Merck
Notes to the Group accounts
General

(1) Company information

The accompanying consolidated financial statements as at December 31, 2013 have been prepared with Merck KGaA, Frankfurter Strasse 250, 64293 Darmstadt, which manages the operations of the Merck Group, as parent company. In accordance with the provisions of the German financial reporting disclosure law (Publizitätsgesetz), consolidated financial statements are also prepared for E. Merck KG, the ultimate parent company and general partner of Merck KGaA with an equity interest of 70.27% as of December 31, 2013. These include Merck KGaA and its subsidiaries. The authoritative German versions of these financial statements are filed with the German Federal Gazette (Bundesanzeiger) and can be accessed at www.bundesanzeiger.de.

(2) Reporting principles

The consolidated financial statements of the Merck Group have been prepared in accordance with consistent accounting policies and in euros, the reporting currency. Pursuant to section 315a of the German Commercial Code (HGB), the International Financial Reporting Standards in force on the reporting date and adopted by the European Union as issued by the International Accounting Standards Board and the IFRS Interpretations Committee (IFRS and IAS, as well as IFRIC and SIC) have been applied.

The following rule was applied in advance as of fiscal 2013:
→ Amendment to IAS 36 "Impairment of Assets"
This amendment was published in May 2013 by the International Accounting Standards Board, adopted by the European Union on December 20, 2013, and is effective for reporting periods beginning on or after January 1, 2014. The changes that early application involves are described in Note [5] "Accounting policies".

The following rules take effect as of fiscal 2013:
→ IFRS 13 "Fair Value Measurement"
→ Amendment to IAS 1 "Presentation of Financial Statements"
→ Amendment to IAS 12 "Income Taxes"
→ Revised version of IAS 19 "Employee Benefits"
→ Amendments to IFRS 1 "First-time Adoption of International Financial Reporting Standards"
→ Amendment to IFRS 7 "Financial Instruments: Disclosures"
→ "Improvements to International Financial Reporting Standards 2009–2011 Cycle"
→ IFRIC 20 "Stripping Costs in the Production Phase of a Surface Mine"

As of fiscal 2012, Merck began applying the revised version of IAS 19 "Employee Benefits" in advance.

IFRS 13 "Fair Value Measurement" provides a uniform definition of fair value as well as principles for measuring fair value. It stipulates how fair value is to be measured when another standard requires fair value measurement or disclosures about fair value. Moreover, the application of IFRS 13 leads to more extensive disclosures in the notes to the accounts.

→ General

In accordance with the amendment to IAS 1, the components of the statement of comprehensive income have been grouped into items based on whether they will be reclassified to profit or loss in the future or will never be reclassified to profit or loss.

The disclosures required by IFRS 7 about the effect of netting arrangements on the financial position have been included in the consolidated financial statements.

Apart from the early application of the revised version of IAS 19, none of the other new standards had a material effect on the consolidated financial statements.

The following standards take effect as of fiscal 2014:

- IFRS 10 "Consolidated Financial Statements"
- IFRS 11 "Joint Arrangements"
- IFRS 12 "Disclosure of Interests in Other Entities"
- Amendments to IAS 27 "Separate Financial Statements"
- Amendment to IAS 28 "Investments in Associates and Joint Ventures"
- Amendment to IAS 32 "Financial Instruments: Presentation"
- Amendment to IAS 39 "Financial Instruments: Recognition and Measurement"
- Amendments to IFRS 10 "Consolidated Financial Statements"
- Amendment to IFRS 11 "Joint Arrangements"
- Amendments to IFRS 12 "Disclosure of Interests in Other Entities"

Merck currently does not expect the new rules to have any material effects on the consolidated financial statements. In particular, the rules contained in IFRS 10 to IFRS 12 will not lead to any material changes based on the current equity holding structures.

As of the balance sheet date, the following standards were published by the International Accounting Standards Board and the IFRS Interpretations Committee, but not yet adopted by the European Union:

- IFRS 9 "Financial Instruments"
- Amendment to IAS 19 "Employee Benefits"
- Amendment to IAS 39 "Financial Instruments: Recognition and Measurement"
- Amendments to IFRS 7 "Financial Instruments: Disclosures"
- Amendments to IFRS 9 "Financial Instruments"
- Annual Improvements to IFRSs 2010–2012 Cycle
- Annual Improvements to IFRSs 2011–2013 Cycle
- IFRIC 21 "Levies"

The impact that IFRS 9, which will become effective as of 2015 at the earliest, will have on the consolidated financial statements is currently being examined. At the present time, the other new rules are not expected to have any material effects on the consolidated financial statements.

Scope of consolidation

(3) Changes in the scope of consolidation

Including the parent company Merck KGaA, Darmstadt, 191 (2012: 203) German and foreign companies were fully consolidated in the annual financial statements of the Merck Group. Of these companies, 165 (2012: 178) are located abroad. No companies were consolidated using the equity method or the proportionate consolidation method as of the balance sheet date. Overall, the following changes in the scope of consolidation had no material impact on the financial statements: Six newly established companies were included in the consolidated financial statements for the first time. Owing to eleven liquidations and four mergers and three disposals, 18 companies were deconsolidated.

Due to secondary importance, 22 (2012: 28) subsidiaries were not consolidated. Overall, the impact of these subsidiaries on sales, profit after tax, assets and equity was less than 1% relative to the entire Merck Group. The interests in subsidiaries not consolidated due to secondary importance were classified as available-for-sale financial assets and presented under non-current financial assets. The list of shareholdings presents all of the companies included in the consolidated financial statements as well as all of the shareholdings of the Merck KGaA (see Note [71]).

(4) Acquisitions and divestments, as well as assets held for sale and disposal groups

No acquisitions or divestments were made in fiscal 2013.

With respect to acquisitions made in 2012, no subsequent purchase price allocation adjustments occurred.

On December 20, 2013, Merck published an offer to acquire the entire share capital of AZ Electronic Materials S.A., Luxembourg, (AZ), by way of a cash payment. Among other things, the successful completion of the transaction is subject to antitrust clearances as well as the achievement of a minimum acceptance level of 95% of the share capital. The expected purchase price payment is being reported under other financial obligations (see Note [61]).

On January 8, 2014, Merck announced its intention to sell the Discovery and Development Solutions business field of the Merck Millipore division to Eurofins Scientific S.A., Luxembourg. The amount of the assets to be sold were shown as a disposal group and include property, plant and equipment in the amount of € 3.7 million, inventories in the amount of € 1.8 million and goodwill allocated to the business field in the amount of € 16.2 million. The transaction is expected to be concluded in the first quarter of 2014.

On December 13, 2013, Merck signed a contract with Theratechnologies Inc., Canada, regarding the termination of the research and development cooperation and the sale of the marketing rights to Egrifta® (tesamorelin for injection) in the United States. The transfer of the assets assigned to the Merck Serono division is effective as of March 3, 2014. In the consolidated balance sheet as of December 31, 2013, an intangible asset in the amount of € 5.4 million relating to this transfer was presented under the balance sheet item "assets held for sale".

Accounting policies

(5) Accounting and measurement principles

With the exception of the two changes described in the following, the accounting and measurement principles have remained unchanged in comparison with the previous year.

In May 2013, the International Accounting Standards Board approved the amended version of IAS 36 "Impairment of Assets," which was adopted by the European Union on December 20, 2013. The amended standard is effective for fiscal years beginning on or after January 1, 2014. Merck made use of the possibility to apply the standard earlier, and has been applying the rules contained in the amended IAS 36 since January 1, 2013. The amendments to IAS 36 rescind the consequences of IAS 36 caused by the adoption of IFRS 13 "Fair Value Measurement". At Merck, the changes related to the amended standard mean that the recoverable amount of cash-generating units with a significant carrying amount of goodwill are only to be disclosed if during the period an impairment or reversal of an impairment was recognized.

Apart from this change, in fiscal 2013 the expenses for Group functions to the operating divisions in the Segment reporting are no longer allocated to the operating segments, but rather disclosed fully in the column "Corporate and Other". This change in disclosure relates exclusively to Segment Reporting and has no impact on the amounts disclosed in the consolidated income statement. A complete presentation of this disclosure change can be found under Note [52].

→ Accounting policies

The main assets and liabilities disclosed in the consolidated balance sheet are measured as follows:

Balance sheet items	Measurement principle
ASSETS	
Cash and cash equivalents	Nominal value
Financial assets (current/non-current)	
Held to maturity investments	Amortized cost
Available-for-sale financial assets	Fair value
Loans and receivables	Amortized cost
Assets from derivatives (financial transactions)	Fair value
Trade accounts receivable	Amortized cost
Inventories	Lower of cost and net realizable value
Other assets (current/non-current)	
Assets from derivatives (operating business)	Fair value
Receivables from non-income-related taxes	Amortized cost
Other receivables	Amortized cost
Income tax receivables	Expected tax refunds based on tax rates that have been enacted or substantively enacted by the end of the reporting period
Assets held for sale	Lower of carrying amount and fair value less costs to sell
Intangible assets	
With finite useful lives	Amortized cost
With indefinite useful lives	Amortized cost (subsequent measurement: impairment only approach)
Property, plant and equipment	Amortized cost
Deferred tax assets	Undiscounted measurement based on tax rates that are expected to apply to the period when the asset is realized or the liability is settled
EQUITY AND LIABILITIES	
Financial liabilities (current/non-current)	
Bonds	Amortized cost
Liabilities to related parties	Amortized cost
Bank loans and overdrafts	Amortized cost
Liabilities from derivatives (financial transactions)	Fair value
Finance lease liabilities	Amortized cost
Trade accounts receivable	Amortized cost
Other liabilities (current/non-current)	
Liabilities from derivatives (operating business)	Fair value
Liabilities from non-income-related taxes	Settlement amount
Other liabilities	Settlement amount
Income tax liabilities	Expected tax payments based on tax rates that have been enacted or substantively enacted by the end of the reporting period
Liabilities in connection with assets held for sale	Fair value less costs to sell
Provisions (current/non-current)	Present value of the expenditures expected to be required to settle the obligation
Provisions for pensions and other post-employment benefits	Projected unit credit method
Deferred tax liabilities	Undiscounted measurement based on tax rates that are expected to apply to the period when the asset is realized or the liability is settled

→ Accounting policies

(6) Management judgments and sources of estimation uncertainty

The preparation of the consolidated financial statements requires management to make judgments and assumptions as well as estimates to a certain extent. This affects the amount of assets and liabilities, disclosures on contingent assets and liabilities, as well as reported income and expenses. Actual values may differ from the estimates made and assumptions and judgments may subsequently prove inaccurate. This is of fundamental importance for the understanding of these consolidated financial statements and the assessment of the underlying risks. The relevant assumptions and estimates for the preparation of the consolidated financial statements are reviewed on an ongoing basis. Changes in estimates are considered in the period of the change and in subsequent periods if the change relates to both the reporting period and also future periods. Judgments, forward-looking assumptions and sources of estimation uncertainty with the greatest potential effects on these consolidated financial statements are presented below.

Sales deductions

Merck grants its customers various kinds of rebates and discounts. In addition, expected product returns, state compulsory charges and rebates from health plans and programs are also deducted from sales.

The most significant portion of these deductions from sales is attributable to the Merck Serono division. The most complex and most substantial rebates in this division relate to government rebate programs in North America such as the U.S. Federal Medicare Program and the U.S. Medicaid Drug Rebate Program. Other significant sales deductions in the division result from compulsory government rebate programs in certain European countries.

Insofar as sales deductions were not already made on payments received, Merck determines the level of required sales deductions on the basis of current experience and recognizes them as a liability or provision. The sales deductions reduce gross sales revenues. Adjustments of liabilities and provisions can lead to increases or reductions of sales in later periods.

Impairment tests of goodwill and other intangible assets with indefinite useful lives

The goodwill (carrying amount as of December 31, 2013: € 4,583.2 million/2012: € 4,695.7 million) and other intangible assets with indefinite useful lives (carrying amount as of December 31, 2013: € 214.9 million/2012: € 156.6 million) reported in the consolidated financial statements are tested for impairment when a triggering event arises or at least once a year.

The impairment tests include assumptions and estimates of the amount of future cash flows and the discount rate. Here, to be mentioned in particular are assumptions and estimates regarding future customers, saleable quantities, achievable prices, corresponding cost developments, the long-term growth rate and the weighted average cost of capital (WACC) used for discounting. All of these assumptions are considered a source of estimation uncertainty due to their inherent uncertainty. Changes in the long-term growth rate and the discount rate especially have an influence on the determination of value in use. Information on the sensitivity of these two factors can be found in Note [41].

Especially due to the acquisition of Serono SA and the Millipore Corporation, the goodwill reported in the consolidated financial statements represents a significant factor. Although Merck expects no materially significant impairment of the goodwill in the near future, such impairment cannot be ruled out for the future in the event of unfavorable developments in the earnings situations of the relevant cash-generating units.

→ Accounting policies

Determination of the level of amortization of intangible assets with finite useful lives

In addition to goodwill and other intangible assets with indefinite useful lives, Merck has a significant amount of intangible assets with finite useful lives (carrying amount as of December 31, 2013: € 5,026.8 million/2012: € 6,056.8 million). Substantial assumptions and estimates are required to determine the appropriate level of amortization of these intangible assets. This relates in particular to the determination of the underlying remaining useful life. The parameter is reviewed by Merck and adjusted if necessary at least at the end of every fiscal year. In these estimates, Merck considers factors including the typical product life cycles for each asset and publicly available information about the estimated useful lives of similar assets. Despite these analyses, the assumed useful lives can prove false at a later date because of the high degree of uncertainty.

If the amortization of intangible assets from market authorizations, patents, licenses and similar rights, capitalized brand names and trademarks had been 10% higher, for example due to shortened remaining useful lives, profit before income tax would have been € 81.4 million lower in fiscal 2013 (2012: reduction of € 87.2 million). In fiscal 2013, a reduction of the useful lives of the intangible assets reported in connection with the drug Rebif® by one year would have lowered profit before income tax by € 61.4 million (2012: € 52.6 million).

In- and out-licensing of intangible assets

Merck regularly acquires intellectual property from research institutions, biotechnology companies and other contract partners. Such acquisitions typically involve the agreement of up-front payments and payments for the achievement of certain milestones. In this context, Merck has to judge to what extent up-front or milestone payments represent compensation for assets to be capitalized or how far these payments represent remuneration for purchased services (ongoing research and development expense).

Merck also acts as the seller of intellectual property in out-licensing agreements and usually receives up-front and milestone payments on this basis. In this context, it must be assessed to what extent all significant risks and rewards of the intangible asset in question are transferred to the acquirer and consequently whether revenue is required to be recognized.

Identification of impairment of non-financial assets

Judgments by company management are required in the identification of existing indications of impairment of intangible assets and property, plant and equipment. As of December 31, 2013, the carrying amounts of these assets amounted to € 12,514.4 million (2012: € 13,898.1 million). Merck uses external and internal information to identify indications of impairment. For example, the approval of a competing pharmaceutical product or the closure of a location can be an indicator of impairment. Nevertheless, Merck's analysis of indications of impairment can prove too optimistic, too pessimistic or incorrect in hindsight due to the high degree of uncertainty. This would result in impairment tests being carried out too late, too early or erroneously not carried out at all.

→ Accounting policies

Impairment of financial assets

On every reporting date, Merck reviews whether there is any objective evidence that a financial asset is impaired and, if this is the case, carries out the impairment to the extent estimated as necessary. Particularly important in this context are impairment losses on trade receivables whose carrying amount was € 2,021.4 million in 2013 (2012: € 2,114.6). Of these trade receivables, € 209.1 million related to receivables in Italy, Spain, Greece and Portugal (2012: € 258.1 million), which are a particular focus as part of the management of operating counterparty risks.

Significant indicators for the identification of impaired receivables and the subsequent impairment tests are in particular payment default or delay in the payment of interest or principal, negative changes in economic or regional economic framework conditions as well as considerable financial difficulties of a debtor. These estimates are discretionary and can later prove to be incorrect.

Other provisions

As a global pharmaceutical and chemical group, Merck is exposed to a multitude of litigation risks. In particular, these include risks from product liability, competition and antitrust law, pharmaceutical law, patent law, tax law and environmental protection. Merck is engaged in legal proceedings and official investigations, the outcomes of which are uncertain. A detailed description of the most important legal matters as of the balance sheet date can be found in Note [48]. The provisions recognized for legal disputes mainly relate to the Merck Serono division and amounted to € 772.3 million as of the reporting date (2012: € 678.9 million). To assess the existence of a reporting obligation and to quantify pending outflows of resources, Merck draws on the knowledge of the legal department as well as any other outside counsel.

In spite of this, both the assessment of the existence of a present obligation and the estimate of the probability of a future outflow of resources are highly subject to uncertainty. Equally, the evaluation of a possible payment obligation is to be considered a major source of estimation uncertainty.

To a certain extent, Merck is obliged to take measures to protect the environment and reported provisions for environmental protection of € 111.2 million as of December 31, 2013 (2012: € 106.7 million). The underlying obligations were located mainly in Germany and the United States. Provisions were recognized primarily for obligations from soil remediation and groundwater protection in connection with the discontinued crop protection business.

The calculation of the present value of the future settlement amount requires, among other things, estimates of the future settlement date, the actual severity of the identified contamination, the applicable remediation methods and the associated future costs. The measurement is carried out regularly in consultation with independent experts. In spite of this, the determination of the future settlement amount of the provisions for environmental protection measures is subject to a considerable degree of uncertainty.

→ Accounting policies

Provisions for pensions and other post-employment benefits

Merck maintains several defined benefit pension plans, particularly in Germany, Switzerland and the United Kingdom. The determination of the present value of the obligation from these defined benefit pension plans primarily requires estimates of the discount rate, future salary increases, future pension increases and future cost increases for medical care.

Detailed information on the existing pension obligations and a sensitivity analysis of the parameters named above are provided in Notes [21] and [49]. As of the reporting date, the amount recorded on the balance sheet for provisions for pensions and other post-employment benefits was € 910.9 million (2012: € 1,211.7 million). The present value of the defined benefit pension obligation was € 2,736.8 million as of December 31, 2013 (2012: € 2,830.1 million).

Income taxes

The calculation of the reported assets and liabilities from deferred and current income taxes requires extensive discretionary judgments, assumptions and estimates. The tax liabilities and the provisions for tax obligations resulted in total income tax liabilities of € 465.1 million as of December 31, 2013 (2012: € 401.4 million). The carrying amounts of deferred tax assets and liabilities amounted to € 736.4 million and € 665.5 million, respectively, as of the reporting date (2012: € 946.6 and € 1,192.0 million, respectively).

The recognized income tax liabilities and provisions are partially based on estimates and interpretations of tax laws and ordinances in different jurisdictions.

With regard to deferred tax items, there is a high degree of uncertainty concerning the date on which an asset is realized or a liability settled and concerning the tax rate applicable on this date. This particularly relates to deferred tax liabilities recognized in the context of the acquisitions of Serono SA and the Millipore Corporation. The recognition of deferred tax assets from loss carryforwards requires an estimate of the probability of the future realizability of loss carryforwards. Factors considered in this estimate are results history, results planning and any tax planning strategy of the respective Group company.

Other judgments, assumptions and sources of estimation uncertainty

Merck makes other judgments, assumptions and estimates in the following areas:

- Identification, recognition and measurement of assets, liabilities and contingent liabilities in the context of business combinations
- Classification of financial assets and financial liabilities
- Determination of the fair value of financial instruments classified as available for sale and of derivative financial instruments
- Determination of the fair value of the liability for share-based compensation
- Determination of the fair value of plan assets

→ Accounting policies

(7) Consolidation methods

The consolidated financial statements are based on the single-entity financial statements of the consolidated companies as of the balance sheet date, which were prepared applying consistent accounting polices in accordance with IFRS.

Acquisitions are accounted for using the purchase method in accordance with IFRS 3. Subsidiaries acquired and consolidated for the first time were measured at the carrying values at the time of acquisition on the basis of financial statements prepared for this purpose. Differences resulting in this connection are recognized as assets and liabilities to the extent that their fair values differ from the values actually carried in the financial statements. A remaining positive difference is recognized as goodwill within intangible assets, and is subjected to an impairment test if there are indications of impairment, or at least once a year.

In cases where a company was not acquired in full, non-controlling interests are measured using the fair value of the proportionate share of net assets. The option to measure non-controlling interests at fair value (full goodwill method) was not utilized.

When additional shares in non-controlling interest are acquired, the purchase price amount that exceeds the carrying amount of this interest is recognized immediately in equity.

Interests in associates over which Merck has significant influence are – as far as they are material – included in accordance with IAS 28 using the equity method of accounting.

Intragroup sales, expenses and income, as well as all receivables and payables between the consolidated companies, were eliminated. The effects of intragroup deliveries reported under non-current assets and inventories were adjusted by eliminating any intragroup profits. In accordance with IAS 12, deferred taxes are applied to these consolidation measures.

(8) Currency translation

The functional currency concept applies to the translation of financial statements of consolidated companies prepared in foreign currencies. The subsidiaries of the Merck Group generally conduct their operations independently. The functional currency of these companies is normally the respective local currency. Assets and liabilities are measured at the closing rate, and income and expenses are measured at weighted average annual rates in euros, the reporting currency. Any currency translation differences arising during consolidation of Group companies are taken directly to equity. If Group companies are deconsolidated, existing currency differences are reversed and reclassified to profit or loss. The local currency is not the functional currency at only a few subsidiaries.

→ Accounting policies

When the financial statements of consolidated companies are prepared, business transactions that are conducted in currencies other than the functional currency are recorded using the current exchange rate on the date of the transaction. Foreign currency monetary items (cash and cash equivalents, receivables and payables) in the year-end financial statements of the consolidated companies prepared in the functional currency are translated at the respective closing rates. Exchange differences from the translation of monetary items are recognized in the income statement with the exception of net investments in a foreign operation. Hedged items are likewise carried at the closing rate. The resulting gains or losses are eliminated in the income statement against offsetting amounts from the fair value measurement of derivatives.

Currency translation was based on the following key exchange rates:

	Average annual rate		Closing rate	
€ 1 =	2013	2012	Dec. 31, 2013	Dec. 31, 2012
British pound (GBP)	0.848	0.814	0.834	0.816
Chinese renminbi (CNY)	8.178	8.143	8.345	8.217
Japanese yen (JPY)	129.016	103.233	144.729	113.568
Swiss franc (CHF)	1.228	1.205	1.227	1.207
Taiwan dollar (TWD)	39.471	38.187	41.128	38.282
U.S. dollar (USD)	1.330	1.293	1.379	1.319

(9) Recognition of sales and other revenue

Sales are recognized net of sales-related taxes as well as sales deductions. They are recognized once the goods have been delivered or the services have been rendered, the significant risks and rewards of ownership have been transferred to the purchaser, the amount of revenue can be measured reliably, and it is probable that the economic benefits will flow to the entity. When sales are recognized, estimated amounts are taken into account for expected sales deductions, for example rebates, discounts and returns.

In addition to revenue from the sale of goods, sales also include revenue from services, but the volume involved is insignificant. Long-term, customer-specific manufacturing contracts do not exist.

Depending on the substance of the relevant agreements, royalty, license and commission income is recognized either immediately or is recognized when the contractual obligation is fulfilled.

Dividend income is recognized when the shareholders' right to receive the dividend is established. This is normally the date of the dividend resolution. Interest income is recognized in the period in which it is earned.

(10) Research and development costs

Research and development costs comprise the costs of research departments and process development, the costs of clinical trials as well as the expenses incurred as a result of research and development collaborations.

The costs of research cannot be capitalized and are expensed in full in the period in which they are incurred. As internally generated intangible assets, it is necessary to capitalize development expenses if the cost of the internally generated intangible asset can be reliably determined and the asset can be expected to lead to future economic benefits. The condition for this is that the necessary resources are available for the development of the asset, technical feasibility of the asset is given, its completion and use are intended, and marketability is given. Owing to the high risks up to the time that pharmaceutical products are approved, these criteria are not met in the pharmaceutical business. Costs incurred after regulatory approval are usually insignificant and are therefore not recognized as intangible assets. Owing to the risks existing up until market launch, development expenses in the Performance Materials and Merck Millipore divisions can likewise not be capitalized.

In addition to own research and development, Merck is also a partner in collaborations aimed at developing marketable products. These collaborations typically involve payments for the achievement of certain milestones. Here, assessments are made as to whether these upfront or milestone payments represent compensation for services rendered (research and development expense) or whether the payments represent the acquisition of an asset that has to be capitalized. Reimbursements for R&D are offset against research and development costs.

(11) Financial instruments: Principles

A financial instrument is any contract that gives rise to both a financial asset of one entity and a financial liability or equity instrument of another entity. A distinction is made between non-derivative and derivative financial instruments.

Derivatives can be embedded in other financial instruments or in non-financial instruments. Under IFRS, an embedded derivative must be separated from the host contract and accounted for separately at fair value if the economic characteristics of the embedded derivative are not closely related to the economic characteristics of the host contract. Merck did not have any separable embedded derivatives during the fiscal year. Issued compound financial instruments with both an equity and a liability component must be recognized separately depending on their characteristics. Merck was not a party to hybrid or compound financial instruments during the fiscal year.

As a rule, Merck accounts for regular way purchases or sales of financial instruments at the settlement date and derivatives at the trade date.

Financial assets and financial liabilities are generally measured at fair value on initial recognition, if necessary including transaction costs.

Financial assets are derecognized in part or in full if the contractual rights to the cash flows from the financial asset have expired or if control and substantially all the risks and rewards of ownership of the financial asset have been transferred to a third party. Financial liabilities are derecognized if the contractual obligations have been discharged, cancelled, or expired. Cash and cash equivalents are carried at nominal value.

→ Accounting policies

(12) Financial instruments: Categories and classes of financial instruments

Financial assets and liabilities are classified into the following IAS 39 measurement categories and IFRS 7 classes. The classes required to be disclosed in accordance with IFRS 7 consist of the measurement categories set out here. Additionally, cash and cash equivalents with an original maturity of up to 90 days, finance lease liabilities, and derivatives designated as hedging instruments are also classes in accordance with IFRS 7. There were no reclassifications between the aforementioned measurement categories during the fiscal year.

Financial assets and financial liabilities at fair value through profit or loss

"Financial assets and financial liabilities at fair value through profit or loss" can be both non-derivative and derivative financial instruments. Financial instruments in this category are subsequently measured at fair value. Gains and losses on financial instruments in this measurement category are recognized directly in the income statement. This measurement category includes an option to designate non-derivative financial instruments as "at fair value through profit or loss" on initial recognition (fair value option) or as "financial instruments held for trading". We did not apply the fair value option during the fiscal year. Merck only assigns derivatives to the "held for trading" measurement category. Special accounting rules apply to derivatives that are designated as hedging instruments in a hedging relationship.

Held to maturity investments

"Held to maturity investments" are non-derivative financial assets with fixed or determinable payments and a fixed maturity that are quoted in an active market. To be able to assign a financial asset to this measurement category, the entity must have the positive intention and ability to hold it to maturity. These investments are subsequently measured at amortized cost. If there is objective evidence that such an asset is impaired, an impairment loss is recognized in profit or loss. Subsequent reversals of impairment losses are also recognized in profit or loss up to the amount of the original cost of the asset. At Merck, this measurement category is used for current and non-current financial assets.

Loans and receivables

"Loans and receivables" are non-derivative financial assets with fixed or determinable payments that are not quoted in an active market. They are subsequently measured at amortized cost. If there is objective evidence that such assets are impaired, an impairment loss is recognized in profit or loss. Subsequent reversals of impairment losses are also recognized in profit or loss up to the amount of the original cost of the asset. Long-term non-interest-bearing and low-interest receivables are measured at their present value. Merck primarily assigns trade receivables, loans, and miscellaneous other current and non-current receivables to this measurement category. Merck uses a separate allowance account for impairment losses on trade and other receivables.

→ Accounting policies

Available-for-sale financial assets

"Available-for-sale financial assets" are those non-derivative financial assets that are not assigned to the measurement categories "financial assets and financial liabilities at fair value through profit or loss", "held-to-maturity investments" or "loans and receivables". Financial assets in this category are subsequently measured at fair value. Changes in fair value are recognized immediately in equity and are only transferred to the income statement when the financial asset is derecognized. If there is objective evidence that such an asset is impaired, an impairment loss is recognized immediately in the income statement, including any amounts already recognized in equity. Reversals of impairment losses on previously impaired equity instruments are recognized immediately in equity. Reversals of impairment losses on previously impaired debt instruments are recognized in profit or loss up to the amount of the impairment loss. Any amount in excess of this is recognized directly in equity. At Merck, this measurement category is used in particular for securities and financial assets, as well as interests in subsidiaries that are not consolidated due to secondary importance (affiliates). Financial assets in this category for which no fair value is available or fair value cannot be reliably determined are measured at cost less any cumulative impairment losses. Impairment losses on financial assets carried at cost may not be reversed.

Other liabilities

Other liabilities are non-derivative financial liabilities that are subsequently measured at amortized cost. Differences between the amount received and the amount to be repaid are amortized to profit or loss over the maturity of the instrument. Merck primarily assigns financial liabilities, trade payables, and miscellaneous other non-derivative current and non-current liabilities to this category.

(13) Financial instruments: Derivatives and hedge accounting

Merck uses derivatives solely to economically hedge recognized assets or liabilities and forecast transactions. The hedge accounting rules in accordance with IFRS are applied to some of these hedges. A distinction is made between fair value hedge accounting and cash flow hedge accounting. Designation of a hedging relationship requires a hedged item and a hedging instrument. At Merck, all hedges relate to recognized or highly probable hedged items. Merck currently only uses derivatives as hedging instruments.

The hedging relationship must be effective at all times, i.e. the change in fair value of the hedging instrument fully offsets changes in the fair value of the hedged item. Merck uses the dollar offset method to measure hedge effectiveness. Derivatives that do not or no longer meet the documentation or effectiveness requirements for hedge accounting, whose hedged item no longer exists, or for which hedge accounting rules are not applied are reported as "financial assets and liabilities at fair value through profit or loss." Changes in fair value are then recognized in profit or loss.

→ Accounting policies

As a rule, the purpose of a fair value hedge is to offset the exposure to changes in the fair value of recognized hedged items (financial assets or financial liabilities) through offsetting changes in the fair value of a hedging instrument. Gains and losses on the hedging instrument resulting from changes in fair value are recognized in profit or loss, net of deferred taxes. Offsetting gains and losses on the hedged item that are attributable to the hedged risk are also recognized in profit or loss, irrespective of the item's allocation to a measurement category.

At Merck, cash flow hedges normally relate to highly probable forecast transactions in foreign currency and to future interest payments. In cash flow hedges, the effective portion of the gains and losses on the hedging instrument is recognized in equity until the hedged item occurs. This is also the case if the hedging instrument expires, is sold, or is terminated before the hedged transaction occurs. The ineffective portion of a cash flow hedge is recognized directly in profit or loss.

(14) Other non-financial assets and liabilities

Other non-financial assets are carried at amortized cost. Allowances are recognized for any credit risks. Long-term non-interest-bearing and low-interest receivables are carried at their present value. Other non-financial liabilities are carried at the amount to be repaid.

(15) Inventories

Inventories are carried at the lower of cost or net realizable value. When determining cost, the "first-in, first-out" (FIFO) and weighted average cost formulas are used. In addition to directly attributable unit costs, manufacturing costs also include overheads attributable to the production process, which are determined on the basis of normal capacity utilization of the production facilities.

Inventories are written down if the net realizable value is lower than the acquisition or manufacturing cost carried in the balance sheet.

Since the products are not manufactured within the scope of long-term production processes, the manufacturing cost does not include any borrowing cost.

Inventory prepayments are recorded under other current assets.

(16) Intangible assets

Acquired intangible assets are recognized at cost and are classified as assets with finite and indefinite useful lives. Self-developed intangible assets are only capitalized if the requirements specified by IAS 38 have been met. Intangible assets with indefinite useful lives acquired in the course of business combinations are recognized at fair value on the acquisition date.

→ Accounting policies

Intangible assets with indefinite useful lives

Intangible assets with indefinite useful lives are not amortized; however they are tested for impairment when a triggering event arises or at least once a year. Here, the respective carrying amounts are compared with the recoverable amount of the cash-generating unit. Impairment losses recognized on indefinite-life intangible assets other than goodwill are reversed if the original reasons for impairment no longer apply.

Goodwill is allocated to cash-generating units and tested for impairment either annually or if there are indications of impairment. A cash-generating unit is a division as presented in the Segment reporting. The carrying amounts of the cash-generating units are compared with their recoverable amounts and impairment losses are recognized where the recoverable amount is lower than the carrying amount. The recoverable amount of a cash-generating unit is determined as the higher of fair value less costs to sell and value in use estimated using the discounted cash flow method. When testing for potential goodwill impairments, Merck determines the recoverable amount by discounting expected cash flows and therefore uses the value-in-use method.

Intangible assets with finite useful lives

Intangible assets with a finite useful life are amortized using the straight-line method. The useful lives of marketing authorizations, acquired patents, licenses and similar rights, brand names, trademarks and software are between 3 and 15 years. Amortization of intangible assets other than software is reported under amortization of intangible assets in the income statement. This item primarily comprises amortization in connection with the purchase price allocations for the acquisitions of Serono SA and the Millipore Corporation. Amortization of software is allocated to the functional costs in the income statement. An impairment test is performed if there are indications of impairment. Impairment losses are determined using the same methodology as for indefinite-life intangible assets. Impairment losses are reversed if the original reasons for impairment no longer apply.

(17) Property, plant and equipment

Property, plant and equipment is measured at cost less depreciation and impairments plus reversals of impairments. The component approach is applied here in accordance with IAS 16. Subsequent costs are only capitalized if it is probable that future economic benefits will arise for the Group and the cost of the asset can be measured reliably. The cost of self-constructed property, plant and equipment is calculated on the basis of the directly attributable unit costs and an appropriate share of overheads. If the construction of property, plant and equipment takes a substantial period of time, the directly attributable borrowing costs incurred up until completion are capitalized as part of the costs. In accordance with IAS 20, costs are reduced by the amount of government grants in those cases where government grants or subsidies have been paid for the acquisition or manufacture of assets (grants related to assets). Grants related to expenses which no longer offset future expenses are recognized in profit or loss. Property, plant and equipment is depreciated by the

→ Accounting policies

straight-line method over the useful life of the asset concerned. Depreciation of property, plant and equipment is based on the following useful lives:

Useful life of property, plant and equipment

	Useful life
Production buildings	maximum of 33 years
Administration buildings	maximum of 40 years
Plant and machinery	6 to 25 years
Operating and office equipment; other facilities	3 to 10 years

The useful lives of the assets are reviewed regularly and adjusted if necessary. If indications of a decline in value exist, an impairment test is performed. The determination of the possible need to recognize impairments proceeds in the same way as for intangible assets. If the reasons for an impairment loss no longer exist, a reversal of the impairment loss recognized in prior periods is recorded.

(18) Leasing

Where non-current assets are leased and economic ownership lies with Merck (finance lease), the asset is recognized at the present value of the minimum lease payments or the lower fair value in accordance with IAS 17 and depreciated over their useful life. The corresponding payment obligations from future lease payments are recorded as liabilities. If an operating lease is concerned, the associated expenses are recognized in the period in which they are incurred.

(19) Deferred taxes

Deferred tax assets and liabilities result from temporary differences between the carrying amount of an asset or liability in the IFRS and tax balance sheets of consolidated companies as well as from consolidation activities, as far as the carrying amount of the asset or liability is recovered or settled in future periods. In addition, deferred tax assets are recorded in particular for tax loss carryforwards if and insofar as their utilization is probable in the foreseeable future. In accordance with the liability method, the tax rates enacted and published as of the balance sheet date are used.

Deferred tax assets and liabilities are only offset on the balance sheet data if they meet the requirements of IAS 12.

→ Accounting policies

(20) Provisions

Provisions are recognized in the balance sheet if it is more likely than not that a cash outflow will be required to settle the obligation and the amount of the obligation can be measured reliably. The carrying amount of provisions takes into account the amounts required to cover future payment obligations, recognizable risks and uncertain obligations of the Merck Group to third parties.

Measurement is based on the settlement amount with the highest probability or if the probabilities are equivalent and a high number of similar cases exist, it is based on the expected value of the settlement amounts. Long-term provisions are discounted and carried at their present value as of the balance sheet date. To the extent that reimbursement claims exist as defined in IAS 37, they are recognized separately as an asset if their realization is virtually certain and the asset recognition criteria has been met.

(21) Provisions for pensions and other post-employment benefits

Provisions for pensions and other post-employment benefits are recorded in the balance sheet in accordance with IAS 19. The obligations under defined benefit plans are measured using the projected unit credit method. Under the projected unit credit method, dynamic parameters are taken into account in calculating the expected benefit payments after an insured event occurs; these payments are spread over the entire period of service of the participating employees. Annual actuarial opinions are prepared for this purpose. The actuarial assumptions for discount rates, salary and pension trends, staff turnover as well as health care cost increases, which were used to calculate the benefit obligation, were determined on a country-by-country basis in line with the economic conditions prevailing in each country; the latest country-specific actuarial mortality table was used in each case. The respective discount rates are generally determined on the basis of the returns on high-quality corporate bonds issued with adequate maturities and currencies. For euro-denominated obligations, bonds with ratings of at least "AA" from one of the three major rating agencies (Standard & Poor's, Moody's or Fitch), and a euro swap rate of adequate duration served as the basis for the data. Actuarial gains and losses resulting from changes in actuarial assumptions and/or experience adjustments (the effects of differences between the previous actuarial assumptions and what has actually occurred) are recognized immediately in equity as soon as they are incurred, taking deferred taxes into account. Consequently, the balance sheet discloses – after deduction of the plan assets – the full scope of the obligations while avoiding the fluctuations in expenses that can result especially when the calculation parameters change. The actuarial gains and losses recorded in the respective reporting period are presented separately in the Statement of Comprehensive Income.

Notes to the consolidated income statement

(22) Sales

Sales were generated primarily from the sale of goods and to a limited degree also included revenues from services rendered. Merck Group sales totaled € 10,700.1 million in 2013 (2012: € 10,740.8 million), which represented a decline of –0.4% compared to 2012 (increase of 8.4% in 2012). Adjusted for the impact of foreign exchange rates and acquisitions, organic growth amounted to 4.2% (2012: 4.5%). Sales are presented by division and region in the Segment reporting (see Note [51]).

(23) Royalty, license and commission income

In 2013, royalty and license income totaled € 359.8 million (2012: € 417.2 million) and mainly included royalty and license income from the products Humira® (AbbVie Inc., formerly Abbott), Avonex® (Biogen Idec Inc.), Enbrel® (Amgen Inc.), Puregon® (Merck & Co. Inc.) and Viibryd® (Forest Laboratories Inc.), as well as income from the active pharmaceutical ingredients bisoprolol and metformin. The change compared to 2012 resulted primarily from the expiration of the patent for Avonex® in the United States on May 7, 2013.

In 2013, commission income totaled € 35.2 million (2012: € 14.9 million). This primarily consisted of cooperation and distribution agreements. The breakdown of royalty, license and commission income by division is presented in the Segment reporting (see Note [51]).

(24) Cost of sales

Cost of sales primarily included the cost of manufactured products sold as well as goods for resale. Cost comprises overheads and, if necessary, inventory write-downs, in addition to directly attributable costs, such as the cost of materials, personnel and energy.

→ Notes to the consolidated income statement

(25) Marketing and selling expenses

Marketing and selling expenses comprised the following:

€ million	2013	2012
Sales force	–789.8	–841.0
Internal sales services	–598.7	–647.7
Sales promotion	–458.4	–460.8
Logistics	–390.7	–405.1
Other marketing and selling expenses	–88.9	–56.2
Marketing and selling expenses	**–2,326.5**	**–2,410.8**

The breakdown of marketing and selling expenses by division is presented in the Segment reporting (see Note [51]).

(26) Royalty, license and commission expenses

In 2013, royalty and license expenses amounted to € 212.8 million (2012: € 208.1 million) and commission expenses totaled € 354.2 million (2012: € 371.7 million).

The sales-dependent royalty payments represented selling expenses and were expensed in the period in which they were incurred. Of significance here are the marketing rights to Erbitux® outside the United States and Canada, for which expenses totaling € 80.9 million (2012: € 86.5 million) were incurred in 2013.

Co-marketing agreements lead to sales-dependent commission payments that are expensed in the period in which they are incurred. The commission expenses incurred related mainly to the marketing of Rebif® in the United States, for which expenses of € 302.4 million were incurred in 2013 (2012: € 309.5 million). These also represented exclusively selling expenses.

The breakdown of royalty, license and commission expenses by division is presented in the Segment reporting (see Note [51]).

(27) Administration expenses

Personnel costs and material expenses of management and administrative functions were recorded under this item unless charged to other functional costs as internal services.

The breakdown of administration expenses by division is presented in the Segment reporting (see Note [51]).

(28) Other operating expenses and income

Other operating expenses and income were as follows:

€ million	2013	2012
Litigation	–154.8	–185.5
Premiums, fees and contributions	–54.3	–51.4
Allowances for receivables	–47.1	–68.3
Non-income related taxes	–37.4	–33.0
Expense for miscellaneous services	–23.9	–20.2
Impairment losses	–18.4	–19.7
Losses on disposals of assets	–17.7	–2.7
Project costs	–6.5	–8.1
Exchange rate differences from operating activities	–	–60.4
Impairment losses on Greek sovereign bonds	–	–2.8
One-time items	–386.8	–663.7
Other operating expenses	–111.0	–129.9
Total other operating expenses	**–857.9**	**–1,245.7**
Release of allowances for receivables	42.1	42.4
Exchange rate differences from operating activities	26.0	–
Income from miscellaneous services	25.1	21.0
Gains on disposals of assets	7.5	6.0
Income from investments	1.5	0.6
Other operating income	37.6	49.8
Total other operating income	**139.8**	**119.8**[1]
Total other operating expenses and income	**–718.1**	**–1,125.9**[1]

[1] Previous year's figures have been adjusted, see explanations below

Allowances for receivables and the release of allowances for receivables included both trade accounts receivable as well as other receivables disclosed under other assets insofar as the expenses were not recorded under one-time items.

The impairments related in the amount of € 3.3 million (2012: € 3.3 million) to assets which were assigned to research and development, in the amount of € 8.0 million (2012: 2012: € 16.1 million) to production plants, in the amount of € 2.7 million (2012: € 0.2 million) to sales-related assets, and in the amount of € 1.7 million (2012: € 0.0 million) to administration. In addition, impairments were recognized in the amount of € 2.7 million (2012: € 0.1 million) related to non-consolidated investments and other financial instruments which were assigned to the category "available for sale".

Other operating expenses included, among other things, special environmental protection costs and non-allocable personnel expenses.

→ Notes to the consolidated income statement

Due to its overall minor importance, income from investments was first shown in fiscal 2013 as a part of other operating income. The figures for 2012 were accordingly adjusted.

One-time items comprised:

€ million	2013	2012
Restructuring costs	–130.5	–503.8
Integration costs/IT costs	–49.0	–36.7
Gains/losses on the divestment of businesses	–2.3	–60.1
Acquisition costs	–	–1.0
Other one-time items	–2.3	–3.1
One-time items before impairment losses/reversals of impairments	**–184.1**	**–604.7**
Impairment losses	–207.2	–59.0
Reversals of impairments	4.5	–
One-time items (total)	**–386.8**	**–663.7**

The restructuring charges incurred in fiscal 2013 amounting to € 130.5 million (2012: € 503.8 million) were directly related to the efficiency measures in connection with the "Fit for 2018" transformation and growth program. This program was initiated in 2012 with the aim of increasing the competitiveness of Merck, especially by optimizing cost structures in all divisions. The recognized restructuring charges largely related to personnel measures, for instance the elimination of positions in order to create a leaner and more efficient organization. These were offset against income generated by the restructuring, which resulted in the amount of € 33.4 million primarily from the sale of the buildings at Merck Serono location in Geneva, Switzerland. The amount for 2012 also primarily comprises expenses for personnel measures in connection with the "Fit for 2018" program.

Integration and IT costs of € 49.0 million (2012: € 36.7 million) were incurred primarily for the global harmonization of the IT landscape and in connection with the integration of acquired and existing businesses.

The losses from the divestment of businesses amounting to € 2.3 million (2012: € 60.1 million) related mainly to subsequent expenses for the Generics business sold in 2007.

Asset impairments amounted to € 207.2 million (2012: € 59.0 million). Of this amount, € 35.7 million (2012: € 34.3 million) was attributable to the "Fit for 2018" transformation and growth program, which together with the restructuring expenses resulted in total expenses of € 166.2 million (2012: € 538.1 million). The other impairments were allocable in the amount of € 170.8 million to intangible assets and in the amount of € 0.7 million to property, plant and equipment. The other impairments allocated to intangible assets are explained in more detail in Note [41].

The impairments related in the amount of € 7.2 million (2012: € 28.6 million) to assets which were assigned to research and development, in the amount of € 4.6 million (2012: € 8.3 million) to production plants, in the amount of € 153.5 million (2012: € 15.3 million) to sales-related assets, and in the amount of € 21.8 million (2012: € 1.8 million) to administration. In addition, impairments were recognized in the amount of € 2.8 million (2012: € 5.0 million) for non-consolidated investments and other financial instruments which were classified to the category "available for sale". Lastly, impairments were recorded in the amount of € 17.3 million (2012: € 0.0 million) for capitalized goodwill in connection with the sale of the Discovery and Development Solutions business field of the Merck Millipore division.

→ Notes to the consolidated income statement

The breakdown of other operating expenses and income by division as well as one-time items excluding impairment losses and reversals of impairment losses by division are presented in the Segment reporting (see Note [51]).

(29) Research and development costs

Research and development costs decreased slightly in 2013 to € 1,504.3 million (2012: € 1,511.3 million) and were thus nearly at the previous year's level. Reimbursements for research and development amounting to € 15.0 million (2012: € 37.2 million) were offset against research and development costs. This figure also included government subsidies of € 8.9 million (2012: € 6.4 million).

The breakdown of research and development costs by division and region is presented in the Segment reporting (see Note [51]).

(30) Amortization of intangible assets

Due to the particular significance of the amortization of intangible assets to the Merck Group, this item is disclosed separately in the income statement. This item mainly included amortization of intangible assets in connection with the purchase price allocations for the acquisitions of Serono SA and the Millipore Corporation. Amortization of intangible assets decreased to € 813.5 million in 2013 from € 871.6 million in 2012.

Amortization amounting to € 763.9 million (2012: € 820.6 million) related to capitalized brands, marketing authorizations and customer relationships. These represent selling expenses. Further amortization of € 49.6 million (2012: € 51.0 million) was attributable to production technologies, which represent cost of sales.

Amortization of software is allocated to the respective functional costs.

(31) Financial result

€ million	2013	2012
Interest income and similar income	30.1	35.6
Interest expenses and similar expenses	–176.6	–221.9
Interest component from currency hedging transactions	–17.2	–19.0
Interest result	**–163.7**	**–205.3**
Interest component of the additions to pension provisions and other non-current provisions	–54.2	–60.3
Currency differences from financing activities	–4.3	11.2
Result from financial investments	–	–0.2
	–222.2	**–254.6**

→ Notes to the consolidated income statement

In spite of the increase in cash and cash equivalents, due to the overall lower level of interest rates interest income slightly declined.

The decrease in interest expenses was due mainly to the repayment of three bonds. Two bonds with a nominal volume of € 500.0 million each were already repaid in the course of fiscal 2012, and a bond with a nominal volume of € 750.0 million was repaid in 2013. In addition, interest expenses in 2012 included the expense from an interest rate swap with a nominal volume of € 250.0 million, which was closed out in 2012.

(32) Income tax

€ million	2013	2012
Current taxes in the period	–496.9	–451.2
Taxes for previous periods	–41.6	–4.5
Deferred taxes in the period	359.0	325.7
	–179.5	**–130.0**

The following table presents the tax reconciliation from theoretical tax expense to tax expense according to the income statement. The theoretical tax expense is determined by applying the statutory tax rate of 30.7% of a corporation headquartered in Darmstadt.

€ million	2013	2012
Profit before income tax	1,388.6	709,0
Tax rate	30.7%	30.7%
Theoretical tax expense	–426.3	–217.7
Tax rate differences	109.7	67.6
Tax effect of companies with a negative contribution to consolidated profit	–14.6	–1.9
Tax for other periods	–41.6	–4.5
Tax credits	225.8	71.3
Tax effect on tax loss carryforwards	0.4	0.1
Effect of non-deductible expenses/tax-free income/other tax effects	–32.9	–44.9
Tax expense according to income statement	**–179.5**	**–130.0**
Tax ratio according to income statement	12.9%	18.3%

The tax expense consisted of corporation and trade taxes for the companies domiciled in Germany as well as comparable income taxes for foreign companies.

The higher tax credits arose primarily in the United States due to the consideration of dividend income from high-tax countries.

→ Notes to the consolidated income statement

The tax effects of non-deductible expenses/tax-free income/other tax effects include a deferred tax benefit in the amount of € 194.1 million (2012: € 2.4 million) which resulted primarily from the decrease in deferred tax liabilities on intangible assets from changes in the applied tax rates for specific companies.

The reconciliation between deferred taxes in the balance sheet and deferred taxes in the income statement is presented in the following table:

€ million	2013	2012
Change in deferred tax assets (balance sheet)	–210.2	216.6
Change in deferred tax liabilities (balance sheet)	526.5	127.6
Deferred taxes credited/debited to equity	42.0	–20.3
Changes in scope of consolidation/currency translation/other changes	0.7	1.8
Deferred taxes (income statement)	**359.0**	**325.7**

Tax loss carryforwards were structured as follows:

	Dec. 31, 2013			Dec. 31, 2012		
€ million	Germany	Abroad	Total	Germany	Abroad	Total
Tax loss carryforwards	3.4	437.4	**440.8**	281.9	285.2	**567.1**
thereof: Including deferred tax asset	0.8	102.5	**103.3**	278.3	146.3	**424.6**
Deferred tax asset	0.2	20.6	**20.8**	41.3	33.0	**74.3**
thereof: Excluding deferred tax asset	2.6	334.9	**337.5**	3.6	138.9	**142.5**
Theoretical deferred tax asset	0.4	77.5	**77.9**	1.0	21.1	**22.1**

The decrease in tax loss carryforwards compared to 2012 was mainly the result of the use of German tax loss carryforwards of Merck KGaA. The increase in non-German tax loss carryforwards resulted primarily from the consideration of loss carryforwards in Luxembourg for which no deferred tax assets were recognized. Deferred tax assets are recognized for tax loss and interest carryforwards only if for tax loss carryforwards of less than € 5.0 million, realization of the related tax benefits is probable within one year, and for tax loss carryforwards of more than € 5.0 million realization of the related tax benefits is probable within the next three years.

The vast majority of the tax loss carryforwards either has no expiry date or can be carried forward for up to 20 years.

The tax loss carryforwards accumulated in Germany for corporation and trade tax amounted to € 3.4 million (2012: € 281.9 million).

The additional theoretically possible deferred tax assets amounted to € 77.9 million (2012: € 22.1 million).

In 2013, the income tax expense was reduced by € 0.4 million (2012: € 0.1 million) due to the utilization of tax loss carryforwards from prior years for which no deferred tax asset had been recognized in prior periods.

→ Notes to the consolidated income statement

Deferred tax assets and liabilities corresponded to the following balance sheet items:

	Dec. 31, 2013		Dec. 31, 2012	
€ million	Assets	Liabilities	Assets	Liabilities
Intangible assets	39.5	801.2	46.4	1,162.7
Property, plant and equipment	14.8	58.3	5.2	67.0
Current and non-current financial assets	0.1	3.9	0.9	4.1
Inventories	442.1	4.6	438.7	4.7
Current and non-current receivables/Other assets	39.1	23.4	41.8	12.6
Provisions for pensions and other post-employment benefits	149.6	47.2	153.6	47.3
Current and non-current other provisions	311.8	69.0	316.2	60.1
Current and non-current liabilities	41.6	4.9	53.1	4.6
Tax loss carryforwards	20.8	–	74.3	–
Tax refund claims/Other	42.2	18.2	43.7	56.2
Offset deferred tax assets and liabilities	–365.2	–365.2	–227.3	–227.3
Deferred taxes (balance sheet)	**736.4**	**665.5**	**946.6**	**1,192.0**

In addition to deferred tax assets on tax loss carryforwards amounting to € 20.8 million (2012: € 74.3 million), deferred tax assets of € 715.6 million (2012: € 872.3 million) were recognized for temporary differences.

As of the balance sheet date, deferred tax liabilities for temporary differences for interests in subsidiaries as regards planned dividend payments amounted to € 12.9 million (2012: € 52.7 million). Deferred tax liabilities amounting to € 43.6 million recognized in 2012 for planned dividend payments within the scope of the Millipore acquisition were reversed in 2013. No deferred tax liabilities were recognized for other temporary differences relating to interests in subsidiaries since the reversal of these differences was not foreseeable. Temporary differences relating to the retained earnings of subsidiaries amounted to € 4,894.6 million (2012: € 3,533.0 million).

(33) Non-controlling interests

Non-controlling interests in net profit were primarily composed of the minority interests in the companies Merck Ltd., Thailand, and Merck (Pvt.) Ltd., Pakistan, as well as in the listed companies Merck Ltd., India, and P.T. Merck Tbk., Indonesia.

(34) Earnings per share

Basic earnings per share are calculated by dividing the profit after tax attributable to the shareholders of Merck KGaA by the weighted average number of theoretical shares outstanding. The use of a theoretical number of shares takes into account the fact that the general partner's capital is not represented by shares. The share capital of € 168.0 million was divided into 64,621,126 shares. Accordingly, the general partner's capital of € 397.2 million was divided into 152,767,813 theoretical shares. Overall, the total capital thus amounted to € 565.2 million or 217,388,939 theoretical shares outstanding. The weighted average number of shares in 2013 was likewise 217,388,939 in 2013.

As of December 31, 2013 there were no potentially dilutive shares.

Notes to the consolidated balance sheet

(35) Cash and cash equivalents

This item comprised:

€ million	Dec. 31, 2013	Dec. 31, 2012
Cash, bank balances and cheques	332.0	349.1
Short-term cash investment (up to 3 months)	648.8	380.6
	980.8	**729.7**

Changes in cash and cash equivalents as defined by IAS 7 are presented in the cash flow statement.

The maximum default risk is equivalent to the carrying value of the cash and cash equivalents.

(36) Current financial assets

€ million	Dec. 31, 2013	Dec. 31, 2012
Held to maturity investments	53.4	349.7
Available-for-sale financial assets	2,312.1	1,230.1
Loans and receivables	27.3	200.0
Derivative assets (financial transactions)	17.7	18.1
	2,410.5	**1,797.9**

The development of current financial assets resulted mainly from the increase in available-for-sale financial assets to € 2,312.1 million (2012: € 1,230.1 million). As of December 31, 2013, this item mainly included commercial paper amounting to € 915.7 million (2012: € 283.7 million) as well as bonds amounting to € 1,251.7 million (2012: € 616.5 million).

The loans and receivables contained in current financial assets are neither past due nor impaired.

(37) Trade accounts receivable

Trade accounts receivable amounting to € 2,021.4 million (2012: € 2,114.6 million) only existed vis-à-vis third parties.

→ Notes to the consolidated balance sheet

Trade accounts receivable past due were as follows:

€ million	Dec. 31, 2013	Dec. 31, 2012
Neither past due nor impaired	1,542.1	1,556.9
Past due, but not impaired		
up to 3 months	127.5	210.5
up to 6 months	6.5	24.7
up to 12 months	2.8	13.3
up to 24 months	3.4	6.6
over 2 years	0.4	3.6
Impaired	338.7	299.0
Carrying amount	**2,021.4**	**2,114.6**

The corresponding allowances developed as follows:

€ million	2013	2012
January 1	**–154.8**	**–149.0**
Additions	–46.5	–68.3
Reversals	42.1	42.4
Utilizations	20.1	20.6
Currency translation and other changes	2.3	–0.5
December 31	**–136.8**	**–154.8**

Due to the large number of products we offer, trade accounts receivable exist vis-à-vis a large number of customers. This diversification helps to reduce risk with respect to potential defaults on receivables. In addition, established credit management processes that take individual customer risks into account are used to assess the recoverability of receivables. If there are indications that individual trade accounts receivable are partly or fully impaired, corresponding allowances are recognized. Additions to allowances relate mainly to receivables from public hospitals and health care organizations in Italy and Spain.

In the period from January 1 to December 31, 2013 trade receivables in Italy and Spain with a nominal value of € 225.7 million were sold for € 215.9 million. Previous impairments in this context amounting to € 26.0 million were reversed and disclosed under other operating income. The sold receivables do not involve any further rights of recovery against Merck.

→ Notes to the consolidated balance sheet

(38) Inventories

This item comprised:

€ million	Dec. 31, 2013	Dec. 31, 2012
Raw materials and supplies	294.9	308.1
Work in progress and finished goods	1,103.2	1,125.4
Goods for resale	76.1	100.4
	1,474.2	**1,533.9**

Write-downs of inventories amounted to € 94.1 million (2012: € 126.1 million). As of the balance sheet date, the residual carrying amount of inventories that were written down amounted to € 593.3 million (2012: € 572.3 million). In 2013, reversals of inventory write-downs of € 24.4 million were recorded (2012: € 36.3 million). As of the balance sheet date, no inventories were pledged as security for liabilities.

(39) Other assets

Other assets comprised the following:

€ million	current	non-current	Dec. 31, 2013	current	non-current	Dec. 31, 2012
Other receivables	113.8	1.6	115.4	86.5	2.3	88.8
Derivative assets (operational)	72.7	53.9	126.6	23.3	32.0	55.3
Financial items	**186.5**	**55.5**	**242.0**	**109.8**	**34.3**	**144.1**
Receivables from non-income related taxes	99.0	30.4	129.4	94.0	31.4	125.4
Prepaid expenses	34.9	12.2	47.1	34.3	2.2	36.5
Assets from defined benefit plans	3.8	–	3.8	15.2	–	15.2
Other assets	36.5	7.4	43.9	18.2	7.5	25.7
Non-financial items	**174.2**	**50.0**	**224.2**	**161.7**	**41.1**	**202.8**
	360.7	**105.5**	**466.2**	**271.5**	**75.4**	**346.9**

Other receivables included current receivables from related parties amounting to € 32.5 million (2012: € 5.4 million) as well as current receivables from affiliates amounting to € 0.6 million (2012: € 0.3 million). Interest receivables amounted to € 30.6 million (2012: € 27.6 million). In addition, other prepayments were reported under this item.

→ Notes to the consolidated balance sheet

Other receivables from third parties past due were as follows:

€ million	Dec. 31, 2013	Dec. 31, 2012
Neither past due nor impaired	109.8	82.0
Past due, but not impaired		
up to 3 months	3.3	4.7
up to 6 months	0.3	0.9
up to 12 months	0.7	0.3
up to 24 months	0.7	0.8
over 2 years	0.2	0.1
Impaired	0.4	–
Carrying amount	**115.4**	**88.8**

In the year under review, allowances for other receivables from third parties amounting to € 0.6 million (2012: € 1.6 million) were necessary. In 2013, these were reported under allowances for receivables; in 2012 under one-time items. There were no reversals of allowances in this connection in 2013 or in 2012.

(40) Tax receivables

Tax receivables amounted to € 109.8 million (2012: € 178.5 million) and resulted from tax prepayments that exceeded the actual amount of tax payable for 2013 and prior fiscal years, and from refund claims for prior years as well as withholding tax credits.

→ Notes to the consolidated balance sheet

(41) Intangible assets

€ million	Marketing authorizations, patents, licenses and similar rights, brands, trademarks and other – Finite useful life	Marketing authorizations, patents, licenses and similar rights, brands, trademarks and other – Indefinite useful life	Goodwill	Software	Advance payments	Total
Cost at January 1, 2012	**11,057.1**	**513.2**	**4,758.8**	**332.2**	**26.0**	**16,687.3**
Changes in scope of consolidation	6.1	–	8.0	–	–	14.1
Additions	42.8	81.0	–	5.4	32.0	161.2
Disposals	–1.9	–	–42.5	–82.3	–0.9	–127.6
Transfers	–2.2	–	–	36.6	–21.7	12.7
Classification as held for sale or transfer to a disposal group	–	–	–	–	–	–
Currency translation	–31.0	–0.1	–28.6	–3.8	–	–63.5
December 31, 2012	**11,070.9**	**594.1**	**4,695.7**	**288.1**	**35.4**	**16,684.2**
Accumulated amortization and impairment losses January 1, 2012	**–4,245.0**	**–425.3**	**–42.4**	**–210.3**	**–**	**–4,923.0**
Changes in scope of consolidation	–	–	–	–	–	–
Amortization	–871.6	–	–	–51.3	–	–922.9
Impairment losses	–8.5	–12.3	–	–8.7	–	–29.5
Disposals	1.8	–	42.5	78.3	–	122.6
Transfers	0.4	–	–	–0.4	–	–
Reversals of impairment losses	–	–	–	–	–	–
Classification as held for sale or transfer to a disposal group	–	–	–	–	–	–
Currency translation	9.8	0.1	–0.1	3.3	–	13.1
December 31, 2012	**–5,113.1**	**–437.5**	**–**	**–189.1**	**–**	**–5,739.7**
Net carrying amount as of December 31, 2012	**5,957.8**	**156.6**	**4,695.7**	**99.0**	**35.4**	**10,944.5**
Cost at January 1, 2013	**11,070.9**	**594.1**	**4,695.7**	**288.1**	**35.4**	**16,684.2**
Changes in scope of consolidation	–	–	–	–	–	–
Additions	7.0	64.5	–	1.8	36.3	109.6
Disposals	–13.5	–1.5	–30.1	–11.2	–0.1	–56.4
Transfers	1.0	–0.8	–	36.3	–29.2	7.3
Classification as held for sale or transfer to a disposal group	–46.6	–	–16.5	–	–	–63.1
Currency translation	–86.1	–0.3	–65.9	–10.7	–0.1	–163.1
December 31, 2013	**10,932.7**	**656.0**	**4,583.2**	**304.3**	**42.3**	**16,518.5**
Accumulated amortization and impairment losses January 1, 2013	**–5,113.1**	**–437.5**	**–**	**–189.1**	**–**	**–5,739.7**
Changes in scope of consolidation	–	–	–	–	–	–
Amortization	–813.5	–	–	–42.5	–	–856.0
Impairment losses	–155.5	–1.3	–17.3	–4.3	–	–178.4
Disposals	13.4	1.5	17.3	11.2	–	43.4
Transfers	4.2	–4.1	–	–1.7	–	–1.6
Reversals of impairment losses	–	–	–	–	–	–
Classification as held for sale or transfer to a disposal group	41.0	–	–	–	–	41.0
Currency translation	30.9	0.3	–	8.8	–	40.0
December 31, 2013	**–5,992.6**	**–441.1**	**–**	**–217.6**	**–**	**–6,651.3**
Net carrying amount as of December 31, 2013	**4,940.1**	**214.9**	**4,583.2**	**86.7**	**42.3**	**9,867.2**

→ Notes to the consolidated balance sheet

Marketing authorizations, patents, licenses and similar rights, brands, trademarks and other

The net carrying amount of "Marketing authorizations, patents, licenses and similar rights, brands, trademarks and other" with finite useful lives amounting to € 4,940.1 million (2012: € 5,957.8 million) mainly included the identified and capitalized assets from the purchase price allocations for the acquisitions of Serono SA and the Millipore Corporation. The vast majority was attributable to marketing authorizations of active pharmaceutical ingredients and technologies. The remaining useful lives of these assets ranged between 0.5 and 11.0 years. This item also included licenses from these acquisitions with a remaining useful life of up to one year.

The additions to intangible assets with finite useful lives amounted to € 7.0 million in 2013 (2012: € 42.8 million).

In connection with the forthcoming sale of the marketing rights to Egrifta® (tesamorelin for injection) to Theratechnologies Inc., Canada, as of December 31, 2013, intangible assets with a definite useful life in the amount of € 5.6 million were reclassified to "assets held for sale".

The item "Marketing authorizations, patents, licenses and similar rights, brand names, trademarks and other" with indefinite useful lives primarily related to rights that Merck had acquired for active ingredients, products or technologies that were still in the research and development stage. Owing to the uncertainty as to the extent to which these projects will ultimately lead to marketable products, the period for which the resulting capitalized assets would generate an economic benefit for the company could not yet be determined. Amortization will only begin once the products receive marketing approval and is carried out on a straight-line basis over the shorter period of the patent or contract term or the expected useful life.

In 2013, additions to intangible assets with indefinite useful lives amounted to € 64.5 million (2012: € 81.0 million) and related exclusively to the Merck Serono division. The acquisition of the rights to the active ingredient TH-302 as well as a licensing agreement with BeiGene Co. Ltd., China, accounted for the vast majority of this amount. Further additions were attributable to the acquisition of a license to an oncological compound from Symphogen A/S, Denmark and to milestone payments to Open Monoclonal Technology, Inc. (OMT), USA, and to Ablynx N.V., Belgium.

Goodwill

Goodwill was incurred mainly in connection with the acquisitions of Serono SA and the Millipore Corporation. The changes in goodwill caused by foreign exchange rates resulted almost exclusively from translating the goodwill of the Millipore Corporation, part of which is carried in U.S. dollars, into the reporting currency.

In connection with the forthcoming sale of the Discovery and Development Solutions business field of the Merck Millipore division to Eurofins Scientific S.A., Luxembourg, on December 31, 2013, goodwill allocated to the business field in the amount of € 16.5 million was reclassified to "assets held for sale".

The disposal in the amount of € 30.1 million is due to the closure of the effect pigments production facility Suzhou Taizhu Technology Development Co. Ltd., Taicang, China, and to the goodwill allocated to the Discovery and Development Solutions business field.

→ Notes to the consolidated balance sheet

The carrying amounts of "Marketing authorizations, patents, licenses and similar rights, brands, trademarks and other" as well as goodwill were attributable to the divisions as follows:

€ million	Remaining useful life in years	Merck Serono	Consumer Health	Performance Materials	Merck Millipore	Total Dec. 31, 2013	Total Dec. 31, 2012
Marketing authorizations, patents, licenses and similar rights, brands, trademarks and other							
Finite useful life		**3,059.5**	**11.0**	**28.3**	**1,841.3**	**4,940.1**	**5,957.8**
Rebif®	6.0	2,209.0	–	–	–	2,209.0	2,577.0
Gonal-f®	5.0	474.7	–	–	–	474.7	569.7
Saizen®	6.0	184.4	–	–	–	184.4	215.1
Humira®	0.5	19.1	–	–	–	19.1	184.8
Avonex®	–	–	–	–	–	–	23.8
Puregon®	1.0	11.5	–	–	–	11.5	22.9
Technologies	0.5–14.0	159.8	0.1	27.7	431.8	619.4	742.2
Brands	0.6–10.5	–	10.9	0.4	244.2	255.5	295.0
Customer relationships	1.0–13.5	1.0	–	0.2	1,165.3	1,166.5	1,327.3
Indefinite useful life	**–**	**212.6**	**–**	**1.9**	**0.4**	**214.9**	**156.6**
Goodwill	**–**	**1,680.0**	**164.1**	**8.2**	**2,730.9**	**4,583.2**	**4,695.7**

Information on impairment tests of intangible assets with indefinite useful lives

Since goodwill and other intangible assets with indefinite useful lives are not amortized, these are subjected to an impairment test if there are indications of impairment, or at least once a year. In fiscal 2013, the goodwill assigned to the Discovery and Development Solutions business field of the Merck Millipore division was impaired by € 17.3 million.

For intangible assets with indefinite useful lives there was an impairment loss in 2013 in the amount of € 1.3 million (2012: € 12.3 million) for a license in the Merck Serono division. The impairment loss was reported in other operating expenses under impairment losses.

Goodwill and intangible assets with indefinite useful lives which do not generate own cash flows are allocated to cash-generating units for impairment testing. A cash-generating unit is a division as presented in the Segment reporting.

When testing for potential impairments of these assets, Merck determines the recoverable amount by discounting expected cash flows and therefore uses the value-in-use method. Reference is made to the latest forecasts approved by the company management. Among other things, market observations, and – if available – market data, constant target-actual deviations, detailed plans as well as past experience form the basis for cash flow forecasts. Above all, assumptions on existing and future customers, future realizable selling prices and volumes and corresponding costs are made. The existing plans normally cover a period of four years. Cash flows for periods in excess of this are included using an individualized long-term growth rate for the specific cash-generating unit.

→ Notes to the consolidated balance sheet

In the business plan, a long-term growth rate of 2.8% was used to measure the goodwill of the Merck Millipore division (2012: 2.8%). The long-term growth rates used for the other divisions are as follows: Merck Serono 0.0% (2012: 1.5%), Consumer Health 2.5% (2012: 2.5%) and Performance Materials 1.0% (2012: 1.0%). The use of division-specific long-term growth rates is suited to taking the specific business and the imminent growth expectations thereof into account.

The expected future cash flows were discounted using a weighted average cost of capital (WACC) of 7.0% (2012: 7.0%).

A 10% reduction in the long-term growth rate was assumed when calculating sensitivity; furthermore sensitivities were calculated for the case that the weighted average cost of capital increases by 10%. Even if the actual long-term growth rate was 10% lower than the expected growth rate, there would be no need to record impairment losses for goodwill. Likewise, there would be no need to record impairment losses if future cash flows were discounted by a weighted average cost of capital that was 10% higher.

Information on impairment losses of intangible assets with finite useful lives

Impairment losses of intangible assets with finite useful lives amounted to € 155.5 million in 2013 (2012: € 8.5 million). Of this amount, an impairment of € 153.5 million was recorded in the income statement as a one-time item under other operating expenses.

An impairment loss was required to be recognized in the amount of € 126.5 million for the intangible asset identified and capitalized for Humira® in connection with the acquisition of Serono SA. This occurred after Merck, based on an out-of-court settlement with AbbVie Biotechnology Ltd., Bermuda, and Abbott GmbH & Co. KG, Germany (collectively "AbbVie"), from the second half of 2014 is to receive no further license payments from AbbVie. An additional impairment loss of € 27.0 million in the Merck Serono division which was classified as a one-time item related to Egrifta® (tesamorelin for injection) and resulted from the agreement for the transfer of marketing rights to Theratechnologies Inc., Canada. Moreover, an impairment of € 1.1 million was attributable to customer relationships in the Performance Materials division and € 0.9 million to marketing rights in the Merck Serono division, which were recorded in the income statement as impairment losses under other operating expenses.

In fiscal 2013, software impairments of € 4.3 million (2012: € 8.7 million) were recognized. Thereof, the € 3.3 million in connection with the transfer of the research and development activities from Switzerland to the United States was recognized in the income statement within other operating expenses under one-time items. The additional € 1.0 million was recorded in other operating expenses under impairments.

In 2013, no intangible assets were pledged as security for liabilities.

→ Notes to the consolidated balance sheet

(42) Property, plant and equipment

€ million	Land, land rights and buildings, including buildings on third-party land	Plant and machinery	Other facilities, operating and office equipment	Construction in progress and advance payments to vendors and contractors	Total
Cost at January 1, 2012	**2,476.0**	**2,825.2**	**915.2**	**729.0**	**6,945.4**
Changes in scope of consolidation	2.9	3.3	0.1	–	6.3
Additions	8.8	28.3	33.2	260.0	330.3
Disposals	–42.0	–89.8	–67.1	–0.9	–199.8
Transfers	221.9	293.8	31.0	–557.6	–10.9
Classification as held for sale or transfer to a disposal group	–	–	–	–	–
Currency translation	–16.1	–16.4	–5.7	–1.4	–39.6
December 31, 2012	**2,651.5**	**3,044.4**	**906.7**	**429.1**	**7,031.7**
Accumulated depreciation and impairment losses January 1, 2012	**–954.2**	**–2,040.2**	**–663.2**	**–174.4**	**–3,832.0**
Changes in scope of consolidation	–	–	–	–	–
Depreciation	–108.7	–199.4	–88.3	–	–396.4
Impairment losses	–16.0	–21.5	–4.1	–2.5	–44.1
Disposals	26.5	82.7	64.1	0.1	173.4
Transfers	–4.6	1.2	1.6	–	–1.8
Reversals of impairment losses	1.4	–	–	–	1.4
Classification as held for sale or transfer to a disposal group	–	–	–	–	–
Currency translation	4.0	12.6	4.8	–	21.4
December 31, 2012	**–1,051.6**	**–2,164.6**	**–685.1**	**–176.8**	**–4,078.1**
Net carrying amount as of December 31, 2012	**1,599.9**	**879.8**	**221.6**	**252.3**	**2,953.6**
Cost at January 1, 2013	**2,651.5**	**3,044.4**	**906.7**	**429.1**	**7,031.7**
Changes in scope of consolidation	–	–	–	–	–
Additions	8.0	15.1	25.0	360.4	408.5
Disposals	–376.2	–63.5	–46.6	–10.3	–496.6
Transfers	186.9	253.0	63.0	–512.1	–9.2
Classification as held for sale or transfer to a disposal group	–0.8	–4.4	–2.7	–	–7.9
Currency translation	–56.9	–43.8	–20.4	–3.6	–124.7
December 31, 2013	**2,412.5**	**3,200.8**	**925.0**	**263.5**	**6,801.8**
Accumulated depreciation and impairment losses January 1, 2013	**–1,051.6**	**–2,164.6**	**–685.1**	**–176.8**	**–4,078.1**
Changes in scope of consolidation	–	–	–	–	–
Depreciation	–108.9	–187.8	–85.2	–	–381.9
Impairment losses	–29.5	–11.0	–0.8	–0.4	–41.7
Disposals	148.6	62.1	44.7	9.7	265.1
Transfers	–54.2	–108.4	–0.4	166.6	3.6
Reversals of impairment losses	4.7	0.4	–	–	5.1
Classification as held for sale or transfer to a disposal group	0.4	1.8	1.9	–	4.1
Currency translation	20.7	33.0	15.5	–	69.2
December 31, 2013	**–1,069.8**	**–2,374.5**	**–709.4**	**–0.9**	**–4,154.6**
Net carrying amount as of December 31, 2013	**1,342.7**	**826.3**	**215.6**	**262.6**	**2,647.2**

→ Notes to the consolidated balance sheet

Impairment losses totaled € 41.7 million in fiscal 2013 (2012: € 44.1 million). Of this total, € 30.3 million was recorded as one-time items under other operating expenses. Of this amount, € 25.3 million was attributable to the buildings of Merck Serono site in Geneva, Switzerland as well as an additional € 3.9 million to further buildings of the Merck Serono division. These impairment losses were within the context of the "Fit for 2018" transformation and growth program.

Furthermore, impairments on property, plant and equipment in the amount of € 11.4 million were recognized in other operating expenses under impairment losses. Of this, € 7.4 million was attributable to the Performance Materials division and related to a production plant in the Pigments business. In addition, impairments were recorded for property, plant and equipment in the Merck Serono division in the amount of € 2.5 million and in the Merck Millipore division of € 1.2 million.

In connection with the forthcoming sale of the Discovery and Development Solutions business field of the Merck Millipore division to Eurofins Scientific S.A., Luxembourg, property, plant and equipment was reclassified to "assets held for sale" as of December 31, 2013, in the amount of € 3.8 million.

The total amount of property, plant and equipment used to secure financial liabilities was immaterial. Total government grants and subsidies in connection with investments in property, plant and equipment during the fiscal year amounted to € 2.9 million (2012: € 12.3 million).

Directly allocable borrowing costs on qualified assets in the amount of € 0.4 million were capitalized.

Property, plant and equipment also included assets that were leased. The total value of capitalized leased assets amounted to € 9.3 million (2012: € 10.1 million) and the corresponding obligations amounted to € 7.7 million (2012: € 9.8 million) (see Note [61]).

The carrying amounts of assets classified as finance leases were as follows:

€ million	Dec. 31, 2013	Dec. 31, 2012
Land and buildings	7.1	8.8
Vehicles	1.4	0.9
Other property, plant and equipment	0.8	0.4
	9.3	**10.1**

(43) Non-current financial assets

€ million	Dec. 31, 2013	Dec. 31, 2012
Investments	19.2	16.1
Investments in associates and other companies	34.3	27.3
Securities – Available-for-sale financial assets	3.8	5.3
Securities – Held to maturity investments	–	30.0
Assets from derivatives (financial transactions)	4.7	0.4
Loans and other non-current financial assets	15.8	18.0
	77.8	**97.1**

→ Notes to the consolidated balance sheet

Unconsolidated investments and the investments in associates and other companies were classified as "available for sale". Thereof investments with a carrying amount of € 52.3 million (2012: € 41.8 million) were subsequently measured at cost since their market value could not be determined.

In 2013, impairment losses were recognized for unconsolidated investments of € 1.4 million (2012: € 5.0 million) and for available-for-sale financial assets of € 4.1 million (2012: € 0.1 million). These were recorded in the income statement under other operating expenses.

Moreover, fair value adjustments of € 1.8 million (2012: € 0.4 million) were made on available-for-sale financial assets and recognized in equity.

(44) Financial liabilities

€ million *December 31, 2013*	< 1 year	1–5 years	> 5 years	Total
Loans and commercial paper	–	1,730.6	1,412.1	3,142.7
Liabilities to banks	42.2	–	–	42.2
Liabilities to related parties	361.9	–	–	361.9
Loans from third parties and other financial liabilities	24.0	60.0	–	84.0
Liabilities from derivatives (financial transactions)	10.0	49.4	–	59.4
Finance lease liabilities	2.3	5.0	0.4	7.7
	440.4	**1,845.0**	**1,412.5**	**3,697.9**

€ million *December 31, 2012*	< 1 year	1 – 5 years	> 5 years	Total
Loans and commercial paper	749.1	1,734.9	1,411.0	3,895.0
Liabilities to banks	48.1	19.9	–	68.0
Liabilities to related parties	233.1	–	–	233.1
Loans from third parties and other financial liabilities	21.5	66.6	–	88.1
Liabilities from derivatives (financial transactions)	37.1	122.4	–	159.5
Finance lease liabilities	2.5	6.2	1.1	9.8
	1,091.4	**1,950.0**	**1,412.1**	**4,453.5**

→ Notes to the consolidated balance sheet

The liabilities of the Merck Group to banks were denominated in the following currencies:

in %	Dec. 31, 2013	Dec. 31, 2012
Euros	14.4	65.6
Argentinian pesos	39.2	13.3
Chinese renminbi	20.5	8.3
Indian rupees	8.4	4.6
Turkish lira	6.9	0.4
U.S. dollars	5.6	4.0
Other currencies	5.0	3.8
	100.0	**100.0**

On the balance sheet date, the bank financing commitments vis-à-vis the Merck Group were as follows:

€ million	Financing commitments from banks	Utilization[1] as of Dec. 31, 2013	Interest	Maturity
Syndicated loan 2013	2,000.0	–	variable	2018
Bilateral credit agreements with banks	22.2	22.2	fixed	2014
Various bank credit lines	245.0	20.0	fixed/ variable	< 1 year
	2,267.2	**42.2**		

[1] Recorded discounts are not taken into account in the disclosure.

A € 2 billion multi-currency revolving credit facility was renewed in fiscal 2013 ("Syndicated Loan 2013"). The credit line was underwritten by an international group of banks and has a tenor of five years, with two extension options of one year each that Merck can exercise at its own discretion. This credit line had not been utilized as of the reporting date.

Furthermore, Merck KGaA had access to a commercial paper program with a volume of € 2 billion to meet short-term capital requirements, which had not been utilized as of the reporting date.

In September 2013, Merck increased the volume of its debt issuance program to € 15 billion. The debt issuance program forms a flexible contractual basis for issuing bonds.

→ Notes to the consolidated balance sheet

The following bonds issued by the Merck Group are currently outstanding:

Issuer	Nominal volume	Maturity	Nominal interest rate	Issue price
Merck Financial Services GmbH, Germany	€ 1,350 million	March 2010 – March 2015	3.375%	99.769
Merck Financial Services GmbH, Germany	€ 100 million	December 2009 – December 2015	3.615%[1]	100.000
Millipore Corporation, USA	€ 250 million	June 2006 – June 2016	5.875%	99.611
Merck Financial Services GmbH, Germany	€ 60 million	November 2009 – November 2016	4.000%	100.000
Merck Financial Services GmbH, Germany	€ 70 million	December 2009 – December 2019	4.250%	97.788
Merck Financial Services GmbH, Germany	€ 1,350 million	March 2010 – March 2020	4.500%	99.582

[1] fixed by interest rate swaps

A bond issued by Merck Financial Services GmbH, Germany, with a nominal volume of € 750 million was repaid in September 2013.

The financial liabilities of the Merck Group are not secured by liens or similar forms of collateral. The loan agreements do not contain any financial covenants. The Merck Group's average borrowing cost in 2013 was 3.9%.

Finance lease liabilities represented the present value of future payments arising from finance leases. This item primarily related to liabilities from finance leases for buildings.

Information on liabilities to related parties can be found in Note [67].

(45) Trade accounts payable

Trade accounts payable consisted of the following:

€ million	Dec. 31, 2013	Dec. 31, 2012
Liabilities to third parties	1,363.9	1,288.2
Liabilities to investments	0.2	0.1
	1,364.1	**1,288.3**

Trade accounts payable included accrued amounts of € 778.0 million (2012: € 776.6 million) for outstanding invoices and reductions in sales revenues.

→ Notes to the consolidated balance sheet

(46) Other liabilities

This item comprised:

€ million	current	non-current	Dec. 31, 2013	current	non-current	Dec. 31, 2012
Other financial liabilities	578.9	2.2	581.1	520.1	2.8	522.9
Liabilities from derivatives (operational)	1.5	0.6	2.1	12.2	2.8	15.0
Financial items	**580.4**	**2.8**	**583.2**	**532.3**	**5.6**	**537.9**
Accruals for personnel expenses	439.9	–	439.9	466.2	–	466.2
Deferred income	31.6	2.3	33.9	29.5	2.6	32.1
Advance payments received from customers	16.0	–	16.0	10.1	0.1	10.2
Liabilities from non-income related taxes	66.6	0.5	67.1	58.1	1.1	59.2
Non-financial items	**554.1**	**2.8**	**556.9**	**563.9**	**3.8**	**567.7**
	1,134.5	**5.6**	**1,140.1**	**1,096.2**	**9.4**	**1,105.6**

As of December 31, 2013, other financial liabilities included liabilities to related companies amounting to € 373.1 million (2012: € 295.4 million). These are profit entitlements of E. Merck KG. Moreover, this item contained liabilities to investments amounting to € 1.6 million (2012: € 3.6 million), interest accruals of € 83.3 million (2012: € 93.0 million) as well as payroll liabilities of € 63.6 million (2012: € 64.8 million). The remaining amount of € 59.5 million (2012: € 66.1 million) recorded under other financial liabilities included among other things liabilities to insurers as well as contractually agreed payment obligations vis-à-vis other companies.

(47) Tax liabilities

Tax liabilities and provisions for tax liabilities resulted in total income tax liabilities of € 465.1 million as of December 31, 2013 (2012: € 401.4 million).

→ Notes to the consolidated balance sheet

(48) Provisions

Provisions developed as follows:

€ million	Litigation	Restructuring	Personnel	Environ-mental protection	Other	Total
January 1, 2013	**678.9**	**351.0**	**168.1**	**106.7**	**271.3**	**1,576.0**
Additions	189.7	69.3	107.3	14.0	97.8	478.1
Utilizations	–29.4	–202.6	–60.1	–10.7	–90.3	–393.1
Release	–50.4	–12.5	–8.3	–1.6	–52.5	–125.3
Interest portion	4.7	–	2.6	3.1	0.1	10.5
Currency translation	–25.6	–2.6	–7.4	–0.3	–4.5	–40.4
Changes in scope of consolidation/Other	4.4	0.2	–0.6	–	–4.0	–
December 31, 2013	**772.3**	**202.8**	**201.6**	**111.2**	**217.9**	**1,505.8**
thereof current	115.4	128.1	66.6	6.0	178.6	494.7
thereof non-current	656.9	74.7	135.0	105.2	39.3	1,011.1

Litigation

As of December 31, 2013, the provisions for legal disputes amounted to € 772.3 million (2012: € 678.9 million). Many of the legal disputes and official proceedings currently pending relate to the Merck Serono division. The legal matters described below represent the most significant legal risks.

Product-related and patent disputes

Rebif®

In Israel, Merck is party to three legal disputes with Israel Bio-Engineering Project Limited Partnership ("IBEP"). IBEP is asserting claims for intellectual property rights and the payment of license fees in the past and in the future. The legal disputes are connected to the financing of the development of Rebif®, a drug for the treatment of multiple sclerosis, and other products in the early 1980s. Merck has taken appropriate accounting measures.

Merck is also involved in a patent dispute in the United States with Biogen IDEC Inc., USA ("Biogen"). Biogen claims that the sale of Rebif® in the United States infringes on a Biogen patent. The disputed patent was granted to Biogen in 2009 in the United States. Subsequently, Biogen sued Merck and other pharmaceutical companies for infringement of this patent. Merck defended itself against all allegations and brought a countersuit claiming that the patent was invalid and not infringed on by Merck's actions. A "Markman hearing" was held in January 2012. The parties are currently engaged in court-ordered mediation proceedings. Merck has taken appropriate accounting measures.

→ Notes to the consolidated balance sheet

Antitrust proceedings

Raptiva®

In December 2011, the Brazilian federal state of São Paulo sued Merck for damages because of alleged collusion between various pharmaceutical companies and an association of patients suffering from psoriasis and vitiligo. The collusion is alleged to have aimed at an increase in the sales of the involved companies' drugs to the detriment of patients and state coffers. Moreover, in connection with the product Raptiva®, patients have filed suit to receive compensatory damages. Merck has taken appropriate accounting measures for these legal disputes in the financial statements.

Drug pricing by the divested Generics Group

Merck continues to bear the risk of having to defend against certain litigation brought against the Generics Group, which was sold to Mylan, Inc. (USA) in 2007. In this context, Merck remains responsible for risks from cases in the United States which relate to drug pricing. Merck has taken appropriate accounting measures.

Paroxetine: In connection with the divested generics business, Merck is subject to antitrust investigations by the British Office of Fair Trading ("OFT") in the United Kingdom. In March 2013, the OFT informed Merck of the assumption that a settlement agreement entered into in 2002 between Generics (UK) Ltd. and several GlaxoSmithKline companies in connection with the antidepressant drug paroxetine violates British and European competition law. As the owner of Generics (UK) Ltd. at the time, Merck was allegedly involved in the settlement negotiations and is therefore liable. The investigations into Generics (UK) Ltd. started in 2011, without Merck being aware of this. It is considered probable that the OFT will impose a fine on Merck. Merck has recognized appropriate provisions in this connection.

Citalopram: In June 2013, the European Commission imposed a fine on Merck for various agreements between its former subsidiary Generics (UK) Ltd. and the Danish company Lundbeck, which related to the antidepressant citalopram, patented by Lundbeck. The provision recognized in 2012 was partially utilized or released. For the remaining risks, appropriate accounting measures were taken. Merck has filed an appeal with the European Court.

In addition to provisions for the mentioned litigation, adequate provisions existed as of the balance sheet date for various smaller pending legal disputes.

Restructuring

Provisions for restructuring mainly include provisions for severance payments for employees in connection with restructuring projects and provisions for onerous contracts. These were recognized once detailed restructuring plans had been prepared and communicated.

In 2013, additional provisions related to the "Fit for 2018" transformation and growth program were set up. The aim of this program, which was established in 2012, is to secure the competitiveness and the growth of the Merck Group over the long term. The provisions recognized in this connection mainly included future commitments to employees such as severance payments and € 31.8 million (2012: € 14.7 million) from partial retirement arrangements. In addition, commitments from the closure of sites were included here. The advance payments made in 2013 in the amount € 202.6 million are primarily due to severance payments to employees.

→ Notes to the consolidated balance sheet

Provisions for employee benefits/Share-based payment

Provisions for employee benefits include obligations from long-term variable compensation programs. In 2012, the previous variable compensation program (Merck Long-Term Incentive Plan – LTIP) was replaced by a new long-term variable compensation plan aligned not only with target achievement based on key performance indicators, but above all with the long-term performance of Merck shares. With the new Merck Long-Term-Incentive-Plan, certain executives and employees could be eligible to receive a certain number of virtual shares – Merck Share Units (MSUs) – at the end of a three-year performance cycle. The number of MSUs that could be received depends on the total value defined for the respective person and the average closing price of Merck shares in Xetra trading during the last 60 trading days prior to January 1 of the respective fiscal year (reference price). In order for members of top management to receive payment, they must personally own an investment in Merck shares dependent on their respective fixed annual compensation. When the three-year performance cycle ends, the number of MSUs to then be granted is determined based on the development of two key performance indicators (KPIs). These are on the one hand the performance of the Merck share price compared to the performance of the DAX® with a weighting of 70% and on the other hand the development of the EBITDA pre margin, during the performance cycle as a proportion of a defined target value with a weighting of 30%. Depending on the development of the KPIs, at the end of the respective performance cycle the eligible participants are granted between 0% and 150% of the MSUs they could be eligible to receive.

Based on the MSUs granted, the eligible participants receive a cash payment at a specified point in time in the year after the three-year performance cycle has ended. The value of a granted MSU, which is relevant for payment, corresponds to the average closing price of Merck shares in Xetra trading during the last 60 trading days prior to January 1 after the performance cycle. The payment amount is limited to three times the reference price.

	2012 tranche	2013 tranche
Performance cycle	Jan.1, 2012 – Dec. 31, 2014	Jan. 1, 2013 – Dec. 31, 2015
Term	3 years	3 years
Reference price of Merck shares in € (60-day average Merck share price prior to the start of the performance cycle)	69.57	100.11
DAX® value (60-day average of the DAX® prior to the start of the performance cycle)	5,883.35	7,350.64
Potential number of MSUs		
Potential number offered for the first time in 2012	538,235	–
Expired	30,685	–
Status on Dec. 31, 2012	507,550	–
Potential number offered for the first time in 2013	–	389,658
Expired	28,101	11,938
Status on Dec. 31, 2013	479,449	377,720

→ Notes to the consolidated balance sheet

The fair value of the obligations is recalculated on each balance sheet date using a Monte Carlo simulation based on the previously described KPIs. The expected volatilities are based on the implicit volatility of Merck shares and the DAX® in accordance with the remaining term of the LTIP tranche. The dividend payments incorporated into the valuation model orient towards medium-term dividend expectations. The value of the provision for the vesting period already completed was € 63.5 million as of December 31, 2013 (2012: € 17.8 million). The net expense for fiscal 2013 was € 45.7 million (2012: € 17.8 million).

The Executive Board members have their own Long-Term Incentive Plan, the conditions of which largely correspond to the Long-Term Incentive Plan described here. A description of the plan for the Executive Board can be found in the compensation report, which is part of the Statement on Corporate Governance.

Moreover, obligations from the previously valid, non-share-price-based LTIP tranche 2011 exist totaling € 37.3 million (2012: € 50.7 million). The amount paid from these tranches depends on the achievement of the two performance indicators "Underlying Free Cash Flow on Revenues (FCR)" and "Return on Sales (ROS)" at the end of a three-year period. The plan has caps on potential future payments in the event of high degree of target achievement. By contrast, if the level of target of achievement is too low, no payments are made. The Executive Board was excluded from participating in the earlier LTIP tranche.

Provisions for employee benefits also include obligations for the partial retirement program and other severance pay that were not set up in connection with the "Fit for 2018" transformation and growth program as well as obligations in connection with long-term working hour accounts and anniversary bonuses.

With respect to provisions for defined-benefit pensions and other post-employment benefits, see Note [49].

Environmental protection

Provisions for environmental protection mainly existed in Germany and the United States and were set up particularly for obligations from soil remediation and groundwater protection in connection with the discontinued crop protection business.

Other provisions

Other provisions mainly include provisions for purchase commitments, subsequent contract costs stemming from discontinued research projects, other guarantees, and provisions for uncertain commitments from contributions, duties and fees.

A provision recognized for contingent consideration in connection with the acquisition of the microbiology business of Biotest AG, Dreieich, in the amount of € 15.0 million was paid in 2013. Also, in connection with discontinued research projects, recognized provisions were utilized, and a provision recognized for claims from the discontinued businesses was released.

→ Notes to the consolidated balance sheet

(49) Provisions for pensions and other post-employment benefits

Depending on the legal, economic and fiscal circumstances prevailing in each country, different retirement benefit systems are provided for the employees of the Merck Group. Generally these systems are based on the years of service and salaries of the employees. Pension obligations of the Merck Group include both defined benefit and defined contribution plans and comprise both obligations from current pensions and accrued benefits for pensions payable in the future. In the Merck Group, defined benefit plans are funded and unfunded. Provisions also contain other post-employment benefits, such as accrued future health care costs for retirees in the United States.

In order to limit the risks of changing capital market conditions and demographic developments, for many years now Merck has been offering only defined contribution plans to newly hired employees.

The value recognized in the balance sheet for pensions and other post-employment benefits was derived as follows:

€ million	Dec. 31, 2013	Dec. 31, 2012
Present value of all defined benefit obligations	**2,736.8**	**2,830.1**
Fair value of the plan assets	–1,840.2	–1,633.6
Funded status	**896.6**	**1,196.5**
Effects of asset ceilings	10.5	–
Net defined benefit liability recognized in the balance sheet	**907.1**	**1,196.5**
Assets from defined benefit plans	3.8	15.2
Provisions for pensions and other post-employment benefits	**910.9**	**1,211.7**

The calculation of the defined benefit obligations as well as the relevant plan assets was based on the following actuarial parameters:

	Germany		Switzerland		United Kingdom		Other countries	
in %	2013	2012	2013	2012	2013	2012	2013	2012
Discount rate	3.75	3.50	2.30	1.75	4.57	4.58	4.76	4.21
Future salary increases	2.51	2.51	1.73	1.97	3.89	3.30	4.03	4.23
Future pension increases	1.75	1.75	0.01	0.02	3.38	2.80	2.34	2.55
Future cost increases for health care benefits	–	–	–	–	–	–	5.10	7.05

These are average values weighted by the present value of the respective benefit obligation.

→ Notes to the consolidated balance sheet

The defined benefit obligations of the Merck Group were based on the following types of benefits provided by the respective plan:

	Germany	Other countries	Merck Group
Present value of defined benefit obligations in € million	Dec. 31, 2013	Dec. 31, 2013	Dec. 31, 2013
Benefit based on final salary			
Annuity	1,740.7	383.0	2,123.7
Lump sum	–	73.6	73.6
Installments	1.1	–	1.1
Benefit not based on final salary			
Annuity	83.2	396.9	480.1
Lump sum	6.4	39.3	45.7
Medical plan	–	12.6	12.6
	1,831.4	**905.4**	**2,736.8**

The main benefit rules are as follows:

Merck KGaA and AB Allgemeine Pensions GmbH & Co. KG accounted for € 1,670.6 million (2012: € 1,681.8 million) of the defined benefit obligations and € 1,052.6 million (2012: € 799.5 million) of the plan assets. The benefits comprise old-age, disability and surviving dependent pensions. On the one hand, these obligations are based on benefit rules comprising benefit commitments dependent upon years of service and final salary from which newly hired employees have been excluded. On the other hand, the benefit rules applicable to employees newly hired since January 1, 2005 comprise a direct commitment in the form of a defined contribution obligation. The benefit entitlement results from the cumulative total of annually determined pension components that are calculated on the basis of a defined benefit expense and an age-dependent annuity table. Statutory minimum funding obligations do not exist.

The Merck Serono pension fund in Switzerland accounted for € 314.8 million (2012: € 393.5 million) of the defined benefit obligations and € 324.9 million (2012: € 378.7 million) of the plan assets. Of this amount, € 10.5 million (2012: € 0.0 million) cannot be recognized due to effects of the asset ceiling according to IAS 19.64. These obligations are based on the granting of old-age, disability and surviving dependents benefits, which include the legally required benefits. Both employer and employee contributions are paid into the pension fund. Statutory minimum funding obligations exist.

The Merck Pension Scheme in the United Kingdom accounted for € 320.1 million (2012: € 303.2 million) of the defined benefit obligations and € 293.1 million (2012: € 284.0 million) of the plan assets. These obligations result from a benefit plan which is based on years of service and final salary and was closed to newly hired employees in 2006. The agreed benefits comprise old-age, disability and surviving dependent benefits. The employer and the employees make contributions to the plan. Statutory minimum funding obligations also exist in the United Kingdom.

→ Notes to the consolidated balance sheet

In the reporting period, the following items were recognized in income:

€ million	2013	2012
Current service cost	82.7	75.7
Past service cost	2.6	19.3
Gains (–) or losses (+) on settlement	–2.8	0.1
Other effects recognized in income	1.0	0.6
Interest expense	92.9	101.8
Interest income	–52.1	–53.8
Total amount recognized in income	**124.3**	**143.7**

With the exception of the net balance of interest expense on the defined benefit obligations and interest income from the plan assets, which is recorded under the financial result, the relevant expenses for defined benefit and defined contribution pension systems are allocated to the individual functional areas.

During the reporting period, the present value of the defined pension obligations changed as follows:

€ million	Funded benefit obligations	Benefit obligations funded by provisions	2013	Funded benefit obligations	Benefit obligations funded by provisions	2012
Present value of the defined benefit obligations January 1	2,615.7	214.4	2,830.1	2,322.8	167.1	2,489.9
Currency translation differences	–27.2	–3.5	–30.7	4.8	–0.1	4.7
Current service cost	72.5	10.2	82.7	64.9	10.8	75.7
Past service cost	2.6	–	2.6	17.7	1.6	19.3
Gains (–) or losses (+) on settlement	–2.2	–0.6	–2.8	–	0.1	0.1
Interest expense	85.4	7.5	92.9	93.8	8.0	101.8
Actuarial gains (–)/losses (+)	–49.5	–10.8	–60.3	334.0	33.1	367.1
Contributions by plan participants	7.0	–	7.0	13.6	–	13.6
Pension payments	–178.5	–7.3	–185.8	–240.4	–7.6	–248.0
Other effects recognized in income	–0.3	–0.5	–0.8	0.1	–0.2	–0.1
Other changes	7.5	–5.6	1.9	4.4	1.6	6.0
Present value of all defined benefit obligations on December 31	**2,533.0**	**203.8**	**2,736.8**	**2,615.7**	**214.4**	**2,830.1**

The following overview shows how the present value of all defined benefit obligations would have been influenced by changes to definitive actuarial assumptions. To determine the sensitivities, in principle each of the observed parameters was varied while keeping the measurement assumptions otherwise constant. Insofar as its development of social security is comparable to salary trends, the amounts for social security vary together with the salary trend.

→ Notes to the consolidated balance sheet

€ million	Dec. 31, 2013
Present value of all defined benefit obligations if	
the discount rate is 50 basis points higher	2,517.0
the discount rate is 50 basis points lower	2,987.3
the expected rate of future salary increases is 50 basis points higher	2,825.7
the expected rate of future salary increases is 50 basis points lower	2,665.1
the expected rate of future pension increases is 50 basis points higher	2,873.3
the expected rate of future pension increases is 50 basis points lower	2,628.5
the medical cost trend rate is 50 basis points higher	2,737.4
the medical cost trend rate is 50 basis points lower	2,736.3

The fair value of the plan assets changed in the reporting period as follows:

€ million	2013	2012
Fair value of the plan assets on January 1	1,633.6	1,370.3
Currency translation differences	–22.1	6.2
Interest income from plan assets	52.1	53.8
Actuarial gains (+)/losses (–) arising from experience adjustments	49.0	62.8
Funding CTA Merck KGaA	200.0	250.0
Employer contributions	39.9	59.9
Employee contributions	7.0	13.6
Pension payments from plan assets	–119.1	–186.3
Plan administration costs paid from the plan assets recognized in income	–1.7	–0.6
Other effects recognized in income	–0.1	–0.1
Other changes	1.6	4.0
Fair value of the plan assets on December 31	**1,840.2**	**1,633.6**

In December 2013 a further € 200.0 million was added to the plan assets of Merck KGaA in the form of a Contractual Trust Arrangement (CTA) set up in 2011 with Merck Pensionstreuhand e. V., Darmstadt. The addition was made in cash. On the same day Merck Capital Asset Management, Malta, which manages the assets of the CTA, acquired securities from Merck Financial Services GmbH at the market value of € 203.0 million.

The actual return on plan assets amounted to € 101.1 million in 2013 (2012: income of € 116.6 million). Effects of the asset ceilings in accordance with IAS 19.64 were recognized in the amount of € 10.5 million (2012: € 0.0 million) as actuarial losses. The effects of the asset ceilings as of the balance sheet date amounted to € 10.5 million (2012: € 0.0 million).

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The development of cumulative actuarial gains (+) and losses (–) was as follows:

€ million	2013	2012
Cumulative actuarial gains (+)/losses (–) recognized in equity on January 1	–795.6	–489.7
Currency translation differences	2.0	–1.2
Remeasurements of defined benefit obligations		
Actuarial gains (+)/losses (–) arising from changes in demographic assumptions	–1.1	12.4
Actuarial gains (+)/losses (–) arising from changes in financial assumptions	88.6	–333.2
Actuarial gains (+)/losses (–) arising from experience adjustments	–27.2	–46.3
Remeasurements of plan assets		
Actuarial gains (+)/losses (–) arising from experience adjustments	49.0	62.8
Effects of the asset ceilings		
Actuarial gains (+)/losses (–)	–10.5	–
Reclassification within retained earnings	–	–0.4
Cumulative actuarial gains (+)/losses (–) recognized in equity on December 31	**–694.8**	**–795.6**

Plan assets for funded defined benefit obligations primarily comprised fixed-income securities, liquid assets, and stocks. They did not include financial instruments issued by Merck Group companies or real estate used by Group companies.

The plan assets serve exclusively to meet the defined benefit obligations. Covering the benefit obligations with financial assets represents a means of providing for future cash outflows, which occur in some countries on the basis of legal requirements and in other countries (e.g. Germany) on a voluntary basis.

The ratio of the fair value of the plan assets to the present value of the defined benefit obligations is referred to as the degree of pension plan funding. If the benefit obligations exceed the plan assets, this represents underfunding of the pension fund.

It should be noted, however, that both the benefit obligations as well as the plan assets fluctuate over time. This could lead to an increase in underfunding. Depending on the statutory regulations, it could become necessary in some countries for the Merck Group to reduce underfunding through additions of liquid assets. The reasons for such fluctuations could include changes in market interest rates and thus the discount rate as well as adjustments to other actuarial assumptions (e.g. life expectancy, inflation rates, etc.)

In order to minimize such fluctuations, in managing its plan assets, the Merck Group also pays attention to potential fluctuations in liabilities. In the ideal case, assets and liabilities develop in opposite directions when exposed to exogenous factors, creating a natural defense against these factors. In order to achieve this effect, the corresponding use of financial instruments is considered in respect of individual pension plans.

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The fair value of the plan assets can be allocated to the following categories:

€ million	Dec. 31, 2013 Quoted market price in an active market	Dec. 31, 2013 No quoted market price in an active market	Dec. 31, 2013 Total	Dec. 31, 2012 Quoted market price in an active market	Dec. 31, 2012 No quoted market price in an active market	Dec. 31, 2012 Total
Cash and cash equivalents	522.8	0.1	522.9	455.3	4.1	459.4
Equity instruments	433.8	0.9	434.7	311.5	13.3	324.8
Debt instruments	589.2	0.5	589.7	548.5	–	548.5
Direct investments in real estate	–	79.1	79.1	–	86.4	86.4
Investment funds	136.7	–	136.7	65.9	–	65.9
Insurance contracts	–	71.4	71.4	–	73.6	73.6
Other	5.7	–	5.7	62.9	12.1	75.0
Fair value of the plan assets	**1,688.2**	**152.0**	**1,840.2**	**1,444.1**	**189.5**	**1,633.6**

Employer contributions to plan assets and direct payments to beneficiaries will probably amount to around € 89.3 million in 2014. The weighted duration amounted to 18 years.

The cost of ongoing contributions for defined contribution plans that are financed exclusively by external funds and for which the companies of the Merck Group are only obliged to pay the contributions amounted to € 19.3 million (2012: € 19.9 million). In addition, employer contributions amounting to € 55.5 million (2012: € 54.9 million) were transferred to the German statutory pension insurance system and € 29.7 million (2012: € 33.9 million) to statutory pension insurance systems abroad.

(50) Equity

Equity capital

The total capital of the company consists of the share capital composed of shares and the equity interest held by the general partner E. Merck KG. As of the balance sheet date, the company's share capital amounting to € 168.0 million was divided into 64,621,125 no par value bearer shares plus one registered share and is disclosed as subscribed capital. The amount resulting from the issue of shares by Merck KGaA exceeding the nominal amount was recognized in the capital reserves. The equity interest held by the general partner amounted to € 397.2 million.

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E. Merck KG's share of net profit

E. Merck KG and Merck KGaA engage in reciprocal net profit transfers. This makes it possible for E. Merck KG, the general partner of Merck KGaA, and the shareholders to participate in the net profit/loss of Merck KGaA in accordance with the ratio of the general partner's equity interest and the share capital (70.274% or 29.726% of the total capital).

The allocation of net profit/loss is based on the net income of E. Merck KG determined in accordance with the provisions of the German Commercial Code as well as the income/loss from ordinary activities and the extraordinary result of Merck KGaA. These results are adjusted for trade tax and create the basis for the allocation of net profit/loss.

The reciprocal net profit/loss transfer between E. Merck KG and Merck KGaA as stipulated by the Articles of Association was as follows:

		2013		2012	
€ million		E. Merck KG	Merck KGaA	E. Merck KG	Merck KGaA
Result of E. Merck KG		–9.2	–	7.5	–
Result of ordinary activities of Merck KGaA		–	534.9	–	–17.2
Extraordinary result		–	–	–	–513.8
Adjustment for trade tax in accordance with Art. 27 (1) Articles of Association of Merck KGaA		–	–	–	–
Trade tax in accordance with Art. 30 (1) Articles of Association of Merck KGaA		–	–34.6	–	1.7
Basis for the appropriation of profits	**(100%)**	**–9.2**	**500.3**	**7.5**	**–529.3**
Profit transfer to E. Merck KG Ratio general partner's capital to total capital	(70.274%)	351.6	–351.6	–372.0	372.0
Profit transfer from E. Merck KG Ratio of share capital to total capital	(29.726%)	2.7	–2.7	–2.2	2.2
Trade tax		–	–	–	–
Corporation tax		–	–12.0	–	4.0
Net income/loss		**345.1**	**134.0**	**–366.7**	**–151.1**

The result of E. Merck KG on which the appropriation of profits is based amounted to € –9.2 million (2012: € 7.5 million). This resulted in a profit transfer to Merck KGaA of € –2.7 million (2012: € 2.2 million). Merck KGaA's result from ordinary activities adjusted for trade tax and extraordinary result, on which the appropriation of its profit is based, amounted to € 500.3 million (2012: € –529.3 million). Merck KGaA transferred € 351.6 million of its profit to E. Merck KG (2012: loss assumption of € 372.0 million). In addition, the expense from corporation tax charges amounting to € 12.0 million resulted (2012: income of € 4.0 million). Corporation tax is only calculated on the income received by shareholders. Its equivalent is the income tax applicable to E. Merck KG. However, this must be paid by the partners of E. Merck KG directly and is not disclosed in the annual financial statements.

Appropriation of profits

The profit distribution to be resolved upon by shareholders also defines the amount of that portion of net profit/loss freely available to E. Merck KG. If the shareholders resolve to carry forward or to allocate to

→ Notes to the consolidated balance sheet

retained earnings a portion of Merck KGaA's net retained profit to which they are entitled, then E. Merck KG is obligated to allocate to the profit brought forward/retained earnings of Merck KGaA a comparable sum determined in accordance with the ratio of share capital to general partner's capital. This ensures that the retained earnings and the profit carried forward of Merck KGaA correspond to the ownership ratios of the shareholders on the one hand and E. Merck KG on the other hand. Consequently, for distributions to E. Merck KG, only the amount is available that results after netting the profit transfer of Merck KGaA with the amount either allocated or withdrawn by E. Merck KG from retained earnings/profit carried forward. This amount corresponds to the amount that is paid as a dividend to the shareholders, and reflects their pro rata shareholding in the company.

	2013		2012	
€ million	E. Merck KG	Merck KGaA	E. Merck KG	Merck KGaA
Net income/net loss	345.1	134.0	–366.7	–151.1
Profit carried forward previous year	–	–	502.5	212.6
Withdrawal from revenue reserves	–	–	114.4	48.4
Transfer to revenue reserves	–	–	–	–
Retained earnings Merck KGaA		**134.0**		**109.9**
Withdrawal by E. Merck KG	–318.8		–250.2	
Dividend proposal		–122.8		–109.9
Profit carried forward	**26.3**	**11.2**	**–**	**–**

For 2012, a dividend of € 1.70 per share was distributed. The dividend proposal for fiscal 2013 will be € 1.90 per share, corresponding to a total dividend payment of € 122.8 million (2012: € 109.9 million) to shareholders. The amount withdrawn by E. Merck KG would amount to € 318.8 million (2012: € 250.2 million).

Changes in reserves

For 2013 the profit transfer to E. Merck KG including changes in reserves amounted to € –383.0 million. This consists of the profit transfer to E. Merck KG (€ –351.6 million), the result transfer from E. Merck KG to Merck KGaA (€ –2.7 million), the profit carried forward of E. Merck KG (€ 26.3 million) as well as the profit transfer from Merck & Cie to E. Merck KG (€ –55.0 million). Merck & Cie is a partnership under Swiss law that is controlled by Merck KGaA, but distributes its operating result directly to E. Merck KG. This distribution is a payment to shareholders, which is why it is likewise presented under changes in equity.

Non-controlling interests

The disclosure of non-controlling interests was based on the stated equity of the subsidiaries concerned after any adjustment required to ensure compliance with the accounting policies of the Merck Group, as well as pro rata consolidation entries.

The net equity attributable to non-controlling interests mainly related to the minority interests in Merck Ltd. India, Merck Ltd., Thailand, Merck (Pvt.) Ltd., Pakistan, and P.T. Merck Tbk, Indonesia.

Segment reporting

(51) Information by division/country and region

Information by division

€ million	Merck Serono 2013	Merck Serono 2012	Consumer Health 2013	Consumer Health 2012
Sales	5,953.6	5,995.8	476.9	472.6
Royalty, license and commission income	372.2	409.4	2.7	2.6
Total revenues	**6,325.8**	**6,405.2**	**479.6**	**475.2**
Gross margin	5,219.7	5,212.1	318.3	316.7
Marketing and selling expenses	–1,288.7	–1,370.8	–213.0	–218.5
Royalty, license and commission expenses	–547.7	–561.6	–2.0	–1.0
Administration expenses [1]	–211.3	–216.8	–18.1	–19.9
Other operating expenses and income [1]	–499.4	–669.0	–3.5	–46.2
Research and development	–1,182.8	–1,187.3	–17.1	–19.4
Operating result (EBIT) [1]	**893.0**	**547.7**	**62.2**	**7.6**
Depreciation and amortization	797.4	881.1	8.6	11.5
Impairment losses	196.4	51.2	0.3	10.7
Reversals of impairment losses	–0.3	–	–	–
EBITDA [1]	**1,886.5**	**1,480.0**	**71.1**	**29.8**
One-time items	68.5	344.7	1.4	37.0
EBITDA pre one-time items (segment result) [1]	**1,955.0**	**1,824.7**	**72.5**	**66.8**
EBITDA margin pre one-time items (in % of sales) [1]	32.8	30.4	15.2	14.1
Net operating assets	6,968.0	8,020.6	258.2	283.8
Segment liabilities	–1,358.0	–1,349.8	–74.5	–76.5
Investments in property, plant and equipment [2]	151.3	146.9	3.7	4.0
Investments in intangible assets [2]	80.6	88.7	0.4	0.4
Net cash flows from operating activities [1]	1,818.9	2,255.6	67.1	75.6
Business free cash flow [1]	1,875.7	1,880.2	83.9	88.8

Information by country and region

€ million	Europe 2013	Europe 2012	thereof Germany 2013	thereof Germany 2012	thereof France 2013	thereof France 2012	thereof Switzerland 2013	thereof Switzerland 2012
Sales by customer location	3,984.6	3,942.7	825.4	801.5	677.0	696.0	159.0	141.6
Sales by company location	4,457.5	4,379.9	1,570.8	1,452.9	790.8	814.9	188.6	174.2
Total revenues	4,686.6	4,677.0	1,596.8	1,472.7	812.5	822.0	364.5	438.4
Intangible assets	7,572.4	8,293.4	398.0	344.9	278.0	302.1	4,692.3	5,343.0
Property, plant and equipment	2,075.2	2,344.3	997.5	996.4	183.6	173.9	508.0	795.2
Research and development	–1,357.4	–1,344.1	–849.0	–791.8	–56.4	–56.0	–411.4	–462.1
Number of employees	20,013	20,777	10,868	10,788	2,946	2,950	1,232	1,926

[1] Previous year's figures have been adjusted, see Note [52]
[2] According to the cash flow statement

→ Segment reporting

Performance Materials		Merck Millipore		Corporate and Other		Group	
2013	2012	2013	2012	2013	2012	2013	2012
1,642.1	1,674.2	2,627.5	2,598.2	–	–	10,700.1	10,740.8
2.3	1.4	17.8	18.7	–	–	395.0	432.1
1,644.4	**1,675.6**	**2,645.3**	**2,616.9**	**–**	**–**	**11,095.1**	**11,172.9**
1,028.5	959.1	1,541.0	1,531.1	–4.9	–3.8	8,102.6	8,015.2
–140.5	–142.8	–683.3	–675.7	–1.0	–3.0	–2,326.5	–2,410.8
–1.3	–1.5	–16.1	–15.7	0.1	–	–567.0	–579.8
–27.8	–31.2	–99.2	–101.3	–206.0	–183.0	–562.4	–552.2
–47.9	–32.0	–120.7	–116.5	–46.6	–262.2	–718.1	–1,125.9
–143.0	–137.4	–159.8	–166.1	–1.6	–1.1	–1,504.3	–1,511.3
653.3	**609.7**	**262.0**	**251.7**	**–259.7**	**–453.1**	**1,610.8**	**963.6**
107.7	114.1	309.2	305.0	15.0	7.6	1,237.9	1,319.3
9.3	12.1	18.8	4.2	0.8	0.5	225.6	78.7
–4.5	–1.3	–0.2	–	–0.1	–0.1	–5.1	–1.4
765.8	**734.6**	**589.8**	**560.9**	**–244.0**	**–445.1**	**3,069.2**	**2,360.2**
13.9	7.3	53.0	53.5	47.3	162.2	184.1	604.7
779.7	**741.9**	**642.8**	**614.4**	**–196.7**	**–282.9**	**3,253.3**	**2,964.9**
47.5	44.3	24.5	23.6	–	–	30.4	27.6
1,044.7	1,187.7	5,987.1	6,328.9	36.0	25.1	14,294.0	15,846.1
–155.9	–147.1	–391.9	–383.1	–64.8	–33.7	–2,045.1	–1,990.2
66.5	55.7	112.6	113.2	72.9	9.3	407.0	329.1
6.7	28.6	10.3	10.0	11.6	16.5	109.6	144.2
828.4	886.6	557.5	658.2	–1,046.4	–1,403.8	2,225.5	2,472.2
787.8	798.1	493.8	511.3	–281.2	–309.1	2,960.0	2,969.3

North America		thereof USA		Emerging Markets		Rest of World		Group	
2013	2012	2013	2012	2013	2012	2013	2012	2013	2012
2,078.0	2,128.3	1,916.8	1,965.0	3,795.6	3,712.2	841.9	957.6	10,700.1	10,740.8
2,072.7	2,121.4	1,933.1	1,979.0	3,467.1	3,408.4	702.8	831.1	10,700.1	10,740.8
2,077.1	2,122.1	1,937.5	1,979.7	3,622.3	3,542.7	709.1	831.1	11,095.1	11,172.9
2,214.8	2,462.1	2,214.5	2,461.6	46.5	141.3	33.5	47.7	9,867.2	10,944.5
341.6	359.6	340.4	358.3	169.3	163.7	61.1	86.0	2,647.2	2,953.6
–92.5	–114.5	–94.7	–113.3	–36.6	–28.6	–17.8	–24.1	–1,504.3	–1,511.3
4,911	4,848	4,754	4,688	11,688	11,642	1,542	1,580	38,154	38,847

→ Segment reporting

(52) Information on segment reporting

Segmentation was performed in accordance with the organizational and reporting structure of the Merck Group. Within the Merck Serono division, Merck focuses on specialist therapeutic areas and markets innovative prescription drugs of chemical and biotechnological origin. The Consumer Health division comprises Merck's business with high-quality over-the-counter products for preventive health care and self-treatment of minor ailments. The Performance Materials division consists of the Liquid Crystals and Pigments & Cosmetics business units. The Merck Millipore division offers solutions to two key customer groups: research and analytical laboratories in the pharmaceutical/biotechnology industry or in academic institutions, and customers manufacturing large- and small-molecule drugs. The fields of activity of the individual divisions are described in detail in the sections about the divisions in the Group management report.

Corporate and Other includes assets and liabilities as well as income and expenses that cannot be directly allocated to the reportable segments presented; it serves the reconciliation to the Group numbers. The numbers mainly relate to Group functions. The cash flows attributable to the financial result and income taxes are also presented under Corporate and Other.

Apart from sales, the success of a segment is mainly determined by EBITDA pre one-time items (segment result) and business free cash flow (see Note [55]).

Transfer prices for intragroup sales are determined on an arm's-length basis. There were no significant intercompany relations between the business segments.

The Emerging Markets region comprises Latin America and Asia with the exception of Japan. The Rest of World region comprises Japan, Africa and Australia/Oceania.

Neither in 2013 nor in 2012 did any single customer account for more than 10% of Group sales.

The following table presents the reconciliation of EBITDA pre one-time items of all operating businesses to the profit before income tax of the Merck Group:

€ million	2013	2012
Total EBITDA pre one-time items of the operating businesses [1]	**3,450.0**	**3,247.8**
Corporate and Other [1]	–196.7	–282.9
EBITDA pre one-time items of the Merck Group	**3,253.3**	**2,964.9**
Depreciation and amortization/impairment losses/reversals of impairments	–1,458.4	–1,396.6
One-time items	–184.1	–604.7
Operating result (EBIT)	**1,610.8**	**963.6**
Financial result	–222.2	–254.6
Profit before income tax	**1,388.6**	**709.0**

[1] Previous year's figures have been adjusted, see explanations below

→ Segment reporting

EBITDA pre one-time items of all operating businesses totaled € 3,450 million (2012: € 3,247.8 million). Taking into account the expenses and income of € –196.7 million (2012: € –282.9 million) not allocable to the operating businesses which were reported under Corporate and Other, EBITDA pre one-time items of the Merck Group amounted to € 3,253.3 million (2012: € 2,964.9 million). This figure did not include depreciation, amortization, impairments and reversals of impairments or one-time items (excluding impairments and reversals of impairments). Consequently, the total operating result (EBIT) of the Merck Group amounted to € 1,610.8 million (2012: € 963.6 million).

The reconciliation of operating assets presented in the Segment reporting to the total assets of the Merck Group was as follows:

€ million	Dec. 31, 2013	Dec. 31, 2012
Assets	20,818.6	21,643.3
Monetary assets (cash and cash equivalents, current financial assets, loans, securities)	–3,539.3	–2,633.7
Non-operating receivables, income tax receivables, deferred taxes and net defined benefit assets	–913.1	–1,173.3
Assets held for sale	–27.1	–
Operating assets (gross)	**16,339.1**	**17,836.3**
Trade accounts payable	–1,364.1	–1,288.3
Other operating liabilities	–681.0	–701.9
Segment liabilities	**–2,045.1**	**–1,990.2**
Operating assets (net)	**14,294.0**	**15,846.1**

The operating assets (gross) of the Merck Group are determined by adjusting all assets totaling € 20,818.6 million (2012: € 21,643.3 million) for monetary assets totaling € 3,539.3 million (2012 : € 2,633.7 million) as well as all other non-operating assets totaling € 913.1 million (2012: € 1,173.3 million) and assets held for sale of € 27.1 million (2012: € 0.0 million). After deducting the reported segment liabilities which represented the operating liabilities totaling € 2,045.1 million (2012: € 1,990.2 million), the operating assets (net) of the Merck Group amounted to € 14,294.0 million (2012: € 15,846.1 million).

The investment result in the amount of € 1.5 million (2012: € 0.6 million) was disclosed for the first time under other operating expenses in 2013 (Note [28]). As in 2012, it was attributable to Corporate and Other.

Expenses for Group functions at consolidated subsidiaries were no longer allocated to the operating segments in fiscal 2013, but rather disclosed fully under Corporate and Other in the Segment reporting. In order to ensure comparability, the previous year's Segment reporting figures have been adjusted in accordance with the new allocation rules. The effects on the 2012 figures are presented below.

→ Segment reporting

The amended allocation of expenses related to administration expenses as well as other expenses and income. Overall, administration expenses under Corporate and Other increased from € 130.2 million by € 52.8 million to € 183.0 million. Other operating expenses and income rose by € 19.5 million to € 262.8 million from € 243.3 million. Considering the positive investment result of € 0.6 million, other operating expenses and income amounted to € 262.2 million.

In the Merck Serono division, € 33.4 million of the original € 250.2 million in administration expenses was reclassified, resulting in administration expenses of € 216.8 million. Out of the € 674.9 million in other operating expenses and income, € 5.9 million was reclassified. This resulted in other operating expenses and income of € 669.0 million.

In the Consumer Health division, € 3.2 million of the original € 23.1 million in administration expenses was disclosed as Corporate and Other, leaving a balance of € 19.9 million.

In the Performance Materials division, € 4.0 million of the original € 35.2 million in administration expenses was reclassified, resulting in administration expenses of € 31.2 million. Following the reclassification, other operating expenses and income declined by € 7.2 million from € 39.2 million to € 32.0 million.

In the Merck Millipore division, € 12.2 million of the original € 113.5 million in administration expenses was reclassified, resulting in administration expenses of € 101.3 million. Other operating expenses and income declined by € 6.4 million from € 122.9 million to € 116.5 million.

The change in costs in the divisions led to further changes to the earnings and cash flow figures in the Segment reporting. In the operating segments, the respective EBIT, EBITDA, EBITDA pre one-time items, cash flow from operating activities as well as business free cash flow increased by the lower amounts for administration expenses and other operating expenses and income. Moreover, this led to a corresponding increase in the EBITDA margin pre one-time items. The earnings and cash flow figures under Corporate and Other declined in line with allocation of administration expenses and other operating expenses and income. The EBITDA margin pre one-time items also declined accordingly.

Notes to the consolidated cash flow statement

The cash flow statement has been prepared in accordance with IAS 7 "Statement of Cash Flows". It presents the changes in cash and cash equivalents as a result of cash inflows and outflows in the year under review. Further information on cash flows can be found in the explanation of cash and cash equivalents (see Note [35]). The amount of undrawn borrowing facilities that could be tapped for future operating activities and to meet obligations is disclosed in Note [44].

The cash flows reported by Group companies outside Germany are translated at average exchange rates. Due to strong exchange rate effects, in 2013 there were greater effects on the individual balance sheet items. Cash and cash equivalents are translated at the closing rates. The impact of foreign exchange rate changes is disclosed separately under changes in cash and cash equivalents.

Within the cash flows from investing activities and financing activities reclassifications were made with the aim of a clearer and more understandable presentation. The 2012 figures were correspondingly adjusted.

(53) Net cash flows from operating activities

In 2013, tax payments totaled € 491.4 million (2012: € 580.5 million). Tax refunds totaled € 85.9 million (2012: € 18.6 million). Interest paid totaled € 248.3 million (2012: € 303.6 million). Interest received amounted to € 89.5 million (2012: € 59.9 million). Within the scope of a Contractual Trust Arrangement in Germany, in 2013 € 200.0 million was transferred to Merck Pensionstreuhand e. V., Darmstadt (trustee) (2012: € 250.0 million). This led to a corresponding decline in pension provisions and to a decrease in cash flows from operating activities.

Net cash flows from operating activities broken down by the segments of the Merck Group are disclosed in Note [51].

(54) Net cash flows from investing activities

A total of € 655.7 million was used for acquisitions and investments in financial assets (2012: € 778.2 million). Of this amount, € 15.1 million (2012: € 20.6 million) was used for acquisitions. In 2013, the line "Acquisitions" reflects a contingent purchase price payment for the microbiology business of Biotest AG, Dreieich, acquired in 2011. Net cash outflows from investments in current and non-current assets amounting to € 640.6 million (2012: € 757.6 million) mainly resulted from the purchase of current financial assets.

In 2013, cash inflows from disposals of assets amounted to € 297.8 (2012: € 93.6 million). The sale of the Merck Serono site in Geneva, Switzerland, resulted in cash inflows of € 251.1 million.

→ *Notes to the consolidated cash flow statement*

(55) Business free cash flow

Business free cash flow is an important performance indicator used to agree internal targets for steering liquidity. It comprises the major payment-relevant items that the individual businesses can influence.

The composition of business free cash flow was as follows:

€ million	2013	2012
EBITDA pre one-time items	**3,253.3**	**2,964.9**
less investments in property, plant and equipment, software as well as advance payments for intangible assets	–446.2	–366.5
Changes in inventories as reported in the balance sheet	59.7	157.2
Changes in trade accounts receivable as reported in the balance sheet	93.2	213.7
Business free cash flow	**2,960.0**	**2,969.3**

This indicator is presented in the Segment reporting (see Note [51]).

Other disclosures

(56) Derivative financial instruments

Merck uses derivative financial instruments exclusively to hedge and reduce risks from currency and interest rate positions. Merck currently uses marketable forward exchange contracts, interest rate swaps and currency options as hedging instruments. Depending on the nature of the hedged item, changes in the fair values of derivatives are recorded in the income statement either in the operating result or in the financial result. The strategy to hedge interest rate and foreign exchange rate fluctuations arising from forecast transactions and transactions already recognized in the balance sheet is set by a Merck Group risk committee, which meets on a regular basis. A planning period of up to 36 months normally serves as the basis for entering into currency derivative contracts. Extensive guidelines regulate the use of derivatives. There is a ban on speculation. Derivative transactions are subject to continuous risk management procedures. Trading, settlement and control functions are strictly separated. Derivative financial contracts are only entered into with banks that have a good credit rating. Related default risks are continuously monitored.

The following derivative financial instruments were held as of the balance sheet date:

	Nominal volume		Fair value	
€ million	Dec. 31, 2013	Dec. 31, 2012	Dec. 31, 2013	Dec. 31, 2012
Cash flow hedge	4,073.5	5,798.9	82.2	–106.1
Interest	650.0	650.0	–39.9	–58.1
Currency	3,423.5	5,148.9	122.1	–48.0
Fair value hedge	–	–	–	–
Interest	–	–	–	–
Currency	–	–	–	–
No hedge accounting	2,042.5	1,610.1	5.3	5.4
Interest	–	–	–	–
Currency	2,042.5	1,610.1	5.3	5.4
	6,116.0	**7,409.0**	**87.5**	**–100.7**

The nominal volume is the aggregate of all buy and sell amounts relating to derivative financial instruments. The fair values result from the valuation of open positions at market prices, disregarding any offsetting effects from hedged items. They correspond to the income or expenses which would result if the derivatives were closed out as of the balance sheet date. Transactions are recognized at fair value on the basis of quoted prices or current market data provided by a recognized information service.

→ Other disclosures

The maturities of the hedging instruments (nominal volume) are as follows as of the balance sheet date:

€ million	Remaining maturity less than 1 year	Remaining maturity more than 1 year	Total Dec. 31, 2013	Remaining maturity less than 1 year	Remaining maturity more than 1 year	Total Dec. 31, 2012
Foreign exchange contracts	3,763.2	1,244.9	5,008.1	3,965.8	2,089.3	6,055.1
Currency options	297.2	160.7	457.9	292.9	411.0	703.9
Interest rate swaps	–	650.0	650.0	–	650.0	650.0
	4,060.4	**2,055.6**	**6,116.0**	**4,258.7**	**3,150.3**	**7,409.0**

The forward exchange contracts and currency options entered into to reduce the exchange rate risk primarily serve to hedge intragroup financing in foreign currency as well as to hedge future cash flows. These mainly served to hedge fluctuations in the exchange rates of the U.S. dollar (€ 3,219.9 million; 2012: € 4,409.6 million), the Swiss franc (€ 603.4 million; 2012: € 528.1 million), the Japanese yen (€ 465.2 million; 2012: € 458.4 million), the British pound (€ 347.3 million; 2012: € 349.1 million) and the Taiwan dollar (€ 215.3 million; 2012: € 388.4 million) versus the euro.

Currency derivatives for which hedge accounting is not applied serve mainly to hedge currency risk from intragroup financing as well as receivables and payables denominated in foreign currency.

Forecast transactions are only hedged if the occurrence can be assumed to be highly probable. The nominal volume of hedged forecast transactions amounted to € 1,868.2 million (2012: € 2,411.6 million) as of the balance sheet date and related to both the hedging of forecast transactions in non-functional currency as well as hedging of variable interest payments for planned refinancing transactions. Moreover, intragroup monetary deposits in foreign currency in the amount of € 1,954.0 million (2012: € 2,732.1 million), intragroup borrowings in foreign currency amounting to € 151.4 million (2012: € 555.3 million) as well as a variable interest private placement with a nominal volume of € 100.0 million were also hedged. These hedging relationships represented cash flow hedges.

Overall, income of € 125.5 million (2012: € 3.6 million) from the fair value measurement of derivatives designated as cash flows hedges was recognized in equity in 2013. € 26.5 million was transferred from equity and recognized as income (2012: € 78.4 million recognized as expense). In 2013, no ineffectiveness resulted from hedge accounting.

The hedging of forecast transactions in non-functional currency related primarily to sales in U.S. dollars, Taiwan dollars and Japanese yen that are expected within the next 36 months. Forward exchange contracts and currency options were used as hedging instruments.

For the planned refinancing of the bond maturing in 2015, we entered into forward starter interest rate swap contracts with a nominal volume of € 550.0 million to hedge the interest rate level. The fair value was recognized in equity at 100% effectiveness.

→ Other disclosures

(57) Management of financial risks

Market fluctuations with respect to foreign exchange and interest rates represent significant profit and cash flow risks for Merck. Merck aggregates these Group-wide risks and steers them also by using derivative financial instruments. Merck uses scenario analyses to estimate existing risks of foreign exchange and interest rate fluctuations. Merck is not subject to any material risk cluster from financial transactions. The report on risks and opportunities included in the Group Management Report provides further information on the management of financial risks.

Foreign exchange risks

Owing to its international business focus, Merck is exposed to foreign exchange-related transaction risks within the scope of both ordinary business and financing activities. Different strategies are used to limit or eliminate these risks. Foreign exchange risks from recognized transactions are eliminated as far as possible through the use of forward exchange contracts. Foreign exchange risks arising from forecast transactions are analyzed regularly and reduced if necessary through forward exchange contracts or currency options by applying the hedge accounting rules.

The following table presents the net foreign exchange risk from forecast and recognized transactions in 2013 in the key currencies and the effect of exchange rate fluctuations versus the euro:

€ million as of Dec. 31, 2013	CHF	JPY	TWD	USD
Foreign exchange risk from balance sheet items	–474.3	184.4	26.4	1,556.1
Foreign exchange risk from executory contracts and forecast transactions in 2014	–233.4	236.2	239.9	1,220.5
Transaction-related foreign exchange position	**–707.7**	**420.6**	**266.3**	**2,776.6**
Position hedged by derivatives	366.5	–258.1	–88.4	–2,199.7
Open-end foreign exchange risk position	**–341.2**	**162.5**	**177.9**	**576.9**
Change in foreign exchange position [1] due to a 10% appreciation of the euro [2]	34.1	–16.3	–17.8	–57.7
included in profit/loss	10.8	–5.4	–0.9	11.4
recognized in equity	–	12.8	7.1	53.0

[1] Foreign exchange positions include booked and planned transactions. Only the exchange rate effects on booked transactions are reflected in profit/loss or equity.
[2] A 10% devaluation of the euro would have an opposite effect of the same amount.

→ Other disclosures

Further significant foreign exchange risks also resulted from transactions recognized in Hong Kong dollars as well as Venezuelan bolivars subject to exchange rate movements versus the U.S. dollar. The changes in foreign exchange positions as a result of a 10% appreciation in the value of the U.S. dollar would be € 9.4 million (2012: € 4.1 million) for the Venezuelan bolivar position, and € –2.2 million (2012: € –0.9 million) for the Hong Kong dollar position, and would be fully recognized in profit or loss. Moreover, derivatives existed to hedge expected cash flows beyond the year 2014. A 10% increase in the value of the euro over the Japanese yen, the Taiwan dollar and the U.S. dollar would have changed equity by € 11.6 million, € 2.1 million and € 40.7 million, respectively. In 2012, owing to hedging of expected cash flows beyond the year 2013, a 10% increase in the value of the euro over the Japanese yen, the Taiwan dollar and the U.S. dollar would have caused a change in equity of € 14.5 million, € 9.8 million and € 65.4 million, respectively.

The corresponding net foreign exchange rate risk from forecast and recognized transactions for 2012 was as follows:

€ million *as of Dec. 31, 2012*	CHF	JPY	TWD	USD
Foreign exchange risk from balance sheet items	–107.8	125.4	28.4	2,082.1
Foreign exchange risk from executory contracts and forecast transactions in 2013	–375.1	304.3	235.7	1,410.1
Transaction-related foreign exchange position	**–482.9**	**429.7**	**264.1**	**3,492.2**
Position hedged by derivatives	177.4	–216.0	–163.8	–2,855.5
Open-end foreign exchange risk position	**–305.5**	**213.7**	**100.3**	**636.7**
Change in foreign exchange position [1] due to a 10% appreciation of the euro [2]	30.6	–21.4	–10.0	–63.7
included in profit/loss	–7.0	–1.4	–	6.2
recognized in equity	–	10.5	13.6	71.2

[1] Foreign currency positions include booked and planned transactions. Only the exchange rate effects of booked transactions are reflected in profit or loss/equity.
[2] A 10% devaluation of the euro would have an opposite effect in the same amount.

In addition to the previously described transaction risks, the Merck Group is also exposed to currency translation risks since many Merck companies are located outside the eurozone. The financial statements of these companies are translated into euros. Exchange differences in the assets and liabilities of these companies resulting from currency translation are recognized in equity.

Interest rate risks

Interest rate risks related mainly to monetary deposits in the amount of € 3,469.1 million (2012: € 2,642.7 million) and to a minor extent to financial liabilities of € 3,697.9 million (2012: € 4,453.5 million). The aim is to optimize the interest result and to minimize interest rate risks. If necessary, derivative financial instruments are used to change variable interest payments into fixed interest payments.

→ Other disclosures

Relative to net interest liabilities on the balance sheet date, owing to the large proportion of fixed-interest financial instruments, a parallel shift in the yield curve by +100 or –100 basis points would not have a material effect. Assuming a refinancing as well as reinvestment of the same amount for the transactions expiring in 2014, a parallel shift in the yield curve by +100 basis points would lead to income of € 15.6 million (2012: € 12.5 million). A parallel shift in the yield curve by –100 basis points would lead to an expense of € 8.6 million (2012: € 9.6 million). This corresponded to a change in interest income of € 18.0 million (2012: € 14.1 million) or € –9.5 million (2012: € –11.2 million) on financial assets and additional interest expense of € 2.4 million (2012: € 1.6 million) or a decline in interest expense of € 0.9 million (2012: € 1.6 million) on financial liabilities. The resulting change in assets measured at fair value and derivative financial instruments would increase equity by € 33.4 million (2012: increase by € 31.6 million) or lower it by € 38.9 million (2012: lowered by € 41.5 million). The scenario calculations here assumed that the interest rate cannot fall below 0%.

Share price risks

The shares in publicly listed companies amounting to € 5.0 million (2012: € 6.9 million) are generally exposed to a market value risk. A 10% change in the value of the stock market would impact equity by € 0.5 million (2012: € 0.7 million). This change in value would be recognized in profit or loss at the time of disposal.

Liquidity risks

The liquidity risk, meaning the risk that Merck cannot meet its payment obligations resulting from financial liabilities, is limited by establishing the required financial flexibility and by effective cash management. Apart from liquid assets of € 3,391.3 million (2012: € 2,527.6 million), Merck had at its disposal a multi-currency revolving credit facility of € 2 billion with a term running until 2018 and two extension options of one year each as well as bilateral credit facilities and various bank credit lines of € 267.2 million (2012: € 338.2 million). There were no indications that the availability of credit facilities already extended was restricted. Moreover, a commercial paper program with a volume of € 2 billion and a debt issuance program with a volume increased to € 15 billion in 2013 were available. Information on bonds issued by the Merck Group can be found in Note [44].

Liquidity risks are monitored and reported to management on a regular basis. No liens or similar forms of collateral are provided for financial liabilities of the Merck Group. The loan agreements do not contain any financial covenants.

Trade payables amounting to € 1,364.1 million (2012: € 1,288.3 million) had a remaining term of less than one year. With respect to liabilities from operating derivatives amounting to € 2.1 million (2012: € 15.0 million), € 1.5 million (2012: € 12.2 million) was short-term. Out of other financial liabilities amounting to € 581.1 million (2012: € 522.9 million), € 578.9 million (2012: € 520.1 million) was due within one year.

→ Other disclosures

The following tables present the contractual cash flows such as repayments and interest on financial liabilities and derivative financial instruments with a negative fair value:

€ million as of Dec. 31, 2013	Carrying amount	Cash flows < one year		Cash flows in 1 – 5 years		Cash flows > 5 years	
		Interest	Repayment	Interest	Repayment	Interest	Repayment
Bonds and commercial paper	3,142.7	127.8	–	333.8	1,722.1	124.5	1,420.0
Liabilities to banks	42.2	4.7	42.2	–	–	–	–
Liabilities to related parties	361.9	0.2	361.9	–	–	–	–
Loans from third parties and other financial liabilities	84.0	6.0	24.0	11.1	56.0	–	4.0
Liabilities from derivatives (financial transactions)	59.4	2.4	10.0	27.6	9.5	14.7	–
Finance leasing liabilities	7.7	0.4	2.3	0.1	5.0	–	0.4
	3,697.9	**141.5**	**440.4**	**372.6**	**1,792.6**	**139.2**	**1,424.4**

€ million as of Dec. 31, 2012	Carrying amount	Cash flows < one year		Cash flows in 1 – 5 years		Cash flows > 5 years	
		Interest	Repayment	Interest	Repayment	Interest	Repayment
Bonds and commercial paper	3,895.0	166.5	750.0	403.2	1,738.2	188.2	1,420.0
Liabilities to banks	68.0	1.9	51.5	1.5	14.8	0.2	1.9
Liabilities to related parties	233.1	0.1	233.1	–	–	–	–
Loans from third parties and other financial liabilities	88.1	6.3	21.5	11.3	62.2	–	4.4
Liabilities from derivatives (financial transactions)	159.5	2.5	37.1	26.3	64.2	32.3	–
Finance leasing liabilities	9.8	0.2	2.5	0.1	6.2	–	1.1
	4,453.5	**177.5**	**1,095.7**	**442.4**	**1,885.6**	**220.7**	**1,427.4**

→ Other disclosures

Credit risks

Merck is only subject to a relatively low credit risk, meaning the unexpected loss of payment funds or income. On the one hand, financial contracts are only entered into with banks and industrial companies with good credit ratings and on the other hand, the broad-based business structure of the Merck Group means that there is no particularly high concentration of credit risks with respect to either customers or individual countries. The credit risk with customers is continuously monitored by analyzing the age structure of trade accounts receivable. The financial crisis has led to an increased risk of default in individual eurozone countries. Merck continuously reviews and monitors open positions vis-à-vis all trading partners in the affected countries and takes risk-mitigating measures and accounts for impairments as necessary. On the reporting date, the theoretically maximum default risk corresponded to the carrying amounts.

→ Other disclosures

(58) Other disclosures on financial instruments

The following table presents the reconciliation of the balance sheet items to the classes of financial instruments in accordance with IFRS 7 and provides information on fair value measurement:

		Subsequent measurement according to IAS 39				
€ million	Carrying amount Dec. 31, 2013	Amortized cost	At cost	Fair value	Carrying amount according to IAS 17	Non-financial items
Assets						
Cash and cash equivalents	980.8	980,8	–	–	–	–
Current financial assets	2,410.5	80.7	–	2,329.8	–	–
Held for trading (non-derivatives)	–	–	–	–	–	–
Derivatives not in a hedging relationship	6.8	–	–	6.8	–	–
Held to maturity	53.4	53.4	–	–	–	–
Loans and receivables	27.3	27.3	–	–	–	–
Available-for-sale	2,312.1	–	–	2,312.1	–	–
Derivatives in a hedging relationship	10.9	–	–	10.9	–	–
Trade receivables	2,021.4	2,021.4	–	–	–	–
Loans and receivables	2,021.4	2,021.4	–	–	–	–
Current and non-current other assets	466.2	115.4	–	126.6	–	224.2
Derivatives not in a hedging relationship	2.9	–	–	2.9	–	–
Loans and receivables	115.4	115.4	–	–	–	–
Derivatives in a hedging relationship	123.7	–	–	123.7	–	–
Non-financial items	224.2	–	–	–	–	224.2
Non-current financial assets	77.8	15.8	52.3	9.7	–	–
Derivatives not in a hedging relationship	–	–	–	–	–	–
Held to maturity	–	–	–	–	–	–
Loans and receivables	15.8	15.8	–	–	–	–
Available-for-sale	57.3	–	52.3	5.0	–	–
Derivatives in a hedging relationship	4.7	–	–	4.7	–	–
Liabilities						
Current and non-current financial liabilities	3,697.9	3,630.8	–	59.4	7.7	–
Derivatives not in a hedging relationship	4.0	–	–	4.0	–	–
Other liabilities	3,630.8	3,630.8	–	–	–	–
Derivatives in a hedging relationship	55.4	–	–	55.4	–	–
Finance lease liabilities	7.7	–	–	–	7.7	–
Trade accounts payable	1,364.1	1,364.1	–	–	–	–
Other liabilities	1,364.1	1,364.1	–	–	–	–
Current and non-current other liabilities	1,140.1	581.1	–	2.1	–	556.9
Derivatives not in a hedging relationship	0.4	–	–	0.4	–	–
Other liabilities	581.1	581.1	–	–	–	–
Derivatives in a hedging relationship	1.7	–	–	1.7	–	–
Non-financial items	556.9	–	–	–	–	556.9

→ Other disclosures

		Subsequent measurement according to IAS 39					
Fair value Dec. 31, 2013	Carrying amount Dec. 31, 2012	Amortized cost	At cost	Fair value	Carrying value according to IAS 17	Non-financial items	Fair value Dec. 31, 2012
980.8	729.7	729.7	–	–	–	–	729.7
	1,797.9	549.7	–	1,248.2	–	–	
–	–	–	–	–	–	–	–
6.8	7.8	–	–	7.8	–	–	7.8
53.4	349.7	349.7	–	–	–	–	349.7
27.3	200.0	200.0	–	–	–	–	200.3
2,312.1	1,230.1	–	–	1,230.1	–	–	1,230.1
10.9	10.3	–	–	10.3	–	–	10.3
	2,114.6	2,114.6	–	–	–	–	
2,021.4	2,114.6	2,114.6	–	–	–	–	2,114.6
	346.9	88.8	–	55.3	–	202.8	
2.9	2.7	–	–	2.7	–	–	2.7
115.4	88.8	88.8	–	–	–	–	88.8
123.7	52.6	–	–	52.6	–	–	52.6
	202.8	–	–	–	–	202.8	
	97.1	48.0	41.8	7.3	–	–	
–	–	–	–	–	–	–	–
–	30.0	30.0	–	–	–	–	30.0
15.8	18.0	18.0	–	–	–	–	18.0
57.3	48.7	–	41.8	6.9	–	–	48.7
4.7	0.4	–	–	0.4	–	–	0.4
	4,453.5	4,284.2	–	159.5	9.8	–	
4.0	4.7	–	–	4.7	–	–	4.7
3,916.6	4,284.2	4,284.2	–	–	–	–	4,715.7
55.4	154.8	–	–	154.8	–	–	154.8
7.7	9.8	–	–	–	9.8	–	9.8
	1,288.3	1,288.3	–	–	–	–	
1,364.1	1,288.3	1,288.3	–	–	–	–	1,288.3
	1,105.6	522.9	–	15.0	–	567.7	
0.4	0.4	–	–	0.4	–	–	0.4
581.1	522.9	522.9	–	–	–	–	522.9
1.7	14.6	–	–	14.6	–	–	14.6
	567.7	–	–	–	–	567.7	

→ Other disclosures

Net gains and losses on financial instruments mainly include measurement results from currency translation, fair value adjustments, impairments and reversals of impairments as well as the recognition of premiums and discounts. Dividends and interest are not recognized in the net gains and losses on financial instruments, except for dividends and interest in the category "held for trading". At Merck, the category "held for trading" only includes derivatives not in a hedging relationship.

The net gains and losses on financial instruments by category on the reporting date were as follows:

€ million 2013	Interest	Net gains or losses Impairments	Reversals of impairment	Fair value adjustments	Disposal gains/losses
Financial instrument of the category					
Held for trading	–	–	–	131.7	–
Held to maturity	2.5	–	–	–	–
Loans and receivables	10.3	–47.2	42.1	–	–
Available-for-sale	15.1	–4.1	–	–	1.6
Other liabilities	–163.3	–	–	–	–

€ million 2012	Interest	Net gains or losses Impairments	Reversals of impairments	Fair value adjustments	Disposal gains/losses
Financial instrument of the category					
Held for trading	–	–	–	44.4	–
Held to maturity	10.5	–	–	–	–
Loans and receivables	7.9	–69.9	42.4	–	–
Available-for-sale	11.4	–5.1	20.8	–	0.3
Other liabilities	–195.3	–	–	–	–

In 2013, foreign exchange gains of € 26.0 million resulting from receivables and payables in operating business, their economic hedging, as well as hedging of forecast transactions in operating business were recorded (2012: losses of € 60.4 million). Foreign exchange losses of € 4.3 million resulting from financial balance sheet items, their economic hedging as well as fair value fluctuations of option contracts to hedge forecast transactions were recorded (2012: gains of € 11.2 million).

The fair value of financial assets and liabilities is based on the official market prices and market values quoted on the balance sheet date (Level 1 assets and liabilities) as well as mathematical calculation models with inputs observable in the market on the balance sheet date (Level 2 assets and liabilities). Level 1 assets comprise stocks and bonds and are classified as "available-for-sale", Level 1 liabilities comprise issued bonds and are classified as "other liabilities". Level 2 assets and liabilities are primarily liabilities to banks classified

→ Other disclosures

as "other liabilities", interest-bearing securities classified as "available-for-sale" as well as derivatives with and without hedging relationships. The fair value of interest-bearing securities is determined by discounting future cash flows using market interest rates. The fair value measurement of forward exchange contracts and currency options uses spot and forward rates as well as foreign exchange volatilities applying recognized mathematical principles. The fair value of interest rate swaps is determined with standard market valuation models using interest rate curves available in the market.

The fair values of the financial instruments disclosed in the balance sheet and the fair values deviating substantially from the carrying amount were determined as follows:

€ million *as of Dec. 31, 2013*	Assets	Liabilities
Fair value determined by official prices and quoted market values (Level 1)	**1,396.5**	**3,414.3**
thereof available-for-sale	1,396.5	–
thereof other liabilities	–	3,414.3
Fair value determined using inputs observable in the market (Level 2)	**1,069.6**	**563.8**
thereof available-for-sale	920.6	–
thereof derivatives with a hedging relationship	139.3	57.1
thereof derivatives without a hedging relationship	9.7	4.4
thereof other liabilities	–	502.3
Fair value determined using inputs unobservable in the market (Level 3)	**–**	**–**

€ million *as of Dec. 31, 2012*	Assets	Liabilities
Fair value determined by official prices and quoted market values (Level 1)	**818.3**	**4,315.3**
thereof available-for-sale	818.3	–
thereof other liabilities	–	4,315.3
Fair value determined using inputs observable in the market (Level 2)	**492.5**	**574.9**
thereof available-for-sale	418.7	–
thereof derivatives with a hedging relationship	63.3	169.4
thereof derivatives without a hedging relationship	10.5	5.1
thereof other liabilities	–	400.4
Fair value determined using inputs unobservable in the market (Level 3)	**–**	**–**

From an economic perspective, netting is only possible at Merck with derivatives. This possibility results from the framework agreements on derivatives trading which Merck enters into with commercial banks. However, Merck does not offset financial assets and financial liabilities in its balance sheet.

→ Other disclosures

The following table presents the potential netting volume of the reported derivative financial assets and liabilities:

€ million as of Dec. 31, 2013	Gross presentation	Netting	Net presentation	Potential netting volume: Due to master netting agreements	Potential netting volume: Due to financial collateral	Potential net amount
Derivative financial assets	149.0	–	149.0	45.9	–	103.1
Derivative financial liabilities	–61.5	–	–61.5	–45.9	–	–15.6

€ million as of Dec. 31, 2012	Gross presentation	Netting	Net presentation	Potential netting volume: Due to master netting agreements	Potential netting volume: Due to financial collateral	Potential net amount
Derivative financial assets	73.8	–	73.8	61.3	–	12.5
Derivative financial liabilities	–174.5	–	–174.5	–61.3	–	–113.2

(59) Capital management

The objective of capital management is to secure the financial flexibility in order to maintain long-term business operations and to realize strategic options. Maintaining a stable investment grade rating, ensuring liquidity, limiting financial risks as well as optimizing the costs of capital are the objectives of our financial policy and set important framework conditions for capital management. Traditionally, the capital market represents a major source of financing for Merck, for instance via bond issues. In addition, Merck has both a commercial paper program for short-term financing on the capital market as well as a multi-currency working capital credit facility of € 2 billion with a term running until 2018 and two extension options, each for one year.

→ Other disclosures

The responsible committees decide on the capital structure of the balance sheet, the appropriation of net retained profit and the dividend level.

In this context, net financial debt is one of the leading capital management indicators. It was as follows:

€ million	Dec. 31, 2013	Dec. 31, 2012	Change
Financial liabilities	3,697.9	4,453.5	–755.6
less			
Cash and cash equivalents	980.8	729.7	251.1
Current financial assets	2,410.5	1,797.9	612.6
Net financial debt	**306.6**	**1,925.9**	**–1,619.3**

(60) Contingent liabilities

€ million	Dec. 31, 2013	thereof affiliates	Dec. 31, 2012	thereof affiliates
Guarantees	2.5	–	17.3	–
Warranties	0.9	–	0.8	–
Other contingent liabilities	32.9	–	87.8	–

Other contingent liabilities included, among other things, potential obligations from legal disputes, for which the probability of an outflow of resources did not suffice to recognize a provision as of the balance sheet date.

→ Other disclosures

(61) Other financial obligations

Other financial obligations comprised the following:

€ million	Dec. 31, 2013	thereof affiliates	Dec. 31, 2012	thereof affiliates
Obligation to purchase the entire share capital of AZ Electronic Materials S.A.	1,876.5	–	–	–
Obligations to acquire intangible assets	2,000.2	–	1,670.7	–
Obligations to acquire property, plant and equipment	44.7	–	111.8	–
Future operating lease payments	172.0	–	207.9	–
Long-term purchase commitments	151.5	–	186.5	–
Other financial obligations	29.0	–	14.8	–
	4,273.9	**–**	**2,191.7**	**–**

In connection with the offer published by Merck on December 20, 2013 to acquire AZ Electronic Materials S.A., Luxembourg, (AZ), a conditional financial commitment exists in the amount of € 1,876.5 million (£ 1,565 million; based on an exchange rate of € 1 = £ 0.834 on December 31, 2013) for the purchase of the entire share capital of AZ in cash. Among other things, the successful completion of the transaction is subject to antitrust approval as well as the achievement of a minimum acceptance level of 95% of the share capital.

Obligations to acquire intangible assets existed in particular within the scope of research and development collaborations. Here Merck has obligations to make milestone payments when its partner achieves certain objectives. In the unlikely event that all contract partners achieve all milestones, Merck would be obligated to pay up to € 2,000.2 million (2012: € 1,670.7 million) for the acquisition of intangible assets.

Our expectations regarding the potential maturities of these obligations were as follows:

€ million	Dec. 31, 2013	Dec. 31, 2012
Obligations to acquire intangible assets		
within one year	56.8	140.3
in 1–5 years	508.4	308.9
more than 5 years	1,435.0	1,221.5
	2,000.2	**1,670.7**

Other financial obligations were recognized at nominal value.

→ Other disclosures

The maturities of liabilities from lease agreements were as follows:

€ million Dec. 31, 2013	within 1 year	1 – 5 years	more than 5 years	Total
Present value of future payments from finance leases	2.3	5.0	0.4	7.7
Interest component of finance leases	0.4	0.1	0.1	0.6
Future finance lease payments	**2.7**	**5.1**	**0.5**	**8.3**
Future operating lease payments	**64.9**	**103.0**	**4.1**	**172.0**

€ million Dec. 31, 2012	within 1 year	1 – 5 years	more than 5 years	Total
Present value of future payments from finance leases	2.5	6.2	1.1	9.8
Interest component of finance leases	0.2	0.1	–	0.3
Future finance lease payments	**2.7**	**6.3**	**1.1**	**10.1**
Future operating lease payments	**72.0**	**126.9**	**9.0**	**207.9**

Operating lease agreements related mainly to customary leasing arrangements to lease operating and office equipment. The payments resulting from operating lease agreements amounted to € 104.0 million (2012: € 102.6 million) and were recorded as an expense in the reporting period.

(62) Personnel expenses/Headcount

Personnel expenses comprised the following:

€ million	2013	2012
Wages and salaries	2,611.8	3,007.2
Compulsory social security contributions and special financial assistance	368.0	398.3
Pension expenses	146.6	159.0
	3,126.4	**3,564.5**

→ Other disclosures

The decrease in personnel expenses compared to the prior year was primarily due to the reduction of one-time effects in connection with "Fit for 2018" transformation and growth program. In 2012, € 381.6 million related to expenses for severance pay.

As of December 31, 2013, the Merck Group had 38,154 employees (2012: 38,847). The average number of employees during the year was 38,282 (2012: 39,939).

The breakdown of personnel by function was as follows:

Average number of employees	2013	2012
Production	9,985	9,486
Logistics	1,779	1,665
Marketing and Sales	12,214	12,353
Administration	5,106	4,416
Research & Development	4,433	4,558
Infrastructure and Other	4,765	7,461
	38,282	**39,939**

In 2013, Merck substantially increased transparency by assigning all positions to a standardized job profile. In this way, positions that were previously not assigned to specific functional areas were assigned according to function.

(63) Material costs

Material costs in 2013 amounted to € 1,473.2 million (2012: € 1,496.4 million) and was reported under cost of sales.

(64) Auditors' fees

The costs of the auditors (KPMG) of the financial statements of the Merck Group consisted of the following:

	2013		2012	
€ million	Merck Group	thereof KPMG Germany	Merck Group	thereof KPMG Germany
Audits of financial statements	5.2	1.5	5.4	1.4
Other audit-related services	0.4	0.2	0.6	0.2
Tax consultancy services	0.8	0.7	0.4	0.3
Other services	0.4	0.3	0.2	–
	6.8	**2.7**	**6.6**	**1.9**

(65) Corporate governance

The Statement of Compliance in accordance with section 161 of the German Stock Corporation Act (Aktiengesetz) was published in the corporate governance section of our website www.merckgroup.com/investors → corporate governance in March 2013 and thus made permanently available.

(66) Companies opting for exemption under section 264 (3) HGB or section 264b HGB

The following companies, which have been consolidated in these financial statements, have opted for exemption:
Allergopharma GmbH & Co. KG, Reinbek
Allergopharma Verwaltungs GmbH, Darmstadt
Chemische Fabrik Lehrte Dr. Andreas Kossel GmbH, Lehrte
Chemitra GmbH, Darmstadt
heipha Dr. Müller Gmbh, Eppelheim
Litec LLL GmbH, Greifswald
Merck Accounting Solutions & Services Europe GmbH, Darmstadt
Merck Chemicals GmbH, Schwalbach
Merck Consumer Health Care Holding GmbH, Darmstadt
Merck Export GmbH, Darmstadt
Merck Selbstmedikation GmbH, Darmstadt
Merck Serono GmbH, Darmstadt
Merck Versicherungsvermittlung GmbH, Darmstadt

(67) Related-party disclosures

Related parties in respect of the Merck Group are E. Merck KG as well as Emanuel-Merck-Vermögens-KG and E. Merck Beteiligungen KG. In principle, direct or indirect subsidiaries of Merck KGaA, associates and joint ventures of the Merck Group as well as pension funds that are classified as funded defined benefit plans in accordance with IAS 19 are also related parties within the meaning of IAS 24. Members of the Executive Board and the Supervisory Board of Merck KGaA, the Executive Board and the Board of Partners of E. Merck KG as well as close members of their families are also related parties.

As of December 31, 2013, there were liabilities by Merck Financial Services GmbH, Merck KGaA, and Merck & Cie, Altdorf, to E. Merck KG in the amount of € 734.7 million (2012: € 528.1 million) as well as by Merck Financial Services GmbH to Merck Capital Asset Management, Malta, and Merck Capital Asset Management Holding, Malta, amounting to € 0.2 million (2012: € 0.3 million) and € 0.1 million (2012: € 0.1 million), respectively. In addition, as of December 31, 2013, Merck KGaA had receivables from E. Merck Beteiligungen KG in the amount of € 32.5 million (2012: € 5.4 million). The balances result mainly from the profit transfers by Merck & Cie to E. Merck KG as well as the reciprocal profit transfers between Merck KGaA and E. Merck KG. They included financial payables of € 361.9 million (2012: € 233.1 million) which were subject to standard market interest rates.

→ Other disclosures

From January to December 2013, Merck KGaA performed services for E. Merck KG with a value of € 1.2 million (2012: € 1.2 million), for Emanuel-Merck-Vermögens-KG with a value of € 0.4 million (2012: € 0.3 million) and for E. Merck Beteiligungen KG with a value of € 0.3 million (2012: € 0.3 million). During the same period, E. Merck KG performed services for Merck KGaA with a value of € 0.5 million (2012: € 0.5 million).

During the reporting period, Merck KGaA sold a piece of developed land to Emanuel-Merck-Vermögens-KG. The purchase price of € 4.3 million corresponded to the market value, which an independent expert third party determined in an appraisal.

Business transactions with major subsidiaries were eliminated during consolidation. Information on pension funds that are classified as funded defined benefit plans in accordance with IAS 19 can be found under Note [49]. There were no further material transactions with these pension funds.

From January to December 2013, there were no transactions between companies of the Merck Group and associates, as was the case in 2012. As in the previous year, companies of the Merck Group had no receivables or liabilities vis-à-vis associates as of December 31, 2013.

There were no material transactions such as, for example, the provision of services or the granting of loans, between companies of the Merck Group and members of the Executive Board and the Supervisory Board of Merck KGaA, the Executive Board and the Board of Partners of E. Merck KG or members of their immediate families.

(68) Executive Board and Supervisory Board compensation

The compensation of the Executive Board of Merck KGaA is paid by the general partner, E. Merck KG, and recorded as an expense in its income statement. For the period from January to December 2013 fixed salaries of € 4.9 million (2012: € 4.9 million), variable compensation of € 17.6 million (2012: € 11.2 million), and additional benefits of € 0.1 million (2012: € 0.1 million) were recorded for members of the Executive Board of Merck KGaA. Furthermore, additions to the provisions of E. Merck KG for the Long-Term Incentive Plan totaled € 8.0 million (2012: € 3.1 million), and to the pension provisions of E. Merck KG include current service costs of € 2.5 million (2012: € 1.9 million) for members of the Executive Board of Merck KGaA.

Subject to the approval of the Annual General Meeting on the proposed distribution of a dividend of € 1.90 per share, the compensation of the Supervisory Board amounting to € 874.4 thousand (2012: € 694.0 thousand) consists of a fixed portion of € 599.5 thousand (2012: € 122.5 thousand) and a variable portion of € 202.2 thousand (2012: € 571.5 thousand), as well as meeting attendance compensation of € 45.7 thousand (2012: € 0.0 thousand).

Further individualized information and details can be found in the Compensation Report on pages 154 et seq.

→ Other disclosures

(69) Information on preparation and approval

The Executive Board of Merck KGaA prepared the consolidated financial statements on February 17, 2014 and approved them for forwarding to the Supervisory Board. The Supervisory Board has the responsibility to examine the consolidated financial statements and to declare whether it approves them.

(70) Subsequent events

Subsequent to the balance sheet date, no events of special importance occurred that could have a material impact on the financial position and results of operations of the Merck Group.

(71) List of shareholdings

The following table presents the list of shareholdings of the Merck Group as of December 31, 2013.

Country	Company	Registered office	Equity interest (%)	thereof Merck KGaA (%)
I. Fully consolidated companies				
Germany				
Germany	Merck KGaA	Darmstadt	Parent company	
Germany	AB Allgemeine Pensions GmbH & Co. KG	Zossen	100.00	100.00
Germany	Allergopharma GmbH & Co. KG	Reinbek	100.00	
Germany	Allergopharma Verwaltungs GmbH	Darmstadt	100.00	100.00
Germany	Biochrom GmbH	Berlin	100.00	
Germany	Chemische Fabrik Lehrte Dr. Andreas Kossel GmbH	Lehrte	100.00	100.00
Germany	Chemitra GmbH	Darmstadt	100.00	100.00
Germany	Emedia Export Company mbH	Gernsheim	100.00	
Germany	heipha Dr. Müller GmbH	Eppelheim	100.00	100.00
Germany	IHS – Intelligent Healthcare Solutions GmbH	Frankfurt/Main	100.00	
Germany	Litec-LLL GmbH	Greifswald	100.00	100.00
Germany	Merck 15. Allgemeine Beteiligungs-GmbH	Darmstadt	100.00	
Germany	Merck Accounting Solutions & Services Europe GmbH	Darmstadt	100.00	100.00
Germany	Merck Chemicals GmbH	Schwalbach	100.00	
Germany	Merck China Chemicals Holding GmbH	Darmstadt	100.00	
Germany	Merck Consumer Health Care Holding GmbH	Darmstadt	100.00	100.00
Germany	Merck Export GmbH	Darmstadt	100.00	100.00
Germany	Merck Financial Services GmbH	Darmstadt	100.00	100.00
Germany	Merck Financial Trading GmbH	Gernsheim	100.00	100.00

→ Other disclosures

Country	Company	Registered office	Equity interest (%)	thereof Merck KGaA (%)
Germany	Merck Holding GmbH	Gernsheim	100.00	100.00
Germany	Merck International GmbH	Darmstadt	100.00	100.00
Germany	Merck Internationale Beteiligungen GmbH	Darmstadt	100.00	
Germany	Merck Schuchardt OHG	Hohenbrunn	100.00	100.00
Germany	Merck Selbstmedikation GmbH	Darmstadt	100.00	
Germany	Merck Serono GmbH	Darmstadt	100.00	100.00
Germany	Merck Versicherungsvermittlung GmbH	Darmstadt	100.00	100.00
Germany	Merck Vierte Allgemeine Beteiligungsgesellschaft mbH	Gernsheim	100.00	
Other European countries				
Switzerland	Allergopharma AG	Therwil	100.00	
Switzerland	Ares Trading SA	Aubonne	100.00	
Switzerland	Merck & Cie	Altdorf	51.63	51.63
Switzerland	Merck (Schweiz) AG	Zug	100.00	
Switzerland	Merck Biosciences AG	Läufelfingen	100.00	
Switzerland	Merck Serono SA	Coinsins	100.00	
Switzerland	Millipore AG	Zug	100.00	
Switzerland	SeroMer Holding SA	Chéserex	100.00	
France	Laboratoire Médiflor S.A.S.	Lyon	100.00	
France	Merck Biodevelopment S.A.S.	Lyon	100.00	
France	Merck Chimie S.A.S.	Fontenay s/Bois	100.00	
France	Merck Médication Familiale S.A.S.	Lyon	100.00	
France	Merck S.A.	Lyon	99.83	
France	Merck Santé S.A.S.	Lyon	100.00	
France	Merck Serono S.A.S.	Lyon	100.00	
France	Millipore S.A.S.	Molsheim	100.00	
United Kingdom	Celliance Ltd.	Edinburgh	100.00	
United Kingdom	Lamberts Healthcare Ltd.	Tunbridge Wells	100.00	
United Kingdom	Merck Chemicals Ltd.	Nottingham	100.00	
United Kingdom	Merck Consumer Health Care Ltd.	Hull	100.00	
United Kingdom	Merck Cross Border Trustees Ltd.	Hull	100.00	
United Kingdom	Merck Holding Ltd.	Feltham	100.00	
United Kingdom	Merck Investments Ltd.	Hull	100.00	
United Kingdom	Merck Ltd.	Hull	100.00	
United Kingdom	Merck Pension Trustees Ltd.	Hull	100.00	
United Kingdom	Merck Serono Europe Ltd.	London	100.00	
United Kingdom	Merck Serono Ltd.	Feltham	100.00	
United Kingdom	Millipore (U.K.) Ltd.	Feltham	100.00	
United Kingdom	Millipore UK Holdings LLP	London	100.00	
United Kingdom	Serologicals Global Holding Company Ltd.	London	100.00	
United Kingdom	Seven Seas Ltd.	Hull	100.00	

→ Other disclosures

Country	Company	Registered office	Equity interest (%)	thereof Merck KGaA (%)
United Kingdom	Upstate Ltd.	London	100.00	
Italy	Allergopharma S.p.A.	Vimodrone	100.00	
Italy	Istituto di Ricerche Biomediche Antoine Marxer RBM S.p.A.	Colleretto Giacosa	100.00	
Italy	Merck S.p.A.	Vimodrone	100.00	
Italy	Merck Serono S.p.A.	Rome	99.74	
Italy	Millipore S.p.A.	Vimodrone	100.00	
Spain	Merck, S.L.	Madrid	100.00	
Spain	Millipore Iberica S.A.	Madrid	100.00	
Belgium	Merck Chemicals N.V./S.A.	Overijse	100.00	
Belgium	Merck Consumer Healthcare N.V.-S.A.	Overijse	100.00	
Belgium	Merck N.V.-S.A.	Overijse	100.00	
Bulgaria	Merck Bulgaria EAD	Sofia	100.00	
Denmark	Merck A/S	Hellerup	100.00	
Denmark	Millipore A/S	Hellerup	100.00	
Denmark	Survac ApS	Frederiksberg	100.00	100.00
Estonia	Merck Serono OÜ	Tallinn	100.00	
Finland	Merck OY	Espoo	100.00	
Finland	Millipore OY	Espoo	100.00	
Greece	Merck A.E.	Maroussi	100.00	
Ireland	Merck Millipore Ltd.	Carrigtwohill	100.00	
Ireland	Merck Serono (Ireland) Ltd.	Dublin	100.00	
Ireland	Millipore Cork	Carrigtwohill	100.00	
Ireland	Millipore Dublin International Finance Company	Dublin	100.00	
Ireland	Tullagreen Holdings Ltd.	Dublin	100.00	
Croatia	Merck d.o.o.	Zagreb	100.00	
Latvia	Merck Serono SIA	Riga	100.00	
Lithuania	Merck Serono, UAB	Kaunas	100.00	
Luxembourg	Merck Chemicals Holding S.a.r.l.	Luxembourg	100.00	
Luxembourg	Merck Finance S.a.r.l.	Luxembourg	100.00	100.00
Luxembourg	Merck Holding S.a.r.l.	Luxembourg	100.00	
Luxembourg	Merck Re S.A.	Luxembourg	100.00	
Luxembourg	Merck-Finanz AG	Luxembourg	100.00	100.00
Luxembourg	Millilux S.a.r.l.	Luxembourg	100.00	
Luxembourg	Millipart S.a.r.l.	Luxembourg	100.00	
Luxembourg	Millipore International Holdings, S.a.r.l.	Luxembourg	100.00	
Malta	Merck Capital Holding Ltd.	Pietà	100.00	58.88
Malta	Merck Capital Ltd.	Pietà	100.00	
Netherlands	Merck B.V.	Schiphol-Rijk	100.00	
Netherlands	Merck Chemicals B.V.	Amsterdam Zuidoost	100.00	
Netherlands	Serono Tri Holdings B.V.	Schiphol-Rijk	100.00	

→ Other disclosures

Country	Company	Registered office	Equity interest (%)	thereof Merck KGaA (%)
Norway	Merck AB, Branch Office Norway	Oslo	100.00	
Noway	Millipore AS	Oslo	100.00	
Austria	Allergopharma Vertriebsgesellschaft m.b.H.	Vienna	100.00	
Austria	Merck Gesellschaft mbH	Vienna	100.00	
Austria	Merck KGaA & Co. Werk Spittal	Spittal	100.00	99.00
Austria	Millipore Gesellschaft mbH	Vienna	100.00	
Poland	Merck Sp.z o.o.	Warsaw	100.00	
Portugal	Merck, S.A.	Algés	100.00	
Romania	Merck Romania S.R.L.	Bucharest	100.00	
Russia	Merck LLC	Moscow	100.00	
Sweden	Merck AB	Solna	100.00	
Sweden	Merck SeQuant AB	Umea	100.00	
Sweden	Millipore AB	Solna	100.00	
Serbia	Merck d.o.o. Beograd	Belgrade	100.00	
Slowakia	Merck spol.s.r.o.	Bratislava	100.00	
Slovenia	Merck d.o.o.	Ljubljana	100.00	
Czech Republic	Merck spol.s.r.o.	Prague	100.00	
Turkey	Merck Ilac Ecza ve Kimya Ticaret AS	Istanbul	100.00	
Hungary	Merck Kft.	Budapest	100.00	
North America				
United States	Amnis Corp.	Seattle	100.00	
United States	EMD Accounting Solutions & Services America, Inc.	Quincy	100.00	
United States	EMD Holding Corp.	Rockland	100.00	
United States	EMD Millipore Corp.	Billerica	100.00	
United States	EMD Serono Holding Inc.	Rockland	100.00	
United States	EMD Serono Research & Development Institute, Inc.	Billerica	100.00	
United States	EMD Serono, Inc.	Rockland	100.00	
United States	Millipore Asia Ltd.	Wilmington	100.00	
United States	Millipore Pacific Ltd.	Wilmington	100.00	
United States	Millipore UK Holdings I, LLC	Wilmington	100.00	
United States	Millipore UK Holdings II, LLC	Wilmington	100.00	
United States	Serono Laboratories Inc.	Rockland	100.00	
Puerto Rico	EMD Millipore Corp., Puerto Rico Branch	Cidra	100.00	
Canada	EMD Chemicals Canada Inc.	Toronto	100.00	
Canada	EMD Crop BioScience Canada Inc.	Toronto	100.00	
Canada	EMD Inc.	Mississauga	100.00	
Canada	Millipore (Canada) Ltd.	Toronto	100.00	

→ Other disclosures

Country	Company	Registered office	Equity interest (%)	thereof Merck KGaA (%)
Emerging Markets				
Argentina	Merck Quimica Argentina S.A.I.C.	Buenos Aires	100.00	
Brazil	Merck S.A.	Rio de Janeiro	100.00	
Chile	Merck S.A.	Santiago de Chile	100.00	
Ecuador	Merck C.A.	Quito	100.00	
Guatemala	Merck, S.A.	Guatemala City	100.00	
Colombia	Merck S.A.	Bogotá	100.00	
Mexico	Merck, S.A. de C.V.	Mexico City	100.00	
Mexico	Millipore S.A. de C.V.	Mexico City	100.00	
Mexico	Serono de Mexico S.A. de C.V.	Mexico City	100.00	
Panama	Mesofarma Corporation	Panama City	100.00	
Peru	Merck Peruana S.A.	Lima	100.00	
Uruguay	ARES Trading Uruguay S.A.	Montevideo	100.00	
Venezuela	Merck S.A.	Caracas	100.00	
Venezuela	Representaciones MEPRO S.A.	Caracas	100.00	
China	Beijing Skywing Technology Co., Ltd.	Beijing	100.00	
China	Merck Chemicals (Shanghai) Co., Ltd.	Shanghai	100.00	
China	Merck Display Materials (Shanghai) Co., Ltd.	Shanghai	100.00	
China	Merck Ltd.	Hong Kong	100.00	
China	Merck Millipore Lab Equipment (Shanghai) Co., Ltd.	Shanghai	100.00	
China	Merck Pharmaceutical (HK) Ltd.	Hong Kong	100.00	
China	Merck Serono (Beijing) Pharmaceutical R&D Co., Ltd.	Beijing	100.00	
China	Merck Serono Co., Ltd.	Beijing	100.00	
China	Millipore (Shanghai) Trading Co., Ltd.	Shanghai	100.00	
China	Millipore China Ltd.	Hong Kong	100.00	
China	Suzhou Taizhu Technology Development Co., Ltd.	Taicang	100.00	
India	Merck Ltd.	Mumbai	51.80	
India	Merck Specialities Pvt. Ltd.	Mumbai	100.00	
India	Millipore India Pvt. Ltd.	Bangalore	100.00	
Indonesia	P.T. Merck Tbk.	Jakarta	86.65	
Israel	Inter-Lab Ltd.	Yavne	100.00	
Israel	InterPharm Industries Ltd.	Yavne	100.00	
Israel	InterPharm Laboratories Ltd.	Yavne	100.00	
Israel	Merck Serono Ltd.	Herzliya Pituach	100.00	
Malaysia	Merck Sdn Bhd	Petaling Jaya	100.00	
Malaysia	Millipore Asia Ltd., Malaysia Branch	Kuala Lumpur	100.00	
Pakistan	Merck (Pvt.) Ltd.	Karachi	75.00	26.00
Pakistan	Merck Pharmaceuticals (Pvt.) Ltd.	Karachi	75.00	
Pakistan	Merck Specialities (Pvt.) Ltd.	Karachi	100.00	

Country	Company	Registered office	Equity interest (%)	thereof Merck KGaA (%)
Philippines	Merck Inc.	Makati City	100.00	
Singapore	Merck Pte. Ltd.	Singapore	100.00	
South Korea	Merck Advanced Technologies Ltd.	Pyungtaek-shi	100.00	
South Korea	Merck Ltd.	Seoul	100.00	
Taiwan	Merck Display Technologies Ltd.	Taipei	100.00	
Taiwan	Merck Ltd.	Taipei	100.00	
Thailand	Merck Ltd.	Bangkok	45.11	
United Arab Emirates	Merck Serono Middle East FZ-LLC	Dubai	100.00	
Vietnam	Merck Vietnam Ltd.	Ho Chi Minh City	100.00	
Rest of the World				
Japan	Merck Ltd.	Tokyo	100.00	15.89
Japan	Merck Serono Co., Ltd.	Tokyo	100.00	
Egypt	Merck Ltd.	Cairo	100.00	
Mauritius	Millipore Mauritius Ltd.	Cyber City	100.00	
South Africa	Merck (Pty) Ltd.	Halfway House	100.00	
South Africa	Merck Pharmaceutical Manufacturing (Pty) Ltd.	Wadeville	100.00	
Tunisia	Merck Promotion SARL	Tunis	100.00	
Tunisia	Merck SARL	Tunis	100.00	
Australia	Merck Pty. Ltd.	Kilsyth	100.00	
Australia	Merck Serono Australia Pty. Ltd.	Sydney	100.00	
New Zealand	Merck Ltd.	Palmerston North	100.00	

II. Companies not consolidated due to secondary importance

Germany				
Germany	AB Pensionsverwaltung GmbH	Zossen	100.00	100.00
Germany	Merck 12. Allgemeine Beteiligungs-GmbH	Darmstadt	100.00	100.00
Germany	Merck 13. Allgemeine Beteiligungs-GmbH	Darmstadt	100.00	
Germany	Merck 14. Allgemeine Beteiligungs-GmbH	Darmstadt	100.00	
Germany	Merck Patent GmbH	Darmstadt	100.00	
Germany	Merck Wohnungs- und Grundstücksverwaltungsgesellschaft mbH	Darmstadt	100.00	100.00
Other European countries				
Switzerland	Asceneuron SA	Lausanne	80.00	
Switzerland	Calypso Biotech SA	Plan-les-Ouates	75.00	
Switzerland	Prexton Therapeutics SA	Plan-les-Ouates	55.00	
France	Gonnon S.A.S.	Lyon	100.00	
United Kingdom	Nature's Best Health Products Ltd.	Tunbridge Wells	100.00	

Country	Company	Registered office	Equity interest (%)	thereof Merck KGaA (%)
Netherlands	Merck Holding Netherlands B.V.	Schiphol-Rijk	100.00	100.00
Netherlands	Peer+ B.V.	Eindhoven	72.73	72.73
Portugal	Laquifa Laboratorios S.A.	Algés	100.00	
North America				
USA	TocopheRx, Inc.	Groton	65.78	
Emerging Markets				
Dominican Republic	Merck Dominicana, S.R.L.	Santo Domingo	100.00	
China	Merck Serono (Beijing) Pharmaceutical Distribution Co., Ltd.	Beijing	100.00	
Indonesia	P.T. Merck Specialities	Jakarta	100.00	
Rest of the World				
Morocco	Merck Maroc S.A.R.L.	Casablanca	100.00	
South Africa	Serono South Africa Ltd.	Johannesburg	100.00	
Australia	Biochrom Australia Pty. Ltd.	Melbourne	100.00	
Australia	Merck Australia Pty. Ltd.	Kilsyth	100.00	

III. Associates not included at equity due to secondary importance

Other European countries				
Switzerland	Vaximm AG	Basel	24.66	
Emerging Markets				
Israel	Neviah Genomics Ltd.	Yavne	69.00	7.75
Israel	QLight Nanotech Ltd.	Jerusalem	47.73	

Responsibility Statement

To the best of our knowledge, and in accordance with the applicable reporting principles, the consolidated financial statements of the Merck Group give a true and fair view of the assets, liabilities, financial position and profit or loss of the Group, and the Group 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 material opportunities and risks associated with the expected development of the Group.

Darmstadt, February 17, 2014

Karl-Ludwig Kley **Kai Beckmann** **Stefan Oschmann**

Bernd Reckmann **Matthias Zachert**