rate of between approximately 10 and 15 per cent (excluding non-recurring effects) for adjusted net profit for the period attributable to Deutsche Börse AG shareholders (2016: €553.2 million) for the forecast period.

Eurex segment
In the past year, cyclical factors (see the “Future development of results of operations” section for details) led to an overall rise in derivatives trading volumes. Higher stock market volatility since the end of 2014 resulted in a significant rise in trading volumes, especially in equity index derivatives. Deutsche Börse Group believes that structural growth factors will remain the dominant feature over the long term, and that they will positively influence trading volumes in all product segments (see the report on opportunities for further details). In the short term, a positive economic environment would result in increasing trading volumes, in particular for equity index derivatives – whilst the present direction of monetary policy, especially in the US, would have positive effects on interest rate derivatives trading.

Eurex will continue to invest systematically in expanding its product offering in the forecast period in order to take advantage of structural factors, such as regulation or changing customer needs. The focus of our efforts will be on the acquisition of new business, which is currently not settled through an exchange or clearing house. We are expecting positive developments along these lines due to regulatory requirements determining that OTC derivative transactions must be settled via central counterparties. This requirement has entered into force during 2016. Consequently, the Group expects this initiative to deliver additional net revenue for the first time in the 2017 financial year, and significant net revenue in the medium to long term. Looking at the once again very positive development of EEX group's trading volumes during the year under review and the continued positive market environment for trading in power and gas products, the Group expects further structural growth in business activity during the forecast period, e.g. by gaining additional market share at the expense of OTC energy markets. Moreover, the Group expects rising demand for multi-bank platforms to further boost business activity at the foreign-exchange (FX) platform 360T®. In addition, we plan to include clearing services in the value chain of fully electronic FX trading during the 2017 financial year, in order to realise the revenue synergies projected in the context of this acquisition.

Xetra segment
As in the past, net revenue in the Xetra cash market segment will continue to depend heavily on stock market cyclicality and volatility. Trading volumes could rise during the forecast period, driven by a gradual improvement in economic growth as well as a rise in investor confidence. Furthermore, the company expects stock market volatility to increase, at least temporarily, making further positive contribution to business development.

As well as enhancing its cash market offering, the company will continue to closely track changes in the competitive environment for the European cash markets. As in the past, it considers itself well positioned to retain its status as the market leader for trading German blue chips and to offer its customers across the globe an attractive range of products and services for cash trading in German and European equities, and for equities clearing. However, the stronger competition in the cash market means that further shifts in the market shares of all competitors cannot be ruled out.

Clearstream segment
The Clearstream segment's main net revenue driver is the settlement and custody of international bonds – a business that is much more stable than the trading business and only subject to less significant capital market fluctuations. The Group anticipates a structurally driven increase in demand for collateral and liquidity management services due to regulatory requirements. In the medium to long term, Clearstream expects its attractive collateral and liquidity management and its strong position in the TARGET2-Securitites (T2S) network to result in increased business activity and hence in significant additional net revenue. As Clearstream did not migrate to T2S until February 2017, the Group anticipates only a moderate contribution to net revenue for 2017. Another factor to impact Clearstream's business in the forecast period will be central bank monetary policy, as it has been in the past. Transaction activity is expected to increase in the medium term, as a result of the ECB's ongoing commitment (at least for 2017) to the programme for purchasing government and corporate bonds. At the same time, however, the continuation of the programme could have a dampening effect on securities issuance and liquidity management. If, contrary to expectations, monetary policy becomes more restrictive, this would have positive consequences for securities issuance, the use of collateral and liquidity management services, as well as for net interest income in the banking business. As a significant portion of customer balances are denominated in US dollars, the turnaround in US interest rate policy – initiated at the end of 2015 and continued in December of 2016 – will cause a rise in net interest income in 2017, at steady cash balance levels.

With regard to its customer structure, the company continues to expect that consolidation in the financial sector will persist and that customers in Clearstream's domestic and international business will merge. These larger customers would benefit from greater discounts, which would lead to a decline in average fees. Although Deutsche Börse faces especially intense competition in the settlement and custody of international bonds, the company does not expect this to have a major impact on its net revenue or to result in a loss of market share during the forecast period.

Market Data + Services segment
This segment aims to accelerate expansion of Deutsche Börse's technology leadership and expertise in the area of market data by pooling all relevant resources within the company in a dedicated, market-driven business unit. The goal is to open up untapped growth opportunities in the medium to long term.

The company anticipates that net revenue in the Market Data + Services segment will increase slightly during the forecast period. This expectation is based on the continuous expansion of the product range in all areas and greater marketing of these products in growth regions. The Group's index business is set to benefit from this development in particular. Moreover, the Group considers the significant structural growth in the market for passively managed assets as an additional growth driver that is expected to further strengthen demand for index licences for exchange-traded funds. In addition to distributing index licences, the Group also benefits from the growing investment volumes in these products. In light of this, the Group believes it is well placed to increasingly extend the positioning of its globally focused range of indices to the Asian market as well.

Changes in pricing models
Deutsche Börse anticipates sustained price pressure in some of its business areas during the forecast period. The company's objective is to cushion this price pressure by continually improving its products and services and by offering selective incentives for price-elastic business.

Over the long term, the average net revenue per unit (e.g. trading or clearing fees per transaction, or fees for custody services) is expected to decline slightly in all areas of the Group. This is a result of laddered pricing models that lead to a decline in income per unit as customers' business activities increase.

Trends in non-financial performance indicators

Initiatives to promote the transparency and security of the markets will continue to be a key focus during the forecast period, ensuring that Deutsche Börse Group adds value to society. Against this backdrop, the company expects to maintain the availability of the different trading systems Xetra® and T7® at the very high level seen in previous years throughout the forecast period.

Responsible management that focuses on long-term value creation is of considerable importance for Deutsche Börse Group as a service company. Given demographic change and the resulting shortage of specialist staff, the company aims to continue to position itself adequately and among other things to increase the number of women in management positions. The Executive Board already set a voluntary target in 2010 for Deutsche Börse Group to increase the proportion of women in middle and senior management to 20 per cent and in junior management to 30 per cent by 2020. These targets remain in place. They relate to Deutsche Börse Group worldwide, including subsidiaries.

In accordance with the Gesetz für die gleichberechtigte Teilhabe von Frauen und Männern an Führungspositionen in der Privatwirtschaft und im öffentlichen Dienst (German Act on the Equal Participation of

Women and Men in Leadership Positions in the Private and Public Sectors), the Supervisory and Executive Boards of Deutsche Börse AG additionally resolved to maintain the existing quotas of women on the two management levels below the Executive Board, i.e. 6 per cent on the first and 10 per cent on the second management level. These target quotas relate to Deutsche Börse AG (excluding subsidiaries) and will be valid until 30 June 2017.

Future development of the Group's financial position

The company expects operating cash flow, which is Deutsche Börse Group's primary funding instrument, to remain clearly positive in the forecast period. The Group expects that two significant factors will influence changes in liquidity. Firstly, the company plans to invest some €150 million per year in intangible assets and property, plant and equipment at Group level during the forecast period. These investments will be included in cash flows from investing activities, and will serve primarily to develop new products and services in the Eurex and Clearstream segments and to enhance existing ones. The total amount mainly comprises investments in trading infrastructure and in risk management functionalities. Secondly, the Executive Board and Supervisory Board of Deutsche Börse AG will propose a dividend of €2.35 per share to the Annual General Meeting to be held in May 2017. This would correspond to a liquidity outflow of about €440 million. Apart from the above, no other material factors were expected to impact the Group's liquidity at the time the management report was prepared. As in previous years, the Group assumes that it will have a sound liquidity base due to its positive cash flow, adequate credit lines (see note 36 to the consolidated financial statements for details), and flexible management and planning systems.

Within the framework of a programme to optimise its capital structure, Deutsche Börse Group generally aims to distribute dividends equivalent to between 40 and 60 per cent of adjusted net profit for the period attributable to Deutsche Börse AG shareholders. In recent years (where the Group's net profit was lower), the dividend payout ratio was kept at the upper end of this range, in order to distribute stable dividends to shareholders. Given that the Group's profit targets were raised in July 2015, in connection with the announcement of the "Accelerate" growth strategy, the company aims for a dividend payout ratio in the middle of the range between 40 and 60 per cent going forward.

Moreover, until 2012 the company distributed a part of freely available funds to shareholders, via share buy-backs. Since 2013, these funds have been used predominantly to support the company's development, as well as to fulfil credit rating and regulatory capital requirements. Against the background of the growth strategy announced in 2015, the company anticipates that in future, freely available funds will increasingly be applied not only to support the Group's organic growth, but also to complementary external growth options.

To maintain its strong credit ratings at Group level, the company aims at a ratio of interest-bearing gross debt to EBITDA of no more than 1.5. The Group expects to reach or slightly come below this figure in 2017, depending on net revenue developments.

The parent company, Deutsche Börse AG, plans to invest some €30 million in intangible assets and property, plant and equipment during the forecast period.

Overall assessment by the Executive Board

The Executive Board of Deutsche Börse AG believes that the company continues to be in a very good position compared with the international competition thanks to its comprehensive offering along the securities trading value chain and its innovative strength. Against this background, it therefore expects to see a positive trend in its results of operations in the long term. The purpose of the measures resolved – and mostly implemented – in 2015, as part of the "Accelerate" programme, is to further accelerate the Group's growth. In this context, the Group aims to act in a more agile and effective manner, and with increased client focus, to turn Deutsche Börse into the global market infrastructure provider of choice, being top-ranked in all its activities. However, for the forecast period, the uncertainty as to how capital market participants will react to the economic and regulatory situation makes it difficult for the Executive Board to make a specific forecast. Deutsche Börse Group's goal for the forecast period is to ensure the scalability of its business model. To this end, the Executive Board will actively manage operating costs in a way that net profit for the period attributable to Deutsche Börse AG shareholders will grow at a stronger rate than net revenue. Specifically, annual growth rates of approximately 10 to 15 per cent (excluding non-recurring effects) are projected for the forecast period. Overall, the Executive Board assumes on this basis that cash flow from operating activities will be clearly positive and that, as in previous years, the liquidity base will be sound. The overall assessment by the Executive Board is valid as at the publication date for this combined management report.

Deutsche Börse AG (Disclosures based on the HGB)

In contrast to the consolidated financial statements, the single-entity financial statements of Deutsche Börse AG are not prepared in accordance with International Financial Reporting Standards (IFRSs) but with the German Commercial Code (Handelsgesetzbuch, HGB) and the supplementary provisions of the German Stock Corporation Act (Aktiengesetz, AktG).

Deutsche Börse AG compiled its annual financial statements for the 2016 financial year pursuant to the Bilanzrichtlinie-Umsetzungsgesetz (German Accounting Directive Implementation Act, BilRUG), which called for changes in particular to the definitions of revenue and other operating income. To ensure comparability, the BilRUG has also been applied to the previous year's figures for these two items as reported in the following.

Business and operating environment

General position

Deutsche Börse AG is the parent company of Deutsche Börse Group. Its business activities primarily comprise its cash and derivative markets as well as IT and Market Data + Services. The performance of the Clearstream segment is primarily reflected in Deutsche Börse AG's business performance via the profit and loss transfer agreement with Clearstream Holding AG. In view of this, Deutsche Börse AG's business and operating environment is essentially the same as that of Deutsche Börse Group. These are described in detail in the "Macroeconomic and sector-specific environment" section.

Deutsche Börse AG's course of business in the reporting period

Revenue for the 2016 financial year remained within the company's guidance. At the same time, total costs increased only slightly, thanks to continuous enhancements in operating efficiency due to the "Accelerate" programme launched in 2015. Net profit increased significantly, due, among others, to the divestment of International Securities Exchange Holdings, Inc. (ISE), and exceeded the company's expectations. Against this background, Deutsche Börse AG's Executive Board considers the company's performance during the 2016 financial year as satisfactory. The 2016 financial year was largely characterised by plans for the merger of Deutsche Börse with London Stock Exchange Group (LSEG).

Results of operations of Deutsche Börse AG

Deutsche Börse AG's revenue for the 2016 financial year rose by 1.5 per cent, to €1,300.2 million (2015: €1,280.5 million). The "Sales revenue by segment" table provides a breakdown of revenue by company segment.

The lion's share of revenue was generated in the Eurex segment, with €799.4 million (2015: €700.9 million). Regarding the performance of the Eurex derivatives market segment, general reference is made to the "Eurex segment" section. Any divergence from the statements in that segment are essentially due to the fact that developments of the energy market (EEX group) and the foreign exchange market (360T group) do not directly impact upon the business of Deutsche Börse AG. The financial performance of the Market Data + Services segment is described, in general, in the "Market Data + Services segment" section. It is worth noting that the business development of the STOXX Ltd. subsidiary does not directly impact the business performance of Deutsche Börse AG. Details concerning the business development in the Xetra segment are largely provided in the "Xetra segment" section. Revenue attributable to the Clearstream segment is generated from IT services that Deutsche Börse AG provides to entities within the Clearstream Holding AG subgroup.

Other operating income rose to €149.1 million during the year under review (2015: €70.3 million). This increase was attributable in particular to the €99.0 million in sales proceeds recognised from the sale of ISE.

Total costs (comprising staff costs, amortisation of intangible assets and depreciation of property, plant and equipment, as well as other operating expenses) were €946.1 million, up 2 per cent on the previous year (2015: €927.0 million). They also include expenses of €65.8 million related to the proposed merger with LSEG; adjusted for these, total costs were down by 5 per cent compared with the previous year. For a breakdown, please refer to the „Overview of total costs" table. Staff costs rose by 4 per cent compared to the previous year, to €201.8 million (2015: €194.2 million) mainly due to expenses related to bonus payments of €43.0 million (2015: €26.8 million), and lower expenses for the "Accelerate" growth programme, of €6.3 million (2015: €21.3 million).

Amortisation of intangible assets and depreciation of property, plant and equipment remained nearly unchanged and amounted to €24.3 million in the year under review (2015: €24.4 million). Other operating expenses were up by 2 per cent year-on-year, to €720.0 million (2015: €708.4 million). The

Performance figures for Deutsche Börse AG

	2016 €m	2015 €m	Change %
Sales revenue	1,300.2	1,280.5[1]	2
Total costs	946.1	927.0	2
Net profit from equity investments	289.9	123.9	134
EBIT	697.5	543.9	28
Profit before tax from ordinary activities (EBT)	603.2	443.9	36
Net profit for the period	553.2	315.9	75
Earnings per share (€)	2.96[2]	1.71[2]	73

1) Calculation based on the definition of revenue pursuant to the BilRUG
2) Calculation based on weighted average of shares outstanding

Sales revenue by segment

	2016 €m	2015 €m	Change %
Eurex	799.4	700.9	14
Market Data + Services	275.8	281.3	–2
Xetra	175.8	185.4	–5
Clearstream	49.2	14.3	244
Total	**1,300.2**	**1,181.9[1]**	**10**

1) Calculation based on the definition of revenue not pursuant to the BilRUG

increase was largely attributable to higher expenses for advisory services, incurred in particular in connection with the planned merger with LSEG.

Deutsche Börse Group's result from equity investments for the 2016 financial year totalled €289.9 million (2015: €123.9 million). In particular, this rise reflects the increase in income from the disposal of equity investments, to €99.0 million (2015: €5.7 million), and the higher profit transfer from Clearstream Holding AG of €167.2 million (2015: €147.1 million). Income from dividends was €37.3 million in the year under review (2015: €18.2 million), of which the largest part of €34.5 million was attributable to distributions made by STOXX Ltd. (2015: €16.6 million).

Earnings before interest and taxes (EBIT) increased to €697.5 million (2015: €543.9 million). Net income for the period totalled €553.2 million, a 75 per cent increase year-on-year (2015: €315.9 million), among others due to the proceeds from the disposal of ISE.

Profit from ordinary activities rose by 36 per cent year-on-year, to €603.2 million (2015: €443.9 million). The profit margin before taxes (the ratio of profit from ordinary activities to revenue) increased from 35 per cent to 46 per cent.

Profitability

Deutsche Börse AG's return on equity expresses the ratio of net income after taxes to average equity available to the company during the course of 2016. Due to the better results, return on equity rose to 21 per cent, compared to 13 per cent in 2015.

Financial position of Deutsche Börse AG

Cash and cash equivalents on the 31 December 2016 balance sheet date amounted to €935.4 million (2015: €172.3 million), comprising cash on hand, current account balances with banks and term deposits.

The company received dividends totalling €37.3 million (2015: €18.2 million). The main reason for this increase is a higher dividend distributed by STOXX Ltd.

Deutsche Börse AG has available external credit lines in the amount of €605.0 million (2015: €605.0 million), which were not drawn upon as at 31 December 2016. Moreover, the company has a Commercial Paper programme in place, which allows for flexible and short-term financings of up to €2.5 billion, in various currencies. At the end of the year, there was no Commercial Paper outstanding (2015: €95.0 million).

Through a Group-wide cash-pooling system, Deutsche Börse AG ensures an optimum allocation of liquidity throughout Deutsche Börse Group; in this way, the parent entity makes sure that all subsidiaries are in a position to honour their payment obligations at any time.

Overview of total costs

	2016 €m	2015 €m	Change %
Staff costs	201.8	194.2	4
Write-offs	24.3	24.4	0
Other operating expenses	720.0	708.4	2
Total	**946.1**	**927.0**	**2**

Cash flow statement (condensed)

	2016 €m	2015 €m
Cash flows from operating activities	156.4	372.8
Cash flows from investing activities	141.4	–1,444.9
Cash flows from financing activities	–697.9	841.9
Cash and cash equivalents as at 31 December	–1,006.8	–606.7

Deutsche Börse AG has issued three corporate bonds with a nominal value of €600 million each and one corporate bond with a nominal value of €500 million. For more details concerning these bonds, please refer to the "Financial position" section. Moreover, as part of Group-internal restructuring measures in 2014, the company raised loans from associates, in a total amount of €375.6 million, which will fall due during the 2017 financial year.

Deutsche Börse AG generated €156.4 million (2015: €372.8 million) in cash flow from operating activities during the 2016 financial year. The decline was especially attributable to higher receivables from affiliated entities and a decrease in medium- and short-term provisions.

Cash flow from investing activities amounted to €141.4 million (2015: €–1,444.9 million). This increase is strongly correlated with a decline in investments in financial assets. In 2015, cash flow from investing activities had been largely influenced by the acquisition of an additional stake in STOXX Ltd., and the acquisition of 360T Group, resulting in a cash outflow of €1,403.5 million.

Cash flow from financing activities amounted to €–697.9 million in the year under review (2015: €841.9 million). In addition to €420.1 million in dividends paid for the 2015 financial year, the company raised loans of €400.0 million and repaid loans of €683.1 million. Cash and cash equivalents amounted to €–1,006.8 million on the balance sheet date of 31 December 2016 (2015: €–606.7 million), comprising liquid funds of €935.4 million (2015: €172.3 million) less cash-pooling liabilities of €1,942.2 million (2015: €779.0 million).

Net assets of Deutsche Börse AG

Deutsche Börse AG's property, plant and equipment amounted to €6,141.2 million on 31 December 2016 (2015: €6,220.7 million). The lion's share of this figure was attributable to investments in affiliated companies of €6,001.8 million (2015: €6,092.8 million), mainly comprising investments in Clearstream Holding AG and Eurex Frankfurt AG. Investments in affiliated companies declined to €91.0 million, mainly due to the sale of the ISE stake (€81.9 million).

At €41.6 million (2015: €21.5 million), Deutsche Börse AG's investments in intangible assets and property, plant and equipment were higher than the amount of €30.0 million expected at the end of 2015. Amortisation, depreciation and impairment amounted to €24.3 million (2015: €24.4 million).

Receivables from and liabilities to affiliated companies include settlements for intra-Group services and amounts invested by Deutsche Börse AG within the scope of cash-pooling arrangements. Receivables from affiliated companies of €167.2 million (2015: €147.1 million) mainly related to the existing profit transfer agreement with Clearstream Holding AG. Liabilities to affiliated companies predominantly resulted from cash pooling (€1,942.2 million – 2015: €779.0 million); short-term loans (€375.6 million – 2015: €375.6 million); and trade liabilities (€82.1 million – 2015: €59.3 million).

Non-current assets (condensed)

	2016 €m	2015 €m
Intangible assets	12.3	11.3
Tangible assets	66.3	51.9
Financial assets	6,062.6	6,157.5
Non-current assets as at 31 December	**6,141.2**	**6,220.7**

Employees per country/region

	31 Dec 2016	%
Germany	1,098	97.0
United Kingdom	22	1.9
France	7	0.6
Rest of Europe	4	0.4
Total Deutsche Börse AG	**1,132**	**100.0**

Deutsche Börse AG collects fees for a large part of services provided immediately after each month-end; accordingly, trade receivables totalled €157.1 million at the year-end (2015: €131.0 million).

Working capital amounted to €–2,064.0 million during the year under review (2015: €–1,158.1 million). The change was mainly attributable to an increase in liabilities to affiliated companies.

Deutsche Börse AG employees

In the reporting period, the number of people employed by Deutsche Börse AG decreased by 21 to total 1,132 as at 31 December 2016 (31 December 2015: 1,153). On average, 1,118 people worked for Deutsche Börse AG during financial year 2016 (2015: 1,131).

In the course of financial year 2016, 31 employees left Deutsche Börse AG, resulting in a fluctuation rate of 2.8 per cent.

Deutsche Börse AG employed staff at six locations throughout the world as at 31 December 2016. Details on the countries/regions concerned, the employee age structure and the length of service of the company's employees are given in the following tables and those on the previous page.

As at 31 December 2016, 75 per cent of Deutsche Börse AG's employees were graduates. This figure is calculated on the basis of the number of employees holding a degree from a university, a university of applied sciences or a university of cooperative education, and employees who have completed comparable studies abroad. In total, the company invested an average of 5.9 days per employee in staff training in 2016.

Remuneration report of Deutsche Börse AG

As the structure and design of the remuneration system correspond to those of Deutsche Börse Group, please refer to the latter's remuneration report.

Employee age structure

	31 Dec 2016	%
Under 30 years	105	9
30 to 39 years	283	25
40 to 49 years	386	34
50 years and older	358	32
Total Deutsche Börse AG	**1,132**	**100**

Employee length of service

	31 Dec 2016	%
Less than 5 years	384	34
5 to 15 years	320	28
Over 15 years	428	38
Total Deutsche Börse AG	**1,132**	**100**

Corporate governance declaration in accordance with section 289a HGB

The corporate governance declaration in accordance with section 289a HGB applies to Deutsche Börse Group and Deutsche Börse AG, please refer to the corporate governance declaration made on behalf of the Group.

Opportunities and risks facing Deutsche Börse AG

As the opportunities and risks facing Deutsche Börse AG and the measures and processes for dealing with them are essentially the same as for Deutsche Börse Group, please refer to the risk report and the report on opportunities for more information. As a matter of principle, Deutsche Börse AG's share of the opportunities and risks of its equity investments and subsidiaries is proportionate to the size of its shareholdings. Risks that threaten the existence of the Eurex Clearing AG subsidiary have a direct impact on Deutsche Börse AG as it has issued a letter of comfort ("Patronatserklärung"). Further information on the letter of comfort issued to Eurex Clearing AG is available in the "Other financial obligations and transactions not included in the balance sheet" section in the notes to the annual financial statements of Deutsche Börse AG.

The description of the internal control system (ICS) required by section 289 (5) HGB is given in the "Internal management" section.

Report on expected developments at Deutsche Börse AG

The expected developments in Deutsche Börse AG's business are largely subject to the same factors as those influencing Deutsche Börse Group. The relevant disclosures and quantitative information on Deutsche Börse AG are provided in the report on expected developments.

Remuneration report

This remuneration report outlines the principles of the remuneration system for members of Deutsche Börse AG's Executive Board, and describes the structure and amount of Executive Board remuneration. Furthermore, it describes the principles applicable to, and the amount of Supervisory Board remuneration. The remuneration report is part of the combined management report; it follows the requirements of the Handelsgesetzbuch (HGB, German Commercial Code), the International Financial Reporting Standards (IFRSs) and the German Accounting Standard No. 17. In addition, it largely follows the recommendations of the German Corporate Governance Code (GCGC). For details, see the corporate governance declaration. The remuneration report is structured in two parts:

1. Remuneration system and aggregate Executive Board remuneration
2. Supervisory Board remuneration

Remuneration system and aggregate Executive Board remuneration

Principles and targets

The Supervisory Board resolved to adopt a new remuneration system for the Executive Board, to come into effect on 1 January 2016. The system was approved by the Annual General Meeting on 11 May 2016, in accordance with section 120 (4) of the Aktiengesetz (AktG, German Stock Corporation Act).

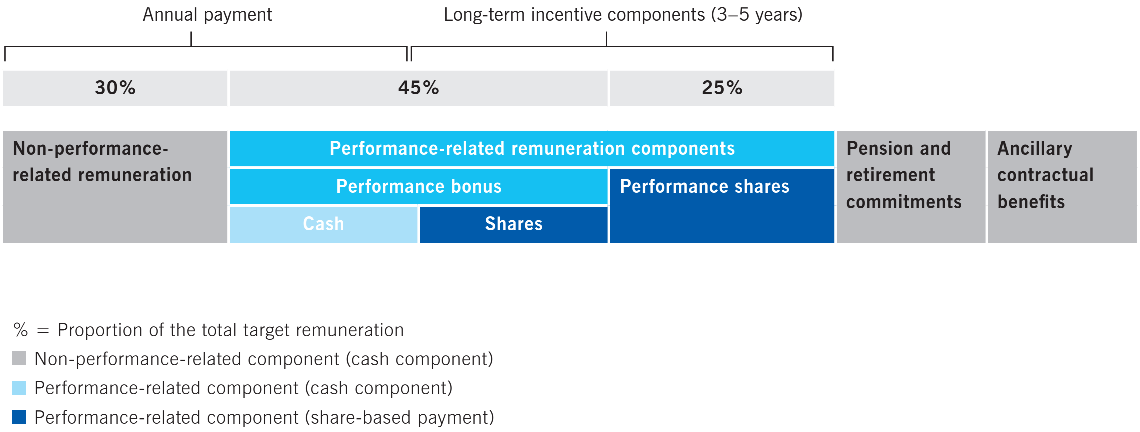
The new remuneration system is based on three key guidelines: firstly, a marked performance orientation – with a more differentiated appraisal through ambitious internal and external targets – ensures that the focus is on the company's above-average growth. Secondly, various assessment bases extending over several years, sustainability elements, and the deferral of disbursements over time discourage excessive risk-taking. Thirdly, the new remuneration system promotes a strong equity culture, and thereby contributes to aligning the interests of shareholders, senior management and other stakeholders.

The Executive Board remuneration is determined by the entire Supervisory Board. The Personnel Committee is responsible for preparing the Supervisory Board's decision. The Supervisory Board reviews the appropriateness of the Executive Board remuneration on a regular basis – at least every two years – including the ratio of Executive Board remuneration to the remuneration of first-level managers and the workforce as a whole, as well as the development of the various salary levels over time. The remuneration system applies equally to all members of the Executive Board.

Structure and remuneration components
The remuneration system for the members of the Executive Board consists of four components:

- non-performance-related fixed remuneration
- performance-related remuneration components
- ancillary benefits
- pension and retirement commitments

Composition of the total target remuneration



In addition, Share Ownership Guidelines apply, according to which Executive Board members are obliged to hold a substantial amount of Deutsche Börse AG shares during their term of office.

The Chief Executive Officer also participates in a Co-Performance Investment Plan which was resolved by the Supervisory Board in 2015.

The final amount of the stock bonus for outstanding tranches within the previous Stock Bonus Plan (SBP) for members of the Executive Board was determined as at 31 December 2015; the SBP was prematurely terminated by way of a settlement process.

The individual components of the Executive Board's remuneration are laid out in detail below.

Non-performance-related fixed remuneration
The members of the Executive Board receive a fixed basic salary, payable in twelve monthly instalments. This non-performance-related remuneration comprises approximately 30 per cent of the total target remuneration for one year.

Performance-related remuneration components
Performance-related remuneration accounts for approximately 70 per cent of the total target remuneration for one year. This variable remuneration element comprises a performance bonus as well as performance shares.

Performance bonus
The performance bonus is measured using the Performance Bonus Plan (PBP). It amounts to approximately two-thirds of the performance-related remuneration, and to approximately 45 per cent of the total target remuneration. It consists of a share-based component (the share-based performance bonus) and a cash component, in equal proportions.

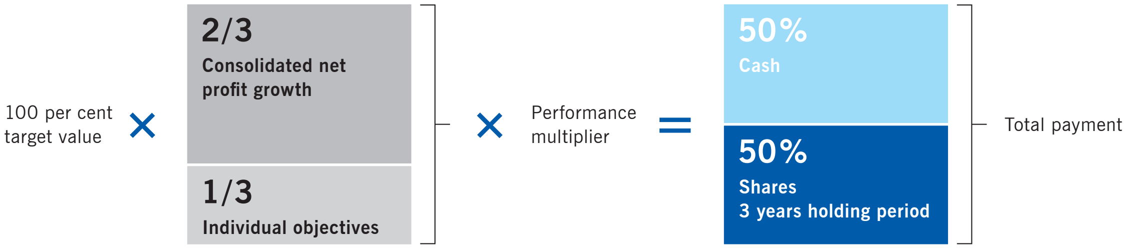
Performance shares
Performance shares are measured and granted within the framework of the Performance Share Plan (PSP). As they reflect the performance of the Deutsche Börse share price over a five-year performance period (the vesting period), they are disbursed after the year under review. Performance shares amount to approximately one-third of the performance-related remuneration, and to approximately 25 per cent of the total target remuneration.

The criteria which the Supervisory Board uses to assess target achievement of individual Executive Board members are described below. These criteria are used to determine the respective performance bonus, as well as the number and value of performance shares.

Principles governing the PBP and assessment of target achievement for the performance bonus
Target achievement for the performance bonus is determined for one financial year on the basis of the PBP. The underlying assessment is based on two components: growth of net profit for the year concerned attributable to Deutsche Börse AG shareholders (hereinafter referred to as net income) with a weighting of two-thirds, and the Executive Board member’s individual performance with a one-third weighting.

Once the Supervisory Board has determined the overall target achievement level from these two components, it may conduct a final appraisal, adjusting it via a performance multiplier for individual Executive Board members, but also for the entire Executive Board. The total performance bonus will be disbursed in cash, no later than the regular salary payment for the calendar month following approval of Deutsche Börse AG’s consolidated financial statements. Executive Board members are obliged to invest 50 per cent of the total disbursement amount after tax in Deutsche Börse AG shares, which they will have to hold for at least three years.

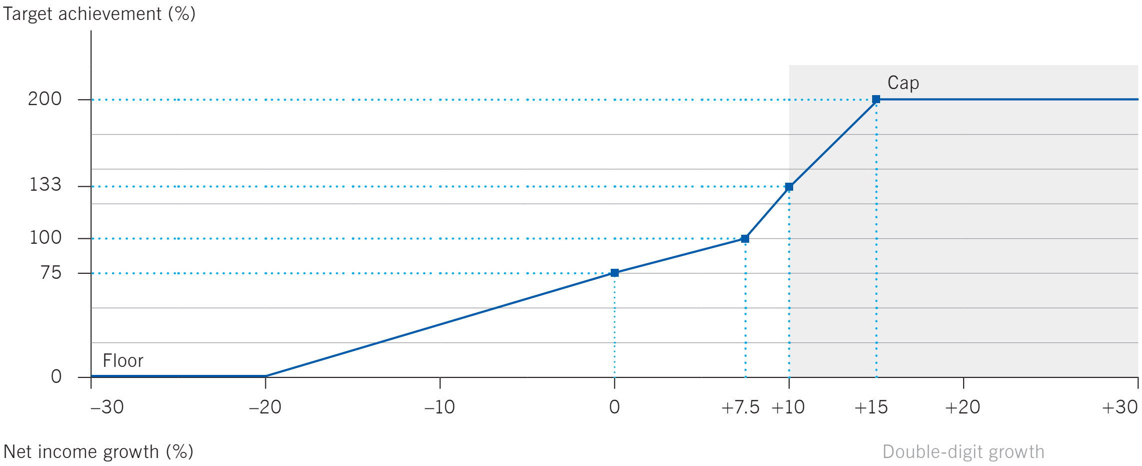
Overview of the performance bonus



Assessment of net income growth for the performance bonus

Net income is derived – independently of the budget – by comparing the net income for the remuneration year with the previous year's figure. Target achievement may range between 0 and 200 per cent, whereby a decline in net income of 20 per cent or more means a 0 per cent target achievement (floor). Where net income remains stable (i.e. unchanged year-on-year), this is deemed a 75 per cent target achievement; a 7.5 per cent increase is equivalent to a 100 per cent target achievement. An increase in net income of 15 per cent or more means a 200 per cent target achievement (cap). Accordingly, a stronger incentive is provided for net income growth rates between 7.5 per cent and 15 per cent, via a steeper slope of the target achievement curve (please refer to the chart "Assessment of net income for the performance bonus").

Assessment of net income for the performance bonus



Assessment of individual target achievement
The individual targets are set by the Supervisory Board at the beginning of each financial year for each Executive Board member – taking into account general targets regarding the company's strategy as well as those with particular importance for the individual Executive Board portfolios (e.g. on financial indicators, clients, employees and control systems). The Supervisory Board assesses target achievement for each member of the Executive Board after the end of the respective remuneration year. In a similar manner to the assessment of net income growth, a range from a lower limit of 0 per cent to an upper limit of 200 per cent has been defined for achievement regarding individual targets.

Determining a performance multiplier

The performance multiplier for the performance bonus enables the Supervisory Board to account for a dilution of equity, or to incorporate achievement of qualitative or quantitative targets (especially integration parameters) in the final assessment of overall target achievement, in the event of mergers, acquisitions or divestments. The performance multiplier may be set in a range between at least 0.8 and at most 1.2; it is multiplied by the performance assessment for the performance bonus, taking the 200 per cent cap into account.

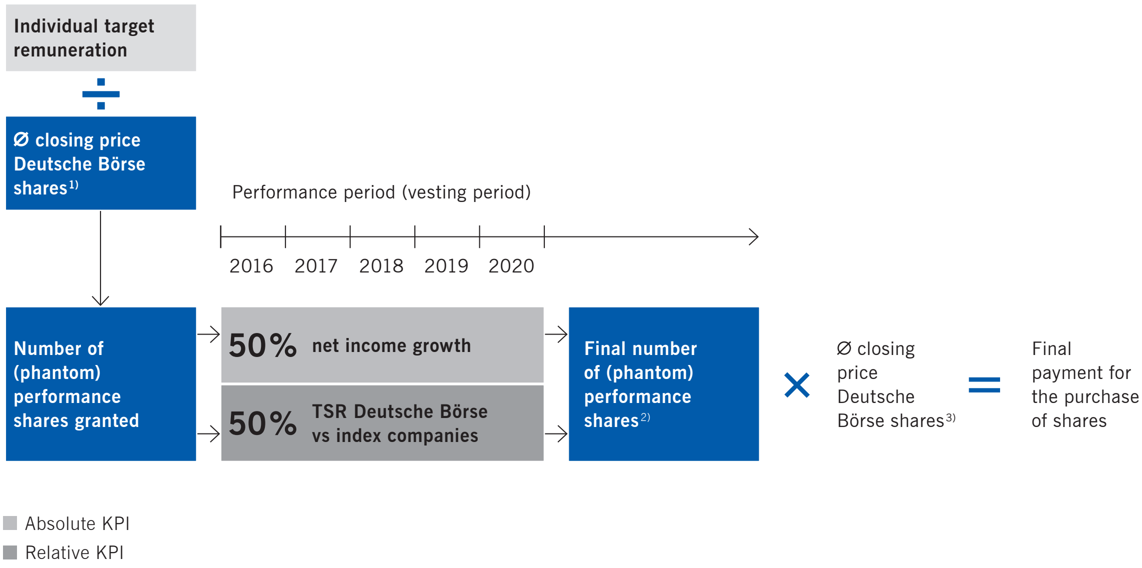
Principles governing the PSP and assessment of target achievement for performance shares

At the beginning of each financial year, the PSP provides for a prospective quantity of so-called performance shares to be allotted to each member of the Executive Board. The number of initial (phantom) performance shares is determined by dividing the amount of individual target remuneration (in euros) by the average Xetra® closing price of Deutsche Börse shares over the last calendar month prior to the start of the performance period (fair value of the performance shares). A claim on allocation of phantom performance shares will only arise upon expiry of the five-year performance period (vesting period). Target achievement in relation to performance shares is determined on the basis of two components: firstly, growth in net income over a five-year period, and secondly, the relative performance of Deutsche Börse's total shareholder return (TSR) compared to the TSR of the industry benchmark STOXX® Europe 600 Financials index during the same period. The final number of phantom performance shares is multiplied by the average Xetra closing price of Deutsche Börse shares in the last calendar month prior to the end of the vesting period. The result of this calculation is the disbursement amount to be used for the purchase of tradeable shares (taking into account the dividends per share paid out during the vesting period). The disbursement takes place no later than the regular salary payment for the calendar month following approval of Deutsche Börse AG's consolidated financial statements after the end of the respective vesting period. The members of the Executive Board are obliged to invest the disbursement amount after tax in Deutsche Börse AG shares.

Therefore, the PSP is variable in two dimensions:

- The first variable is the number of performance shares, which is derived from the growth path of net income and from the TSR of Deutsche Börse shares relative to the TSR of the reference index, each over a five-year period. In this context, the maximum number of performance shares is capped at 250 per cent of performance shares determined at the beginning of the vesting period.
- The second set of variables is the development of share price and dividends during the vesting period, with no cap applied to the share price.

Structure of the Performance Share Plan (PSP)

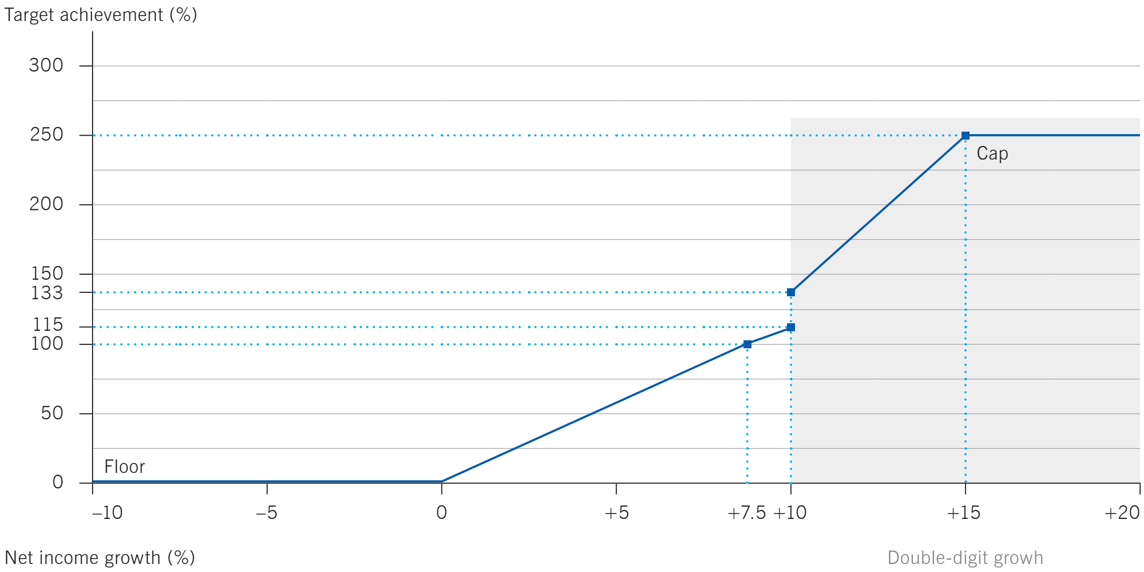


1) Of the last calendar month before the start of the vesting period
2) Cap at 250 per cent of the number granted
3) Of the last calendar month prior to the end of the vesting period, including the dividends from the entire vesting period

Assessment of net income for performance shares

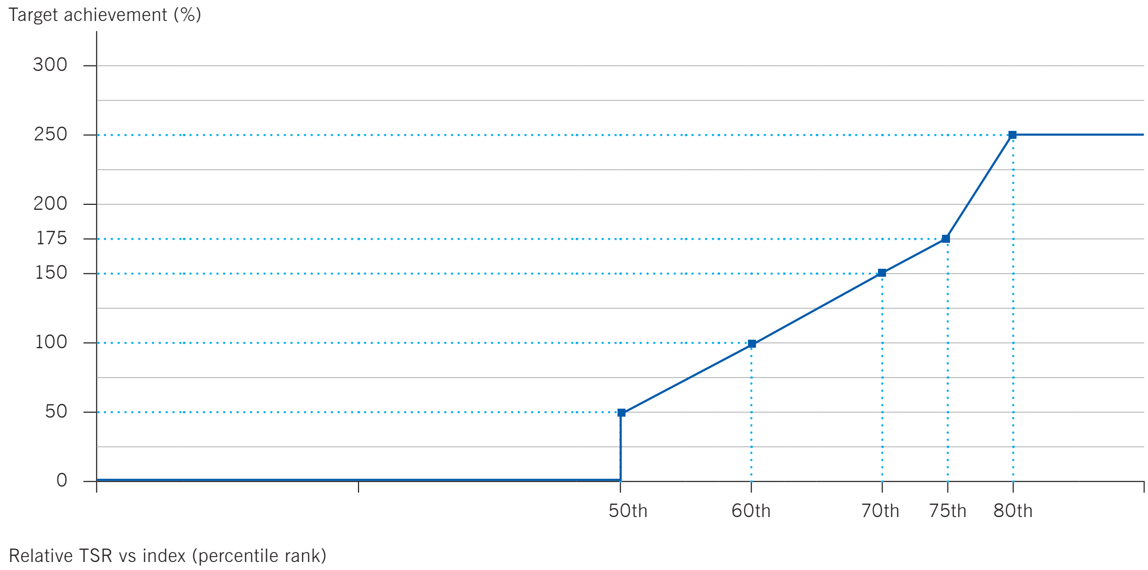
During the five-year performance period, the Supervisory Board measures the target achievement level in terms of net income growth and determines it for the Executive Board members accordingly. The target achievement level at the end of the respective performance period is calculated as the sum of the annual target achievement levels of each of the five years, divided by five. The level of target achievement may range between 0 and 250 per cent. If net income declines, or remains unchanged year-on-year, this is deemed a 0 per cent target achievement level (floor). A 7.5 per cent increase in net income is equivalent to a 100 per cent target achievement. An increase in net income of 15 per cent or more means a 250 per cent target achievement (cap). The target achievement level increases more strongly for growth rates between 10 and 15 per cent, compared to single-digit growth rates, providing a stronger incentive to Executive Board members to strive for double-digit net income growth. Please also refer to the chart “Assessment of net income growth for performance shares”.

Assessment of net income for performance shares



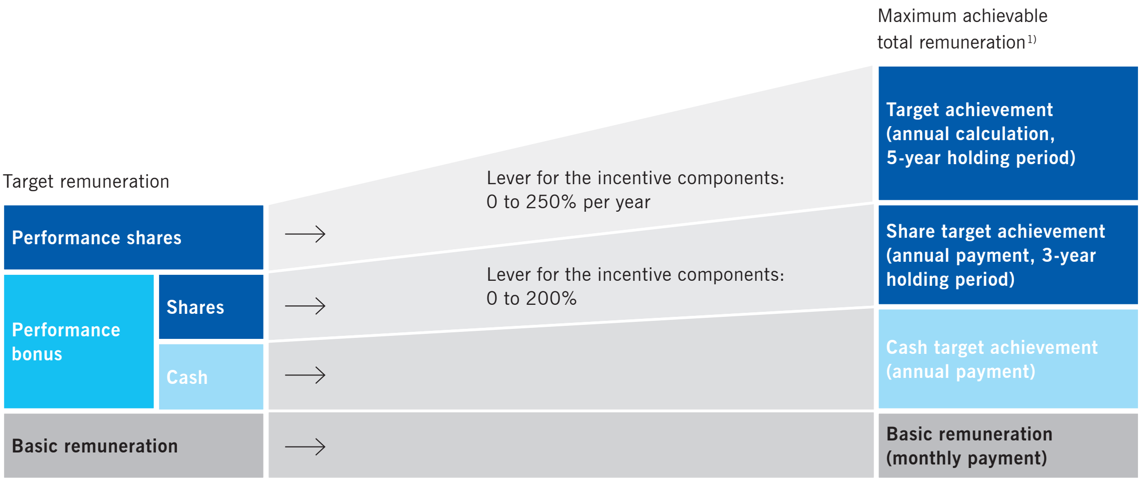
Assessment of TSR performance of Deutsche Börse shares
The TSR performance of Deutsche Börse shares is derived from Deutsche Börse AG's ranking, relative to the constituents of the STOXX Europe 600 Financials index. Executive Board members' target achievement may range from 0 per cent (floor) to 250 per cent (cap). A 0 per cent target achievement is assumed in the event of Deutsche Börse AG's relative five-year TSR falling short of the median, i.e. being lower than that of at least half of index constituents. Where Deutsche Börse AG's TSR has outperformed 60 per cent of index constituents, this represents a target achievement of 100 per cent. A target achievement of 175 per cent is reached if Deutsche Börse AG's TSR has outperformed 75 per cent of index constituents. The 250 per cent target achievement cap is reached if Deutsche Börse AG's TSR ranks amongst the top 20 per cent of index constituents – in other words, if it is ranked in the 80th percentile of the index or higher. Please also refer to the chart "Assessment of the Total Shareholder Return (TSR) of the Deutsche Börse share for performance shares".

Assessment of the Total Shareholder Return (TSR) of the Deutsche Börse share for performance shares



Performance-related remuneration for Executive Board members is predominantly share-based. Furthermore, it is largely calculated on the basis of long-term performance, with various target criteria being assessed over a period of five years (performance shares) or four years (share-based performance bonus: annual disbursement and three-year holding period for shares to be invested), respectively (see also the section "Share Ownership Guidelines"). The cash component of the performance bonus (annual disbursement) is the only short-term component within variable remuneration.

Basic remuneration as well as annual and long-term incentive components



% = Proportion of the total target remuneration
- Performance-related component (share-based payment)
- Performance-related component (cash component)
- Non-performance-related component (cash component)

1) Unlimited share price performance

Ancillary contractual benefits

The members of the Executive Board receive certain ancillary contractual benefits, such as the provision of an appropriate company car for business and personal use (with tax being payable by the Executive Board members on the pecuniary benefit arising from personal use). They also receive taxable contributions towards private pensions. The company has also taken out insurance cover for them, such as personal accident insurance and a Directors & Officers (D&O) insurance.

Pension and retirement commitments

Retirement benefits

Messrs Kengeter, Pottmeyer and Tessler are entitled to pension benefits after reaching the age of 60, Ms Stars after reaching the age of 62, and Mr Preuss after reaching the age of 63, provided that they are no longer in the employment of Deutsche Börse AG in each case at that time. As a matter of principle, the Supervisory Board reviews and determines the pensionable income from which retirement benefits are derived. There are two different retirement benefit systems for Executive Board members. Executive Board members who were appointed for the first time prior to 1 January 2009 receive a defined benefit pension. Executive Board members who were appointed for the first time after that date receive a defined contribution pension. The pensionable income and the present value of the existing pension commitments as at 31 December 2016 are presented in the table “Retirement benefits”.

Defined benefit pension system: After reaching the contractually agreed retirement age, members of the Executive Board to whom the defined benefit pension system is applicable receive a specified percentage (replacement rate) of their individual pensionable income as a pension. This is subject to the Executive Board member in question having served on the Executive Board for at least three years, and having been reappointed at least once. Pensionable income is determined and regularly reviewed by the Supervisory Board. When the term of office began, the replacement rate was 30 per cent. It rose by 5 percentage points with each reappointment, up to a maximum of 50 per cent. The provisions of the defined benefit pension system apply to Messrs Preuss and Tessler.

Defined contribution pension system: For Executive Board members to whom the defined contribution pension system applies, the company makes a contribution in the form of a capital component in each calendar year they serve on the Executive Board. This contribution is determined by applying an individual replacement rate to the pensionable income. As in the defined benefit pension system, the pensionable income is determined and regularly reviewed by the Supervisory Board. The annual capital components calculated in this manner bear annual interest of 3 per cent. The provisions of the defined contribution pension system apply to Messrs Kengeter and Pottmeyer, and to Ms Stars.

Early retirement pension

Members of the Executive Board who have a defined benefit pension are entitled to an early retirement pension if the company does not extend their contract, unless the reason for this is attributable to the Executive Board member or would justify termination without notice of the Executive Board member's contract. The amount of the early retirement pension is calculated in the same way as the retirement benefits – by applying the relevant replacement rate to the pensionable income. Again, this is subject to the Executive Board member having served on the Executive Board for at least three years, and having been reappointed at least once. Members of the Executive Board who have a defined contribution pension are not eligible for early retirement benefits.

Death and permanent occupational incapacity benefits

In the event of the permanent occupational incapacity of a member of the Executive Board, the company is entitled to retire the Executive Board member in question. Permanent occupational incapacity exists if an Executive Board member is unable to perform his or her professional activities for more than six months, and if it is not expected that his or her occupational capacity will be regained within a further six months. In such cases, Executive Board members who have a defined benefit pension plan receive the amount calculated by applying the relevant replacement rate to the pensionable income. Executive Board members with a defined contribution pension plan receive the benefit assets acquired when the benefits fall due, plus an allocated amount. The allocated amount corresponds to the full annual pension contribution that would have been due in the year of leaving service, multiplied by the number of years between the benefits falling due and the Executive Board member reaching the age of 60, 62, or 63, respectively.

In the event of the death of an Executive Board member, his or her spouse receives 60 per cent of the above amount and each dependent child receives 10 per cent (25 per cent for full orphans), up to a maximum of 100 per cent of the pension contribution.

Transitional payments
In the event of permanent occupational incapacity, the agreements under the defined benefit pension system for the Executive Board provide for a transitional payment in addition to the benefits described above. The amount of this payment corresponds to the target amount of the variable remuneration (cash and stock bonuses) in the year in which the benefits fall due. It is paid out in two tranches, in the two subsequent years. In the case of the death of an Executive Board member, his or her spouse receives 60 per cent of the transitional payment.

Severance payments
In the event of early termination of an Executive Board member's contract of service other than for good cause, any payments made to the Executive Board member may not exceed the remuneration for the residual term of the contract of service and may also not exceed the value of two total annual remuneration payments (severance payment cap). The payment is calculated based on the total remuneration in the past financial year and, where appropriate, the expected total remuneration for the current financial year. The Supervisory Board may exceed the upper limit in exceptional, justified cases. Performance shares granted will lapse where the company has good cause to terminate employment or where a member of the Executive Board terminates his or her contract before the end of the performance period without good cause and without a mutual agreement.

Change of control
If an Executive Board member is asked to stand down within six months of a change of control, he or she is entitled to a severance payment equal to two total annual remuneration payments or the value of the residual term of his or her contract of service, where this is less than two years. This entitlement may be increased to 150 per cent of the severance payment. If an Executive Board member resigns within six months of the change of control because his or her position as a member of the Executive Board is negatively impacted to a significant degree as a result of the change of control, the Supervisory Board may decide at its discretion whether to grant a severance payment of the above-mentioned amount. In case of a change of control, all performance periods ongoing at that time shall end with the day the contract of service is terminated. The respective performance shares will be accounted for prematurely.

Share Ownership Guidelines
Under the Share Ownership Guidelines, members of the Executive Board are obliged to continuously hold a multiple of their average fixed remuneration in Deutsche Börse AG shares during their term of office. A multiple of 3 applies to the CEO, and a multiple of 2 to the Deputy CEO and to ordinary Executive Board members. This pertains to a relevant period between 1 January 2016 and 31 December 2018. Shares of the following three categories will be considered to assess compliance with the Share Ownership Guidelines: (i) shares purchased from the performance bonus, during the holding period; (ii) shares from allocation of performance shares; and (iii) shares held in private ownership. Such shareholdings must be built up over a three-year period ending on 31 December 2018.

Co-Performance Investment Plan (CPIP)
The Chief Executive Officer participates in a Co-Performance Investment Plan which was resolved by the Supervisory Board in 2015. In December 2015, he used private funds to invest an amount of €4,500,000 in Deutsche Börse AG shares (investment shares) within the investment period provided for in the Co-Performance Investment Plan. These shares must be held at least until the end of the 2019 financial year. In return for his acquisition of investment shares, Mr Kengeter was granted 68,987 co-performance shares in the company, which are generally subject to the same criteria as performance shares. Performance shares are explained in the section "Principles governing the PSP and assessment of target achievement for performance shares". The performance of the co-performance shares is based on (i) the growth in Deutsche Börse AG's net income and (ii) the ratio of the Deutsche Börse shares' total shareholder return (TSR), relative to the TSR of companies included in the STOXX Europe 600 Financials index.

The performance period for the co-performance shares commenced on 1 January 2015 and will end on 31 December 2019. The equivalent of these shares will be paid out in three steps:

- Prepayment on the disbursement amount as at 31 March 2019 (first prepayment): the amount of the first prepayment will be determined by the Supervisory Board; it is supposed to be approximately one-third of the expected amount to be disbursed.
- Prepayment on the disbursement amount as at 31 March 2020 (second prepayment): the amount of the second prepayment will be one-third of the disbursement amount determined.
- Disbursement of the remaining disbursement amount as at 31 March 2021 (final disbursement): the final disbursement will be equivalent to the total disbursement amount, less the first and second prepayments.

Supercession of the previous Share Bonus Plan (SBP)
The final amount of stock bonuses for all tranches outstanding within the previous Share Bonus Plan for Executive Board members was calculated as at 31 December 2015 and settled during 2016. For the tranches 2014 and 2015, retention periods shall apply until 31 December 2016 and 31 December 2017, respectively. Where not restricted by takeover legislation, with regard to the intended merger with London Stock Exchange Group plc, or other legal provisions, the stock bonuses had to and have to be invested in shares of Deutsche Börse AG.

Miscellaneous

Post-contractual non-compete clause

A post-contractual non-compete clause applies to members of the Executive Board of Deutsche Börse AG who were appointed or reappointed to the Board on or after 1 October 2014. This means that the respective members of the Executive Board are contractually prohibited from acting for a competing company, or from undertaking competing activities, for a period of one year from the end of the employment relationship. The compensation payable during the non-compete period amounts to 75 per cent of the member's final fixed remuneration and 75 per cent of the final cash bonus; it is payable for the term of the post-contractual non-compete clause. Benefits under the pension agreement are deducted from the compensation. In addition, 50 per cent of other benefits are deducted if the other benefits plus the compensation exceed the final remuneration. The company may waive the post-contractual non-compete clause before termination of the contract of service.

Secondary employment

Additional appointments or sideline activities entered into by individual members of the Executive Board require the approval of the entire Executive Board and the Chairman of the Supervisory Board or, in certain cases, the entire Supervisory Board, which has delegated granting such approval to the Personnel Committee. If a member of the Executive Board is remunerated for an office performed at an affiliate of Deutsche Börse AG, this is offset against the Executive Board member's entitlement to remuneration from Deutsche Börse AG.

Loans to Executive Board members

The company did not grant any loans or advances to members of the Executive Board during the financial year 2016, and there are no loans or advances from previous years to members of the Executive Board.

Payments to former members of the Executive Board

Former members of the Executive Board or their surviving dependents received payments of €4.5 million in the year under review (2015: €2.3 million). The actuarial present value of the pension obligations as at the balance sheet date was €74.2 million in the year under review (2015: €71.8 million).

Amount of Executive Board remuneration

The following tables contain the corresponding figures for the above-mentioned individual components of the Executive Board's remuneration for the financial years 2016 and 2015. The remuneration awarded to each Executive Board member in accordance with No. 4.2.5 (3) of the GCGC is shown in the tables "Granted contributions" and "Inflows". Details disclosed in accordance with section 314 of the HGB are shown in the "Inflows" table.

Retirement benefits

	Pensionable income	Replacement rate		Present value/defined benefit obligation		Pension expense	
	2016 € thous.	as at 31 Dec 2016 %	as at 31 Dec 2015 %	as at 31 Dec 2016 € thous.	as at 31 Dec 2015 € thous.	2016 € thous.	2015 € thous.
Defined benefit system							
Andreas Preuss	800.0	50.0	50.0	11,241.2	10,082.6	1,331.7	997.3
Jeffrey Tessler	577.8	45.0	40.0	5,550.2	4,756.8	403.8	169.0
Total	**1,377.8**			**16,791.4**	**14,839.4**	**1,735.5**	**1,166.3**
Defined contribution system							
Carsten Kengeter	1,000.0	40.0	40.0	989.2	449.0	548.2	436.0
Gregor Pottmeyer	500.0	48.0	48.0	2,711.5	2,009.7	279.9	290.0
Hauke Stars	500.0	36.0	36.0	978.8	652.5	209.0	209.3
Total	**2,000.0**			**4,679.5**	**3,111.2**	**1,037.1**	**935.3**

2016 total expense for share-based payments

(Prior-year figures in brackets)

	Expense recognised (total) € thous.	Carrying amount as at the balance sheet date (total) € thous.
Carsten Kengeter[1]	3,011.7 (2,550.2)	4,091.3 (2,550.2)
Andreas Preuss	164.2 (4,095.1)	164.2 (4,578.1)
Gregor Pottmeyer	131.1 (3,422.8)	131.1 (3,887.9)
Hauke Stars	120.9 (2,693.6)	120.9 (3,184.1)
Jeffrey Tessler	130.3 (3,261.8)	130.3 (3,645.4)
Total[2]	**3,558.2 (16,023.5)**	**4,637.8 (17,845.7)**

1) Includes the expense recognised for the Co-Performance Investment Plan as well as the Performance Share Plan
2) Prior-year figures were adjusted due to the resignation of Reto Francioni (former Chief Executive Officer); thus, they do not match the figures published in the previous year.

Number of phantom shares

		Number of phantom shares on the grant date	Adjustments of number of phantom shares since the grant date	Number of phantom shares as at 31 Dec 2016
Carsten Kengeter	Tranche 2016	16,593	3,320	19,913
	Tranche 2015[1]	84,092	50,437	134,529
	Total 2015 to 2016 tranches			**154,442**
Andreas Preuss	Tranche 2016	8,952	1,791	10,743
	Tranche 2015	12,693	–12,693	0
	Tranche 2014	14,391	–14,391	0
	Total 2014 to 2016 tranches			**10,743**
Gregor Pottmeyer	Tranche 2016	7,148	1,430	8,578
	Tranche 2015	10,752	–10,752	0
	Tranche 2014	12,045	–12,045	0
	Total 2014 to 2016 tranches			**8,578**
Hauke Stars	Tranche 2016	6,595	1,320	7,915
	Tranche 2015	9,706	–9,706	0
	Tranche 2014	9,669	–9,669	0
	Total 2014 to 2016 tranches			**7,915**
Jeffrey Tessler	Tranche 2016	7,105	1,422	8,527
	Tranche 2015	10,154	–10,154	0
	Tranche 2014	11,512	–11,512	0
	Total 2014 to 2016 tranches			**8,527**
	Total 2014 to 2016 tranches			**190,205**

1) Includes 68,987 phantom shares of the Co-Performance Investment Plan

Granted contributions

	Carsten Kengeter CEO (since 1 June 2015, appointed as at 4 Apr 2015)			
	2016 € thous.	2016 (min) € thous.	2016 (max) € thous.	2015 € thous.
Fixed remuneration	1,500.0	1,500.0	1,500.0	819.7
Ancillary benefits	129.3	129.3	129.3	76.4
Total	**1,629.3**	**1,629.3**	**1,629.3**	**896.1**
One-year variable remuneration	1,100.0	0	2,200.0	397.4
variable cash remuneration (individual targets)[1]	–	–	–	397.4
cash component performance bonus (50%)[2]	1,100.0	0	2,200.0	–
Multi-year variable remuneration	2,400.0	0	no max.	1,614.6
variable cash component (net income target, 3-year term)[1]	–	–	–	794.9
SBP (3-year term)[1]	–	–	–	819.7
share component performance bonus (50%, 3-year holding period)[2][3]	1,100.0	0	no max.	–
performance shares (5-year term)[2][4]	1,300.0	0	no max.	–
Total	**5,129.3**	**1,629.3**	**no max.**	**2,908.1**
Service cost	548.2	548.2	548.2	436.0
Total remuneration	**5,677.5**	**2,177.5**	**no max.**	**3,344.1**

1) Remuneration components under the remuneration system which was applicable until the end of 2015
2) Remuneration components under the remuneration system which has been applicable since 2016
3) The target achievement level is capped at 200 per cent. As there is no cap on the development of the share price, no maximum amount has been specified (no max.). For further information, please refer to the corporate governance declaration.
4) Target achievement levels for net income and total shareholder return as well as for the maximum number of performance shares are all capped at 250 per cent. As there is no cap on the development of the share price, no maximum amount can be stated (no max.). For further information, please refer to the corporate governance declaration.

	Hauke Stars			
	2016 € thous.	2016 (min) € thous.	2016 (max) € thous.	2015 € thous.
Fixed remuneration	650.0	650.0	650.0	650.0
Ancillary benefits	24.5	24.5	24.5	24.6
Total	**674.5**	**674.5**	**674.5**	**674.6**
One-year variable remuneration	516.7	0	1,033.4	300.0
variable cash remuneration (individual targets)[1]	–	–	–	300.0
cash component performance bonus (50%)[2]	516.7	0	1,033.4	–
Multi-year variable remuneration	1,033.4	0	no max.	1,250.0
variable cash component (net income target, 3-year term)[1]	–	–	–	600.0
SBP (3-year term)[1]	–	–	–	650.0
share component performance bonus (50%, 3-year holding period)[2][3]	516.7	0	no max.	–
performance shares (5-year term)[2][4]	516.7	0	no max.	–
Total	**2,224.6**	**674.5**	**no max.**	**2,224.6**
Service cost	209.0	209.0	209.0	209.3
Total remuneration	**2,433.6**	**883.5**	**no max.**	**2,433.9**

Andreas Preuss Deputy CEO				Gregor Pottmeyer			
2016 € thous.	2016 (min) € thous.	2016 (max) € thous.	2015 € thous.	2016 € thous.	2016 (min) € thous.	2016 (max) € thous.	2015 € thous.
800.0	800.0	800.0	800.0	720.0	720.0	720.0	720.0
31.7	31.7	31.7	31.5	28.5	28.5	28.5	28.4
831.7	**831.7**	**831.7**	**831.5**	**748.5**	**748.5**	**748.5**	**748.4**
701.4	0	1,402.8	418.0	560.0	0	1,120.0	320.0
–	–	–	418.0	–	–	–	320.0
701.4	0	1,402.8	–	560.0	0	1,120.0	–
1,402.8	0	no max.	1,686.1	1,120.0	0	no max.	1,360.0
–	–	–	836.0	–	–	–	640.0
–	–	–	850.1	–	–	–	720.0
701.4	0	no max.	–	560.0	0	no max.	–
701.4	0	no max.	–	560.0	0	no max.	–
2,935.9	**831.7**	**no max.**	**2,935.6**	**2,428.5**	**748.5**	**no max.**	**2,428.4**
1,331.7	1,331.7	1,331.7	997.3	279.9	279.9	279.9	290.0
4,267.6	**2,163.4**	**no max.**	**3,932.9**	**2,708.4**	**1,028.4**	**no max.**	**2,718.4**

Jeffrey Tessler			
2016 € thous.	2016 (min) € thous.	2016 (max) € thous.	2015 € thous.
761.6	761.6	761.6	761.6
18.2	18.2	18.2	19.2
779.8	**779.8**	**779.8**	**780.8**
556.7	0	1,113.4	330.0
–	–	–	330.0
556.7	0	1,113.4	–
1,113.4	0	no max.	1,340.0
–	–	–	660.0
–	–	–	680.0
556.7	0	no max.	–
556.7	0	no max.	–
2,449.9	**779.8**	**no max.**	**2,450.8**
403.8	403.8	403.8	169.0
2,853.7	**1,183.6**	**no max.**	**2,619.8**

Inflows

	Carsten Kengeter CEO (since 1 June 2015, appointed as at 4 Apr 2015)		Andreas Preuss Deputy CEO	
	2016 € thous.	2015 € thous.	2016 € thous.	2015 € thous.
Fixed remuneration	1,500.0	819.7	800.0	800.0
Ancillary benefits[2]	129.3	76.4	31.7	31.5
Total	**1,629.3**	**896.1**	**831.7**	**831.5**
One-year variable remuneration	2,200.0	476.9	1,363.0	477.0
variable cash remuneration (individual targets)[3]	–	476.9	–	477.0
cash component performance bonus (50%)[4]	2,200.0	–	1,363.0	–
Multi-year variable remuneration	3,670.6	953.9	5,941.1	2,047.2
variable cash component (consolidated net income target, 3-year term)[3]	–	953.9	–	954.0
variable share component (SBP tranches 2013–2015/2012)[3][5]	1,470.6	–	4,578.1	1,093.2
share component performance bonus (50%, 3-year holding period)[4]	2,200.0	–	1,363.0	–
performance shares (5-year term)[4]	–	–	–	–
Total	**7,499.9**	**2,326.9**	**8,135.8**	**3,355.7**
Service cost	548.2	436.0	1,331.7	997.3
Total remuneration (GCGC)	**8,048.1**	**2,762.9**	**9,467.5**	**4,353.0**
plus SBP tranche for the remuneration year[6]	–	819.7	–	850.1
plus performance shares[4]	1,300.0	–	701.4	–
less variable share component[3]	–1,470.6	–	–4,578.1	–1,093.2
less service cost	–548.2	–436.0	–1,331.7	–997.3
Total remuneration (section 314 of the HGB)	**7,329.3**	**3,146.6**	**4,259.1**	**3,112.6**
Number of phantom shares[7]	16,593	15,105[8]	8,952	12,693

1) Prior-year figures were adjusted due to the resignation of Reto Francioni (former Chief Executive Officer); thus, they do not match the figures published in the previous year.
2) Ancillary benefits (other remuneration) comprise salary components such as taxable contributions towards private pensions, company car arrangements, travel arrangements, living allowances, and expenses for tax and legal consultations.
3) Remuneration components under the remuneration system which was applicable until the end of 2015
4) Remuneration components under the remuneration system which has been applicable since 2016
5) Figures for financial year 2016 refer to the 2013, 2014 and 2015 tranches of the SBP; figures for financial year 2015 refer to the 2012 tranche of the SBP.
6) Corresponds to a 100 per cent target achivement level for the 2015 phantom share bonus. For further information on the supercession of the previous SBP, please refer to the section „Supercession of the previous Share Bonus Plan (SBP)“.
7) The number of prospective performance shares for the performance period determined at the 2016 grant date is calculated by dividing the target number by the average share price (Xetra® closing price) of Deutsche Börse shares in December 2015 (€78.35)
8) The average share price (Xetra closing price) of Deutsche Börse shares was €54.27 for the calculation of the number of phantom shares in the assessment period from August to September 2014.

	Gregor Pottmeyer		Hauke Stars		Jeffrey Tessler		Total	
	2016 € thous.	2015 € thous.	2016 € thous.	2015 € thous.	2016 € thous.	2015 € thous.	2016 € thous.	2015 [1] € thous.
	720.0	720.0	650.0	650.0	761.6	761.6	4,431.6	3,751.3
	28.5	28.4	24.5	24.6	18.2	19.2	232.2	180.1
	748.5	**748.4**	**674.5**	**674.6**	**779.8**	**780.8**	**4,663.8**	**3,931.4**
	952.0	359.8	682.0	327.3	851.7	376.6	6,048.7	2,017.6
	–	359.8	–	327.3	–	376.6	–	2,017.6
	952.0	–	682.0	–	851.7	–	6,048.7	–
	4,839.9	1,448.4	3,866.1	722.4	4,497.1	1,617.0	22,814.8	6,788.9
	–	719.6	–	654.7	–	753.1	–	4,035.3
	3,887.9	728.8	3,184.1	67.7	3,645.4	863.9	16,766.1	2,753.6
	952.0	–	682.0	–	851.7	–	6,048.7	–
	–	–	–	–	–	–	–	–
	6,540.4	**2,556.6**	**5,222.6**	**1,724.3**	**6,128.6**	**2,774.4**	**33,527.3**	**12,737.9**
	279.9	290.0	209.0	209.3	403.8	169.0	2,772.6	2,101.6
	6,820.3	**2,846.6**	**5,431.6**	**1,933.6**	**6,532.4**	**2,943.4**	**36,299.9**	**14,839.5**
	–	720.0	–	650.0	–	680.0	–	3,719.8
	560.0	–	516.7	–	556.7	–	3,634.8	–
	–3,887.9	–728.8	–3,184.1	–67.7	–3,645.4	–863.9	–16,766.1	–2,753.6
	–279.9	–290.0	–209.0	–209.3	–403.8	–169.0	–2,772.6	–2,101.6
	3,212.5	**2,547.8**	**2,555.2**	**2,306.6**	**3,039.9**	**2,590.5**	**20,396.0**	**13,704.1**
	7,148	10,752	6,595	9,706	7,105	10,154	46,393	58,410

Supervisory Board remuneration

The members of the Supervisory Board receive a fixed annual remuneration of €70 thousand. The Chairman receives remuneration of €170 thousand and the Deputy Chairman receives €105 thousand. Members of Supervisory Board committees receive additional fixed annual remuneration of €30 thousand for each committee position they hold. This amount rises to €35 thousand for members of the Audit Committee. Committee Chairmen's remuneration is €40 thousand, or €60 thousand for the Chairman of the Audit Committee. If a Supervisory Board member belongs to several Supervisory Board committees, only the work in a maximum of two committees is remunerated. The remuneration for the work in the two most highly remunerated committees is awarded. Supervisory Board members who only belong to the Supervisory Board for part of the financial year, receive one-twelfth of the fixed annual remuneration and, if applicable, of the remuneration for their committee membership, for each month or part-month of membership.

With the Annual General Meeting on 11 May 2016, an attendance fee was introduced. For every meeting of the Supervisory Board or one of its committees attended by a member of the Supervisory Board in person, be it as a member of the Board or committee or a guest, they will receive an attendance fee of €1 thousand. Where two or more meetings are held on the same day or on consecutive days, the attendance fee will only be granted once.

Remuneration paid to members of the Supervisory Board for advisory and agency services
There were no further agreements in the reporting period for advisory and agency services with members of the Supervisory Board, or with companies that employ members of the Supervisory Board of Deutsche Börse AG, or in which Supervisory Board members hold an interest.

Supervisory Board remuneration[1)]

	2016	2015	2016[2)] € thous.	2015 € thous.
Joachim Faber (Chairman)	full year	full year	257.0	250.0
Richard Berliand (Deputy Chairman as from 13 May 2015)	full year	full year	190.0	175.8
Ann-Kristin Achleitner[3)]	11 May – 31 Dec	–	89.7	–
Irmtraud Busch[4)]	–	1 Jan – 13 May	–	41.7
Karl-Heinz Flöther	full year	full year	142.0	137.1
Marion Fornoff	full year	full year	107.0	100.0
Hans-Peter Gabe	full year	full year	106.0	100.0
Richard M. Hayden[4)]	–	1 Jan – 13 May	–	54.2
Craig Heimark	full year	full year	103.0	116.7
David Krell[4)]	–	1 Jan – 13 May	–	41.7
Monica Mächler	full year	full year	140.0	125.8
Friedrich Merz[4)]	–	1 Jan – 13 May	–	56.3
Thomas Neiße[4)]	–	1 Jan – 13 May	–	41.7
Heinz-Joachim Neubürger †	–	1 Jan – 5 Feb	–	22.5
Gerhard Roggemann (Deputy Chairman until 13 May 2015)[5)]	1 Jan – 11 May	full year	54.2	144.6
Erhard Schipporeit	full year	full year	166.0	166.7
Jutta Stuhlfauth	full year	full year	135.0	120.0
Martin Ulrici[4)]	–	1 Jan – 13 May	–	41.7
Johannes Witt	full year	full year	143.0	137.5
Amy Yip[6)]	full year	13 May – 31 Dec	132.0	86.7
Total			**1,764.9**	**1,960.7**

1) The recipient of the remuneration is determined individually by the members of the Supervisory Board.
2) Remuneration including individual attendance fee
3) Elected to the Supervisory Board on 11 May 2016
4) Left the Supervisory Board on 13 May 2015
5) Left the Supervisory Board on 11 May 2016
6) Elected to the Supervisory Board on 13 May 2015

Corporate governance declaration

The corporate governance declaration in accordance with section 289a of the Handelsgesetzbuch (HGB, German Commercial Code) is part of the combined management report. In this declaration, the Executive Board and Supervisory Boards of Deutsche Börse AG report on the following: the declaration of conformity in accordance with section 161 of the Aktiengesetz (AktG, German Stock Corporation Act), relevant information on corporate governance practices, the Executive and Supervisory Boards' working practices and the composition and working practices of their committees, and the quotas for women established in accordance with sections 76 (4) and 111 (5) of the AktG.

Declaration of conformity in accordance with section 161 of the AktG

On 8 December 2016, the Executive Board and Supervisory Board of Deutsche Börse AG issued the following declaration of conformity:

"Declaration of Conformity regarding the German Corporate Governance Code in accordance with section 161 of the German Stock Corporation Act
The following declaration of conformity refers to the version of the German Corporate Governance Code (GCGC) as of 5 May 2015, published in the Federal Gazette on 12 June 2015.

The Executive Board and the Supervisory Board of Deutsche Börse AG declare that the recommendations of the GCGC have been met almost completely and will be met with only few deviations. For details, please see below:

1. Agreement of severance payment caps when concluding Executive Board contracts (no. 4.2.3 (4) GCGC)
Severance payment caps agreed upon in all current contracts with the members of the Executive Board complied and will continue to comply with the recommendation no. 4.2.3 (4) GCGC. As in the past, however, the Supervisory Board reserves the right to deviate from no. 4.2.3 (4) GCGC in the future under certain circumstances. The Supervisory Board is of the opinion that a deviation may become necessary in extraordinary cases.

2. Cap on total amount of compensations (no. 4.2.3 (2) (sentence 6) GCGC) and disclosure in the compensation report (no. 4.2.5 (3) GCGC)
No. 4.2.3 (2) (sentence 6) GCGC recommends that the amount of management compensation shall be capped, both overall and for individual components. Deutsche Börse AG deviated and will deviate from this recommendation.

Effective as of 1 January 2016, a new compensation system was implemented for the Executive Board of Deutsche Börse AG. This was also approved by the Annual General Meeting on 11 May 2016. The long-term variable compensation elements within the framework of this new compensation system are share-based. Even though a cap is provided in relation to the number of shares which are allocated to the members of the Executive Board, no cap is foreseen on the maximum achievable bonus amount as the development of the share price remains uncapped. In our opinion, a cap on the achievable amount would be inconsistent with the rationale of a share-based compensation system which aims to achieve an adequate participation in the economic risks and chances of the company by the members of the Executive Board.

No. 4.2.5 (3) (subitem 1) GCGC recommends, inter alia, to present the maximum achievable compensation for variable compensation components in the remuneration report. As there will be no cap in relation to the share-based variable compensation components, the maximum achievable compensation cannot be presented as recommended in no. 4.2.5 (3) (subitem 1) GCGC. Therefore, the deviation from the Code results from the fact that there is no cap on the maximum achievable compensation."

The annual declaration of conformity in accordance with section 161 of the AktG is also available online at www.deutsche-boerse.com/declconformity. The declarations of conformity for the previous five years can also be found there.

Information on corporate governance practices

Conduct policies

Deutsche Börse Group's global orientation means that binding policies and standards of behaviour must apply at all of its locations around the world. The main aims of our principles for cooperation are to ensure responsibility, respect and mutual esteem. We also adhere to these principles when implementing the Group's business model. Communication with customers, investors, employees and the public is based on timely information and transparency. In addition to focusing on generating a profit, Deutsche Börse Group's business is managed in accordance with recognised standards of social responsibility.

Group-wide code of ethics

Acting responsibly means having values that are shared by all employees throughout the Group. The code of ethics adopted by the Executive Board, which is applicable throughout the Group, lays the foundations for this by setting minimum ethical and legal standards. It is binding both on members of the Executive Board and on all other executives and employees within the Group. In addition to specifying concrete rules, it provides general guidance as to how employees can contribute to putting the values it sets out into practice in the course of their daily work. The aim of the code of ethics is to provide guidance on working together in the company on a day-to-day basis, to help resolve any conflicts and to resolve ethical and legal challenges. The code of ethics for Deutsche Börse Group employees can be found at www.deutsche-boerse.com > Sustainability > Set an example > Employees > Code of ethics.

Code of conduct for suppliers and service providers

Deutsche Börse Group demands that high standards are met not only by its management and its employees, but also by its suppliers. The Group's code of conduct for suppliers and service providers requires them to respect human rights and employee rights, and to comply with minimum standards. It was amended in 2016 to implement a resolution of the Executive Board incorporating the requirements of the UK's Modern Slavery Act, which applies to all companies doing business in the United Kingdom. Most suppliers have signed up to these conditions, and all other key suppliers have made voluntary commitments that correspond to or in fact exceed Deutsche Börse Group's standards. Service providers and suppliers must sign up to the code or enter into an equivalent voluntary commitment before they can do business with Deutsche Börse Group. The code is regularly reviewed in the light of current developments and amended as necessary. The code of conduct for suppliers and service providers can be found online at www.deutsche-boerse.com > Sustainability > Set an example > Procurement management.

Values

Deutsche Börse Group's business activities are based on the legal frameworks and ethical standards of the different countries in which it operates. A key way in which the Group underscores the values which it considers important is by joining initiatives and organisations advocating generally accepted ethical standards. Relevant memberships are as follows:

United Nations Global Compact www.unglobalcompact.org: This voluntary business initiative established by the United Nations aims to achieve a more sustainable and more equitable global economy. At the heart of the compact are ten principles covering the areas of human rights, labour, the environment and anti-corruption. Deutsche Börse Group has submitted annual progress reports on its implementation of the UN Global Compact since 2009.

Diversity Charter www.diversity-charter.com: As a signatory to the Diversity Charter, the company has committed to acknowledging, respecting and promoting the diversity of its workforce, customers and business associates – irrespective of their age, gender, disability, race, religion, nationality, ethnic background, sexual orientation or identity.

International Labour Organisation www.ilo.org: This UN agency is the international organisation responsible for drawing up and overseeing international labour standards; it brings together representatives of governments, employees and employers to jointly shape policies and programmes. Deutsche Börse Group has signed up to the ILO's labour standards and hence agreed to abide by them.

The German Sustainability Code www.nachhaltigkeitsrat.de/en/home: The German Council for Sustainable Development formally adopts the German Sustainability Code and recommends that the political and business communities make extensive use of this voluntary instrument. Deutsche Börse Group has published an annual declaration of conformity with the German Sustainability Code since 2011.

Sector-specific policies

Deutsche Börse Group's pivotal role in the financial sector requires that it handles information, and especially sensitive data and facts, responsibly. A number of rules are in force in the Group to ensure that employees comply with this. These cover both legal requirements and special policies applicable to the relevant industry segments, such as the whistleblowing system and risk and control management policies.

Whistleblowing system

Deutsche Börse Group's whistleblowing system gives employees and external service providers an opportunity to report non-compliant behaviour. Deutsche Börse Group has engaged Deloitte & Touche to act as an external ombudsman and to receive any such information submitted by phone or e-mail. Whistleblowers' identities are not revealed to Deutsche Börse Group.

Risk and control management policies

Functioning control systems are an important part of stable business processes. Deutsche Börse Group's enterprise-wide control systems are embedded in an overarching framework. This comprises the legal requirements, the recommendations of the German Corporate Governance Code, international regulations and recommendations, and other company-specific policies, among other things. The executives responsible for the different elements of the control system are in close contact with each other and with the Executive Board, and report regularly to the Supervisory Board or its committees. Equally, the Group has an enterprise-wide risk management system that covers, and provides mandatory rules for, functions, processes and responsibilities. Details of the internal control system and risk management at Deutsche Börse Group can be found in the "Internal management" and "Risk report" sections.

Executive Board and Supervisory Board working practices

The German Stock Corporation Act enshrines the dual board system – which assigns separate, independent responsibilities to the Executive Board and the Supervisory Board – as a fundamental principle. These responsibilities are set out in detail in the following sections.

Both boards perform their duties in the interests of the company and with the aim of achieving a sustainable increase in value. Their actions are based on the principle of good corporate governance. As a result, Deutsche Börse AG's Executive Board and Supervisory Board work closely together in a spirit of mutual trust, with the Executive Board providing the Supervisory Board with comprehensive information on the course of business in a regular and timely manner. In addition, the Executive Board regularly informs the Supervisory Board of all issues relating to corporate planning, the company's business performance, the risk situation and risk management, compliance, and the company's control systems. The Chief Executive Officer (CEO) reports to the Supervisory Board without undue delay, orally or in writing, on matters that are of special importance to the company. The company's strategic orientation is examined in detail with the Supervisory Board and agreed with it, and implementation of the relevant measures is discussed at regular intervals. In particular, the chairmen of the two boards are in regular contact and discuss the company's strategy, business performance and risk management. The Supervisory Board can also request reports from the Executive Board at any time, especially on matters relating to Deutsche Börse AG and on business transactions at subsidiaries that could have a significant impact on Deutsche Börse AG's position.

Deutsche Börse AG's Executive Board
The Executive Board manages Deutsche Börse AG and Deutsche Börse Group. The Board had five members in the reporting period. The main duties of the Executive Board include defining the Group's corporate goals and strategic orientation, managing and monitoring the operating units, and establishing and monitoring an efficient risk management system. The Executive Board is responsible for preparing the consolidated and annual financial statements of Deutsche Börse AG as well as for producing financial information during the year. In addition, it must ensure compliance with legal requirements and official regulations.

The members of the Executive Board are jointly responsible for all aspects of management. Irrespective of this collective responsibility, the individual members manage the areas of the company assigned to them in the Executive Board's schedule of responsibilities independently, and are personally responsible for them. In addition to the business areas, there are two functional areas of responsibility – that of the CEO and that of the Chief Financial Officer (CFO). The business areas cover the operating areas, such as the company's cash market activities and the derivatives business, securities settlement and custody, information technology and the market data business. The responsibilities within the Executive Board were reorganised effective 1 January 2016 so as to bundle areas of responsibility and related issues, and to enhance client orientation. Apart from the existing CEO and CFO functions, the following three divisions were established: (1) Clients, Products & Core Markets, (2) IT & Operations, Data & New Asset Classes, and (3) Cash Market, Pre-IPO & Growth Financing. Details can be found in the "Overview of Deutsche Börse Group – Organisational structure" section.

Further details of the Executive Board's work are set out in the bylaws that the Supervisory Board has resolved for the Executive Board. Among other things, these list issues that are reserved for the full Executive Board, special measures requiring the approval of the Supervisory Board, and other procedural details and the arrangements for passing resolutions. The Executive Board holds regular board meetings; these are convened by the CEO, who coordinates the Executive Board's work. Any Executive Board member can require a meeting to be convened. In accordance with its bylaws, the full Executive Board normally takes decisions on the basis of resolutions passed by a simple majority of the members voting on them in each case. If a vote is tied, the CEO has the casting vote. The CEO also has a right of veto, although he cannot enforce a resolution against a majority vote.

More information on the Executive Board, its composition, and members' individual appointments and biographies can be found at www.deutsche-boerse.com/execboard.

Deutsche Börse AG's Supervisory Board

The Supervisory Board supervises and advises the Executive Board in its management of the company. It supports the Executive Board in significant business decisions and provides assistance on strategically important issues. The Supervisory Board has specified measures requiring its approval in the bylaws for the Executive Board. In addition, the Supervisory Board is responsible for appointing the members of the Executive Board, for deciding on their total remuneration and for examining Deutsche Börse AG's consolidated and annual financial statements. Details of the Supervisory Board's work in financial year 2016 can be found in the report of the Supervisory Board.

The Supervisory Board consists of twelve members, two-thirds of whom are shareholder representatives and one-third of whom are employee representatives. The term of office for shareholder and employee representatives on the current Supervisory Board is identical. It lasts three years, and ends at the Annual General Meeting in 2018.

The Supervisory Board holds at least six regular meetings every year. In addition, extraordinary meetings are held as required. The committees also hold regular meetings. The Supervisory Board passes its resolutions by a simple majority. If a vote is tied, the Chairman has the casting vote. In addition, the Supervisory Board regularly reviews the efficiency of its work, discusses potential areas for improvement, and resolves suitable measures where necessary.

The Supervisory Board has resolved a list of requirements for its composition along with concrete goals. Detailed information on the profile for the Supervisory Board's composition can be found in the corporate governance report.

Supervisory Board committees and their working practices
The Supervisory Board's goal in establishing committees is to improve the efficiency of its work by examining complex matters in smaller groups that prepare them for the full Supervisory Board. Additionally, the Supervisory Board has delegated individual decision-making powers to the committees to the extent that this is legally permissible. The Supervisory Board had six committees during the reporting period. Their individual responsibilities are outlined in the Supervisory Board's bylaws. The committees' rules of procedure correspond to those for the full Supervisory Board. Details of the duties and members of the individual committees can be found online at www.deutsche-boerse.com > Investor Relations > Corporate Governance > Supervisory Board > Committees.

The individual committee chairs report to the plenary meeting about the subjects addressed, and resolutions passed, in the committee meetings. Information on the Supervisory Board's concrete work and meetings in the reporting period can be found in the report of the Supervisory Board.

More information on the Supervisory Board and its committees, the individual members and their appointments and biographies, can be found at www.deutsche-boerse.com/supervboard.

Target figures for women in management positions

In accordance with the Gesetz für die gleichberechtigte Teilhabe von Frauen und Männern an Führungspositionen in der Privatwirtschaft und im öffentlichen Dienst (FührposGleichberG, German Act on the Equal Participation of Women and Men in Leadership Positions in the Private and Public Sectors), Deutsche Börse AG's Supervisory Board and Executive Board have defined target quotas for women on these boards and for the two management levels directly beneath the Executive Board; these quotas apply in all cases to Deutsche Börse AG.

At the time when the targets for Deutsche Börse AG's Supervisory Board and Executive Board were set, 33.33 per cent of Supervisory Board members were women, while the figure for the Executive Board was 20 per cent. In view of this, the Supervisory Board resolved on 16 June 2015 that the current proportion of female members of the Supervisory Board (33.33 per cent) and the Executive Board (20 per cent) should be maintained as a minimum requirement until the end of the implementation period (30 June 2017). Following the end of the 2016 Annual General Meeting, the proportion of women members on the Supervisory Board exceeded this minimum requirement and amounted to 41.67 per cent. The proportion of female Executive Board members remained unchanged, at 20 per cent.

The proportion of women in management positions at the two levels directly beneath Deutsche Börse AG's Executive Board amounted to 6 per cent (level 1) and 10 per cent (level 2) on 15 September 2015, the date when the Executive Board defined the relevant targets. At that time, the Executive Board resolved that the then current proportions of women on these executive levels (i.e. 6 per cent for level 1 and 10 per cent for level 2) should be maintained as a minimum requirement until 30 June 2017. As at 31 December 2016, women in management positions at these two levels accounted for 10 per cent and 11 per cent respectively. Please refer to the "Non-financial key performance indicators – Target female quotas adopted" section for further information on Deutsche Börse AG's targets for women in management positions and the voluntary commitment it made as part of its non-financial key performance indicators.

Supervisory Board committees in 2016

Composition and responsibilities

Audit Committee

Members

- Erhard Schipporeit (Chairman)
- Karl-Heinz Flöther
- Monica Mächler
- Johannes Witt

Composition

- at least four members, who are elected by the Supervisory Board
- prerequisites for the chair of the committee: the person concerned must be independent and must have specialist knowledge and experience of applying accounting principles and internal control processes (financial expert)
- persons who cannot chair the committee: the Chairman of the Supervisory Board; former members of the company's Executive Board whose appointment ended less than two years ago

Responsibilities

- handles issues relating to the preparation of the annual budget and financial topics, particularly capital management
- handles issues relating to the adequacy and effectiveness of the company's control systems, and in particular to risk management, compliance and internal auditing
- audit reports
- handles accounting issues, including the oversight of the accounting and reporting process
- half-yearly financial report and any quarterly financial reports, if applicable
- examines the annual financial statements, the consolidated financial statements and the combined management report, discusses the audit report with the auditor and prepares the Supervisory Board's resolutions adopting the annual financial statements and approving the consolidated financial statements, as well as the resolution on the Executive Board's proposal on the appropriation of the unappropriated surplus
- prepares the Supervisory Board's recommendation to the Annual General Meeting on the election of the auditor of the annual financial statements, the consolidated financial statements and the half-yearly financial report, to the extent that the latter is audited or reviewed by an auditor, and makes corresponding recommendations to the Supervisory Board
- ensures the obligatory independence of the external auditors
- non-audit services provided by the auditor
- issues the engagement letter to the auditor, including in particular the review or audit of half-yearly financial reports, and determines the areas of emphasis for the audit and the audit fee
- prepares the Supervisory Board's resolution approving the declaration of conformity in accordance with section 161 of the AktG, and the corporate governance declaration in accordance with section 289a of the HGB

Nomination Committee

Members	Composition
▪ Joachim Faber (Chairman) ▪ Ann-Kristin Achleitner (since 11 May 2016) ▪ Gerhard Roggemann (until 11 May 2016) ▪ Amy Yip	▪ the Chairman of the Personnel Committee also chairs the Nomination Committee ▪ at least two other members (solely shareholder representatives who are also members of the Personnel Committee) **Responsibilities** ▪ proposes suitable candidates to the Supervisory Board for inclusion in the Supervisory Board's election proposal to the Annual General Meeting

Personnel Committee

Members	Composition
▪ Joachim Faber (Chairman) ▪ Ann-Kristin Achleitner (since 11 May 2016) ▪ Marion Fornoff ▪ Gerhard Roggemann (until 11 May 2016) ▪ Amy Yip	▪ chairman of the Supervisory Board as committee chairman ▪ at least three other members, who are elected by the Supervisory Board and one of whom must be an employee representative **Responsibilities** ▪ handles issues relating to the contracts of service for Executive Board members, and in particular to the structure and amount of their remuneration ▪ addresses succession planning for the Executive Board ▪ approves appointments of members of Deutsche Börse AG's Executive Board to other executive boards, supervisory boards, advisory boards and similar boards, as well as honorary appointments and sideline activities, and approves any exemptions from the requirement to obtain approval ▪ approves the grant or revocation of general powers of attorney ▪ approves cases in which the Executive Board grants employees retirement pensions or other individually negotiated retirement benefits, or proposes to enter into works agreements establishing pension plans

Risk Committee

Members	Composition
▪ Richard Berliand (Chairman) ▪ Monica Mächler ▪ Erhard Schipporeit ▪ Jutta Stuhlfauth	▪ at least four members, who are elected by the Supervisory Board **Responsibilities** ▪ reviews the risk management framework, including the overall risk strategy and risk appetite, and the risk roadmap ▪ takes note of and reviews the periodic risk management and compliance reports ▪ oversees monitoring of the Group's operational, financial and business risks ▪ discusses the annual reports on significant risks and on the risk management systems at regulated Group entities, to the extent legally permissible

Strategy Committee

Members	Composition
▪ Joachim Faber (Chairman) ▪ Ann-Kristin Achleitner (since 11 May 2016) ▪ Richard Berliand ▪ Hans-Peter Gabe ▪ Gerhard Roggemann (until 11 May 2016) ▪ Jutta Stuhlfauth ▪ Amy Yip	▪ chairman of the Supervisory Board as committee chairman ▪ at least five other members, who are elected by the Supervisory Board **Responsibilities** ▪ advises the Executive Board on matters of strategic importance to the company and its affiliates ▪ addresses fundamental strategic and business issues, as well as important projects for Deutsche Börse Group

Technology Committee

Members	Composition
▪ Richard Berliand (Chairman) ▪ Karl-Heinz Flöther ▪ Craig Heimark ▪ Johannes Witt	▪ at least three members, who are elected by the Supervisory Board **Responsibilities** ▪ supports the Supervisory Board in meeting its supervisory duties with respect to the information technology used to execute the Group's business strategy, and with respect to information security ▪ advises on IT strategy and architecture ▪ oversees monitoring of technological innovations, the provision of IT services, the technical performance and stability of the IT systems, operational IT risks, and information security services and risks

Frankfurt/Main, 7 March 2017
Deutsche Börse AG
The Executive Board

Carsten Kengeter

Andreas Preuss

Gregor Pottmeyer

Hauke Stars

Jeffrey Tessler

Responsibility statement by the Executive Board

To the best of our knowledge, and in accordance with the applicable reporting principles, the consolidated financial statements give a true and fair view of the assets, liabilities, financial position and profit or loss of the Group, and the combined management report includes a fair review of the development and performance of the business and the position of the Group, together with a description of the principal opportunities and risks associated with the expected development of the Group.

Frankfurt/Main, 10 March 2017
Deutsche Börse AG
The Executive Board

Carsten Kengeter

Andreas Preuss

Gregor Pottmeyer

Hauke Stars

Jeffrey Tessler

Auditor's Report

We have audited the consolidated financial statements prepared by Deutsche Börse Aktiengesellschaft, Frankfurt/Main, comprising the consolidated income statement, the consolidated statement of comprehensive income, the consolidated balance sheet, the consolidated cash flow statement, the consolidated statement of changes in equity and the notes to the consolidated financial statements, together with the combined management report for the financial year from January 1 to December 31, 2016. The preparation of the consolidated financial statements and the combined management report in accordance with IFRSs, as adopted by the EU, and the additional requirements of German commercial law pursuant to Section 315a (1) of the German Commercial Code [HGB] are the responsibility of the Company`s executive board. Our responsibility is to express an opinion on the consolidated financial statements and on the combined management report based on our audit.

We conducted our audit of the consolidated financial statements in accordance with Section 317 HGB and German generally accepted standards for the audit of financial statements promulgated by the Institut der Wirtschaftsprüfer [Institute of Public Auditors in Germany] [IDW]. Those standards require that we plan and perform the audit such that misstatements materially affecting the presentation of the net assets, financial position and results of operations in the consolidated financial statements in accordance with the applicable financial reporting framework and in the combined management report are detected with reasonable assurance. Knowledge of the business activities and the economic and legal environment of the Group and expectations as to possible misstatements are taken into account in the determination of audit procedures. The effectiveness of the accounting-related internal control system and the evidence supporting the disclosures in the consolidated financial statements and the combined management report are examined primarily on a test basis within the framework of the audit. The audit includes assessing the annual financial statements of those entities included in consolidation, the determination of entities to be included in consolidation, the accounting and consolidation principles used and significant estimates made by executive board, as well as evaluating the overall presentation of the consolidated financial statements and combined management report. We believe that our audit provides a reasonable basis for our opinion.

Our audit has not led to any reservations.

KPMG

In our opinion, based on the findings of our audit, the consolidated financial statements comply with IFRSs, as adopted by the EU, the additional requirements of German commercial law pursuant to Section 315a (1) HGB and give a true and fair view of the net assets, financial position and results of operations of the Group in accordance with these requirements. The combined management report is consistent with the consolidated financial statements, complies with the German statutory requirements, and as a whole provides a suitable view of the Group's position and suitably presents the opportunities and risks of future development.

Frankfurt am Main, 10 March, 2017

KPMG AG
Wirtschaftsprüfungsgesellschaft
[Original German version signed by:]

Braun	Dielehner
Wirtschaftsprüfer	Wirtschaftsprüfer
[German Public Auditor]	[German Public Auditor]