HALF-YEAR FINANCIAL REPORT

2016 Edition

SANOFI

2016
HALF-YEAR FINANCIAL REPORT

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The condensed half-year consolidated financial statements are unaudited.

1 CONDENSED HALF-YEAR CONSOLIDATED FINANCIAL STATEMENTS

CONSOLIDATED BALANCE SHEETS – ASSETS

(€ million)	Note	June 30, 2016	December 31, 2015
Property, plant and equipment	**B.2.**	9,819	9,943
Goodwill	**B.3.**	39,420	39,557
Other intangible assets	**B.3.**	11,094	12,026
Investments in associates and joint ventures	**B.5.**	2,727	2,676
Other non-current assets	**B.6.**	2,316	2,725
Deferred tax assets		5,392	4,714
Non-current assets		**70,768**	**71,641**
Inventories		7,067	6,516
Accounts receivable	**B.7.**	7,290	7,386
Other current assets		1,772	1,767
Current financial assets		130	111
Cash and cash equivalents	**B.9.**	6,076	9,148
Current assets		**22,335**	**24,928**
Assets held for sale or exchange	**B.20.**	6,010	5,752
TOTAL ASSETS		**99,113**	**102,321**

The accompanying notes on pages 11 to 41 are an integral part of the condensed half-year consolidated financial statements.

CONSOLIDATED BALANCE SHEETS — LIABILITIES AND EQUITY

(€ million)	Note	June 30, 2016	December 31, 2015
Equity attributable to equity holders of Sanofi		54,190	58,049
Equity attributable to non-controlling interests		157	161
Total equity	**B.8.**	**54,347**	**58,210**
Long-term debt	**B.9.**	14,850	13,118
Non-current liabilities relating to business combinations and to non-controlling interests	**B.11.**	1,027	1,121
Provisions and other non-current liabilities	**B.12.**	9,895	9,169
Deferred tax liabilities		2,774	2,895
Non-current liabilities		**28,546**	**26,303**
Accounts payable		3,928	3,817
Other current liabilities		8,679	9,442
Current liabilities relating to business combinations and to non-controlling interests	**B.11.**	210	130
Short-term debt and current portion of long-term debt	**B.9.**	2,427	3,436
Current liabilities		**15,244**	**16,825**
Liabilities related to assets held for sale or exchange	**B.20.**	976	983
TOTAL LIABILITIES & EQUITY		**99,113**	**102,321**

The accompanying notes on pages 11 to 41 are an integral part of the condensed half-year consolidated financial statements.

CONSOLIDATED INCOME STATEMENTS

(€ million)	Note	June 30, 2016 (6 months)[1]	June 30, 2015 (6 months)[1] [2]	December 31, 2015 (12 months) [1] [2]
Net sales	**B.19.4.**	**15,926**	**16,629**	**34,060**
Other revenues		310	353	801
Cost of sales		(4,970)	(5,268)	(10,919)
Gross profit		**11,266**	**11,714**	**23,942**
Research and development expenses		(2,514)	(2,405)	(5,082)
Selling and general expenses		(4,609)	(4,654)	(9,382)
Other operating income	**B.15.**	265	74	254
Other operating expenses	**B.15.**	(195)	(166)	(462)
Amortization of intangible assets	**B.3.**	(877)	(988)	(2,137)
Impairment of intangible assets	**B.4.**	(52)	(28)	(767)
Fair value remeasurement of contingent consideration liabilities	**B.11.**	(67)	71	53
Restructuring costs and similar items	**B.16.**	(627)	(380)	(795)
Other gains and losses, and litigation		—	—	—
Operating income		**2,590**	**3,238**	**5,624**
Financial expenses	**B.17.**	(241)	(262)	(559)
Financial income	**B.17.**	50	57	178
Income before tax and associates and joint ventures		**2,399**	**3,033**	**5,243**
Income tax expense	**B.18.**	(497)	(692)	(709)
Share of profit/(loss) of associates and joint ventures		98	(66)	(22)
Net income excluding the held-for-exchange Animal Health business		**2,000**	**2,275**	**4,512**
Net income/(loss) of the held-for-exchange Animal Health business	**B.20.**	286	109	(124)
Net income		**2,286**	**2,384**	**4,388**
Net income attributable to non-controlling interests		41	59	101
Net income attributable to equity holders of Sanofi		**2,245**	**2,325**	**4,287**
Average number of shares outstanding (million)	**B.8.7.**	1,287.6	1,307.2	1,306.2
Average number of shares outstanding after dilution (million)	**B.8.7.**	1,296.6	1,322.0	1,320.7
– Basic earnings per share (in euros)		1.74	1.78	3.28
– Basic earnings per share (in euros) excluding the held-for-exchange Animal Health business		1.52	1.70	3.38
– Diluted earnings per share (in euros)		1.73	1.76	3.25
– Diluted earnings per share (in euros) excluding the held-for-exchange Animal Health business		1.51	1.68	3.34

(1) The results of the Animal Health business are presented separately in accordance with IFRS 5 (Non-Current Assets Held for Sale and Discontinued Operations); see Notes B.1 and B.20.

(2) Due to a change in accounting presentation, VaxServe sales of non-Sanofi products are included in ***Other revenues*** from 2016 onwards. The presentation of prior period ***Net sales*** and ***Other revenues*** has been amended accordingly (see Note A.1.2.).

The accompanying notes on pages 11 to 41 are an integral part of the condensed half-year consolidated financial statements.

CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME

(€ million)	Note	June 30, 2016 (6 months)	June 30, 2015 (6 months)	December 31, 2015 (12 months)
Net income		**2,286**	**2,384**	**4,388**
Attributable to equity holders of Sanofi		*2,245*	*2,325*	*4,287*
Attributable to non-controlling interests		*41*	*59*	*101*
Other comprehensive income:				
. Actuarial gains/(losses)	**B.8.8.**	(924)	772	652
. Tax effects	**B.8.8.**	253	(180)	(187)
Sub-total: items not subsequently reclassifiable to profit or loss (a)		**(671)**	**592**	**465**
. Available-for-sale financial assets		(422)	194	(37)
. Cash flow hedges		—	(6)	(3)
. Change in currency translation differences	**B.8.8.**	(37)	1,858	1,915
. Tax effects	**B.8.8.**	83	(69)	20
Sub-total: items subsequently reclassifiable to profit or loss (b)		**(376)**	**1,977**	**1,895**
Other comprehensive income for the period, net of taxes (a+b)		**(1,047)**	**2,569**	**2,360**
Comprehensive income		**1,239**	**4,953**	**6,748**
Attributable to equity holders of Sanofi		*1,203*	*4,887*	*6,641*
Attributable to non-controlling interests		*36*	*66*	*107*

The accompanying notes on pages 11 to 41 are an integral part of the condensed half-year consolidated financial statements.

CONSOLIDATED STATEMENTS OF CHANGES IN EQUITY

(€ million)	Share capital	Additional paid-in capital and retained earnings	Treasury shares	Stock options and other share-based payment	Other comprehensive income [1]	Attributable to equity holders of Sanofi	Non-controlling interests	Total equity
Balance at January 1, 2015	**2,639**	**52,553**	**(694)**	**2,599**	**(977)**	**56,120**	**148**	**56,268**
Other comprehensive income for the period	—	592	—	—	1,970	2,562	7	2,569
Net income for the period	—	2,325	—	—	—	2,325	59	2,384
Comprehensive income for the period	**—**	**2,917**	**—**	**—**	**1,970**	**4,887**	**66**	**4,953**
Dividend paid out of 2014 earnings (€2.85 per share)	—	(3,694)	—	—	—	(3,694)	—	(3,694)
Payment of dividends to non-controlling interests	—	—	—	—	—	—	(60)	(60)
Share repurchase program [2]	—	—	(1,244)	—	—	(1,244)	—	(1,244)
Reduction in share capital [2]	(37)	(1,453)	1,490	—	—	—	—	—
Share-based payment plans:								
. Exercise of stock options	14	448	—	—	—	462	—	462
. Issuance of restricted shares	6	(6)	—	—	—	—	—	—
. Proceeds from sale of treasury shares on exercise of stock options	—	—	1	—	—	1	—	1
. Value of services obtained from employees	—	—	—	84	—	84	—	84
. Tax effects of the exercise of stock options	—	—	—	20	—	20	—	20
Changes in non-controlling interests without loss of control	—	(18)	—	—	—	(18)	2	(16)
Balance at June 30, 2015	**2,622**	**50,747**	**(447)**	**2,703**	**993**	**56,618**	**156**	**56,774**
Other comprehensive income for the period	—	(127)	—	—	(81)	(208)	(1)	(209)
Net income for the period	—	1,962	—	—	—	1,962	42	2,004
Comprehensive income for the period	**—**	**1,835**	**—**	**—**	**(81)**	**1,754**	**41**	**1,795**
Payment of dividends to non-controlling interests	—	—	—	—	—	—	(50)	(50)
Share repurchase program [2]	—	—	(537)	—	—	(537)	—	(537)
Reduction in share capital [2]	(15)	(671)	686	—	—	—	—	—
Share-based payment plans:								
. Exercise of stock options	4	107	—	—	—	111	—	111
. Value of services obtained from employees	—	—	—	121	—	121	—	121
. Tax effects of the exercise of stock options	—	—	—	(10)	—	(10)	—	(10)
Change in non-controlling interests without loss of control	—	(8)	—	—	—	(8)	14	6
Balance at December 31, 2015	**2,611**	**52,010**	**(298)**	**2,814**	**912**	**58,049**	**161**	**58,210**

(€ million)	Share capital	Additional paid-in capital and retained earnings	Treasury shares	Stock options and other share-based payment	Other comprehensive income [1]	Attributable to equity holders of Sanofi	Non-controlling interests	Total equity
Balance at December 31, 2015	**2,611**	**52,010**	**(298)**	**2,814**	**912**	**58,049**	**161**	**58,210**
Other comprehensive income for the period	—	(671)	—	—	(371)	(1,042)	(5)	(1,047)
Net income for the period	—	2,245	—	—	—	2,245	41	2,286
Comprehensive income for the period	**—**	**1,574**	**—**	**—**	**(371)**	**1,203**	**36**	**1,239**
Dividend paid out of 2015 earnings (€2.93 per share)	—	(3,759)	—	—	—	(3,759)	—	(3,759)
Payment of dividends to non-controlling interests	—	—	—	—	—	—	(54)	(54)
Share repurchase program [2]	—	—	(1,402)	—	—	(1,402)	—	(1,402)
Reduction in share capital [2]	(45)	(1,655)	1,700	—	—	—	—	—
Share-based payment plans:								
. Exercise of stock options	1	16	—	—	—	17	—	17
. Issuance of restricted shares	7	(7)	—	—	—	—	—	—
. Value of services obtained from employees	—	—	—	117	—	117	—	117
. Tax effects of the exercise of stock options	—	—	—	(14)	—	(14)	—	(14)
Change in non-controlling interests without loss of control	—	(21)	—	—	—	(21)	14	(7)
Balance at June 30, 2016	**2,574**	**48,158**	**—**	**2,917**	**541**	**54,190**	**157**	**54,347**

(1) See Note B.8.8.

(2) See Notes B.8.2. and B.8.3.

The accompanying notes on pages 11 to 41 are an integral part of the condensed half-year consolidated financial statements.

CONSOLIDATED STATEMENTS OF CASH FLOWS

(€ million)	Note	June 30, 2016 (6 months) [1]	June 30, 2015 (6 months) [1]	December 31, 2015 (12 months)[1]
Net income attributable to equity holders of Sanofi		**2,245**	**2,325**	**4,287**
Net (income)/loss of the held-for-exchange Animal Health business		(286)	(109)	124
Non-controlling interests, excluding BMS [2]		(3)	11	7
Share of undistributed earnings of associates and joint ventures		(57)	114	115
Depreciation, amortization and impairment of property, plant and equipment and intangible assets		1,572	1,693	4,276
Gains and losses on disposals of non-current assets, net of tax [3]		(27)	(44)	(136)
Net change in deferred taxes		(477)	(569)	(1,253)
Net change in provisions [4]		(107)	86	(13)
Cost of employee benefits (stock options and other share-based payments)		111	79	193
Unrealized (gains)/losses recognized in income		(122)	(267)	(365)
Operating cash flow before changes in working capital and excluding the held-for-exchange Animal Health business		**2,849**	**3,319**	**7,235**
(Increase)/decrease in inventories		(514)	(479)	(466)
(Increase)/decrease in accounts receivable		103	(156)	(493)
Increase/(decrease) in accounts payable		74	121	241
Net change in other current assets, current financial assets and other current liabilities		(119)	308	1,773
Net cash provided by/(used in) operating activities excluding the held-for-exchange Animal Health business[5]		**2,393**	**3,113**	**8,290**
Net cash provided by/(used in) operating activities of the held-for-exchange Animal Health business		**211**	**292**	**630**
Acquisitions of property, plant and equipment and intangible assets	**B.2. – B.3.**	(1,200)	(771)	(2,772)
Acquisitions of investments in consolidated undertakings, net of cash acquired [6]	**B.1.**	(345)	(47)	(220)
Acquisitions of available-for-sale financial assets		(123)	(113)	(142)
Proceeds from disposals of property, plant and equipment, intangible assets and other non-current assets, net of tax [7]		264	92	211
Net change in loans and other financial assets		(10)	(10)	(88)
Net cash provided by/(used in) investing activities excluding the held-for-exchange Animal Health business		**(1,414)**	**(849)**	**(3,011)**
Net cash provided by/(used in) investing activities of the held-for-exchange Animal Health business		**(56)**	**(178)**	**(246)**
Issuance of Sanofi shares	**B.8.1.**	17	462	573
Dividends paid:				
. to shareholders of Sanofi		(3,759)	(3,694)	(3,694)
. to non-controlling interests, excluding BMS [2]		(9)	(7)	(12)
Transactions with non-controlling interests, other than dividends		—	(5)	(8)
Additional long-term debt contracted	**B.9.1.**	1,787	2	2,253
Repayments of long-term debt	**B.9.1.**	(2,582)	(456)	(708)
Net change in short-term debt		1,856	(142)	(199)
Acquisition of treasury shares	**B.8.2.**	(1,404)	(1,244)	(1,784)
Disposals of treasury shares, net of tax		—	1	1
Net cash provided by/(used in) financing activities excluding the held-for-exchange Animal Health business		**(4,094)**	**(5,083)**	**(3,578)**
Net cash provided by/(used in) financing activities of the held-for-exchange Animal Health business		**(9)**	**23**	**(23)**

Impact of exchange rates on cash and cash equivalents		**(103)**	**42**	**(232)**
Impact on cash and cash equivalents of the reclassification of the Animal Health business to "Assets held for sale or exchange" [8]	**B.20.**	**—**	**—**	**(23)**
Net change in cash and cash equivalents excluding the Animal Health business		**(3,218)**	**(2,777)**	**1,469**
Net change in cash and cash equivalents of the Animal Health business		**146**	**137**	**361**
Net change in cash and cash equivalents		**(3,072)**	**(2,640)**	**1,807**
Cash and cash equivalents, beginning of period		**9,148**	**7,341**	**7,341**
Cash and cash equivalents, end of period	**B.9.**	**6,076**	**4,701**	**9,148**

(1) *Cash flows of the Animal Health business are presented separately in accordance with IFRS 5 (Non-Current Assets Held for Sale and Discontinued Operations).*

(2) *See Note C.2. to the financial statements for the year ended December 31, 2015.*

(3) *Includes available-for-sale financial assets.*

(4) *This line item includes contributions paid to pension funds (see Note B.12.).*

(5) *Including:*

- Income tax paid	(1,180)	(1,028)	(1,706)
- Interest paid (excluding cash flows on derivative instruments used to hedge debt)	(180)	(183)	(404)
- Interest received (excluding cash flows on derivative instruments used to hedge debt)	28	30	57
- Dividends received from non-consolidated entities	3	5	9

(6) *This line item includes payments made in respect of contingent consideration identified and recognized as a liability in business combinations.*

(7) *This line item includes proceeds from disposals of investments in consolidated entities and of other non-current financial assets.*

(8) *Cash and cash equivalents of the Animal Health business are presented within the line item* ***Assets held for sale or exchange*** *for 2015 and 2016.*

The accompanying notes on pages 11 to 41 are an integral part of the condensed half-year consolidated financial statements.

NOTES TO THE CONDENSED HALF-YEAR CONSOLIDATED FINANCIAL STATEMENTS AS OF JUNE 30, 2016

INTRODUCTION

Sanofi the parent company, together with its subsidiaries (collectively "Sanofi" or the Company), is a global healthcare leader engaged in the research, development and marketing of therapeutic solutions focused on patient needs.

Sanofi is listed in Paris (Euronext: SAN) and New York (NYSE: SNY).

The condensed consolidated financial statements for the six months ended June 30, 2016 were reviewed by the Sanofi Board of Directors at the Board meeting on July 28, 2016.

A/ Basis of preparation of the half-year financial statements and accounting policies

A.1. INTERNATIONAL FINANCIAL REPORTING STANDARDS (IFRS)

The half-year consolidated financial statements have been prepared and presented in condensed format in accordance with IAS 34 (Interim Financial Reporting). The accompanying notes therefore relate to significant events and transactions of the period, and should be read in conjunction with the consolidated financial statements for the year ended December 31, 2015.

The accounting policies used in the preparation of the consolidated financial statements as of June 30, 2016 comply with international financial reporting standards (IFRS) as endorsed by the European Union and as issued by the International Accounting Standards Board (IASB). The accounting policies applied as of June 30, 2016 are identical to those described in the notes to the published consolidated financial statements as of December 31, 2015.

IFRS as endorsed by the European Union as of June 30, 2016 are available via the following web link:

http://ec.europa.eu/finance/company-reporting/standards-interpretations/index_en.htm

A.1.1. New standards and amendments issued in 2016

During the first half of 2016 the IASB issued IFRS 16 (Leases), effective for annual periods beginning on or after January 1, 2019, which aligns the accounting treatment of operating leases with that already applied to finance leases. The IASB also issued clarifications to IFRS 15 (Revenue from Contracts with Customers). The amendments to IFRS 15, which was originally issued in 2014, do not alter the underlying principles of the standard, but clarify the way in which those principles should be applied. The issues clarified by the amendments are how to (i) identify a performance obligation (the promise to transfer a good or a service to a customer) in a contract; (ii) determine whether a company is a principal (the provider of a good or service) or an agent (responsible for arranging for the good or service to be provided); and (iii) determine whether the revenue from granting a license of intellectual property should be recognized at a point in time or over time. Also during the first half of 2016, the IASB issued amendments to IAS 12 (Income Taxes), entitled "Recognition of Deferred Tax Assets for Unrealized Losses". IAS 12 deals with the recognition and measurement of deferred tax assets and liabilities. The amendments clarify how to account for deferred tax assets related to unrealized losses on debt instruments measured at fair value, to address diversity in practice.

A.1.2. VaxServe revenues

VaxServe is a U.S.-based Vaccines segment entity, whose activities include the distribution within the United States of vaccines and other products manufactured by third parties.

In order to improve the clarity of the financial information published by the Company, with effect from January 1, 2016 VaxServe sales of non-Sanofi products are presented within the line item ***Other revenues***. Previously, all VaxServe sales were recognized within the income statement line item ***Net sales***.

The impact of this presentational change on comparative periods is a reclassification from ***Net sales*** to ***Other revenues*** of €210 million for the first half of 2015 and €482 million for the year ended December 31, 2015.

A.2. USE OF ESTIMATES

The preparation of financial statements requires management to make reasonable estimates and assumptions based on information available at the date of the finalization of the financial statements. Those estimates and assumptions may affect the reported amounts of assets, liabilities, revenues and expenses in the financial statements, and disclosures of contingent assets and contingent liabilities as at the date of the review of the financial statements. Examples of estimates and assumptions include:

- amounts deducted from sales for projected sales returns, chargeback incentives, rebates and price reductions;
- impairment of property, plant and equipment, intangible assets, and investments in associates and joint ventures;
- the valuation of goodwill and the valuation and useful life of acquired intangible assets;
- the amount of post-employment benefit obligations;
- the amount of provisions for restructuring, litigation, tax risks and environmental risks;
- the amount of deferred tax assets resulting from tax losses available for carry-forward and deductible temporary differences;
- the measurement of contingent consideration; and,
- which exchange rate to use at the end of the reporting period for the translation of accounts denominated in foreign currencies, and of financial statements of foreign subsidiaries, in cases where more than one exchange rate exists for a given currency.

Management is also required to exercise judgment in assessing whether the criteria specified in IFRS 5 (Non-Current Assets Held for Sale and Discontinued Operations) are met, and hence whether a non-current asset or asset group should be classified as “held for sale or exchange” and whether a discontinued operation should be reported separately. Such assessments are reviewed at the end of each reporting period based on the facts and circumstances.

For half-year financial reporting purposes, and as allowed under IAS 34, Sanofi has determined income tax expense on the basis of an estimate of the effective tax rate for the full financial year. This rate is applied to business operating income plus financial income and minus financial expenses, and before (i) the share of profit/loss of associates and joint ventures and (ii) net income attributable to non-controlling interests. The estimated full-year effective tax rate is based on the tax rates that will be applicable to projected pre-tax profits or losses arising in the various tax jurisdictions in which Sanofi operates.

Actual results could differ from these estimates.

A.3. SEASONAL TRENDS

Sanofi’s activities are not subject to significant seasonal fluctuations.

A.4. FAIR VALUE OF FINANCIAL INSTRUMENTS

Under IFRS 13, fair value measurements must be classified using a hierarchy based on the inputs used to measure the fair value of the instrument. This hierarchy has three levels:

- level 1: quoted prices in active markets for identical assets or liabilities (without modification or repackaging);
- level 2: quoted prices in active markets for similar assets and liabilities, or valuation techniques in which all important inputs are derived from observable market data;
- level 3: valuation techniques in which not all important inputs are derived from observable market data.

The table below sets forth the principles used to measure the fair value of the principal financial assets and liabilities recognized by Sanofi in its balance sheet:

Note	Type of financial instrument	Measurement principle	Level in fair value hierarchy	Valuation technique	Method used to determine fair value			
						Market data		
					Valuation model	Exchange rate	Interest rate	Volatility
B.6.	Available-for-sale financial assets (quoted equity securities)	Fair value	1	Market value	Quoted market price	N/A		
B.6.	Available-for-sale financial assets (unquoted debt securities)	Fair value	2	Income approach	Present value of future cash flows	N/A	Mid swap + z spread for bonds of comparable risk and maturity	N/A
B.6.	Long-term loans and advances and other non-current receivables	Amortized cost	N/A	N/A	The amortized cost of long-term loans and advances and other non-current receivables at the end of the reporting period is not materially different from their fair value.			
B.6.	Financial assets recognized under the fair value option (1)	Fair value	1	Market value	Net asset value	N/A		
B.10.	Forward currency contracts	Fair value	2	Income approach	Present value of future cash flows	ECB Fixing	< 1 year: Mid Money market > 1 year: Mid Zero Coupon	N/A
B.10.	Currency options	Fair value	2		Options with no knock-out feature: Garman & Kohlhagen Knock-out options: Merton, Reiner & Rubinstein	ECB Fixing	< 1 year: Mid Money Market > 1 year: Mid Zero Coupon	Mid in-the-money
B.10.	Interest rate swaps	Fair value	2		Present value of future cash flows	N/A	< 1 year: Mid Money Market and LIFFE interest rate futures: > 1 year: Mid Zero Coupon	N/A
B.10.	Cross-currency swaps	Fair value	2		Present value of future cash flows	ECB Fixing	< 1 year: Mid Money Market and LIFFE interest rate futures: > 1 year: Mid Zero Coupon	N/A
B.9.	Investments in mutual funds	Fair value	1	Market value	Net asset value	N/A		
B.9.	Negotiable debt instruments, commercial paper, instant access deposits and term deposits	Amortized cost	N/A	N/A	Because these instruments have a maturity of less than 3 months, amortized cost is regarded as an acceptable approximation of fair value as disclosed in the notes to the consolidated financial statements.			
B.9.	Debt	Amortized cost (2)	N/A	N/A	In the case of debt with a maturity of less than 3 months, amortized cost is regarded as an acceptable approximation of fair value as reported in the notes to the consolidated financial statements. For debt with a maturity of more than 3 months, fair value as reported in the notes to the consolidated financial statements is determined either by reference to quoted market prices at the end of the reporting period (quoted instruments) or by discounting the future cash flows based on observable market data at the end of the reporting period (unquoted instruments).			
B.11.	Liabilities relating to business combinations and to non-controlling interests (CVRs)	Fair value	1	Market value	Quoted market price	N/A		
B.11.	Liabilities relating to business combinations and to non-controlling interests (other than CVRs)	Fair value (3)	3	Income approach	Under IAS 32, contingent consideration payable in a business combination is a financial liability. The fair value of such liabilities is determined by adjusting the contingent consideration at the end of the reporting period using the method described in Note B.11.			

(1) These assets are held to fund a deferred compensation plan offered to certain employees.

(2) In the case of debt designated as a hedged item in a fair value hedging relationship, the carrying amount in the consolidated balance sheet includes changes in fair value attributable to the hedged risk(s).

(3) For business combinations completed prior to application of the revised IFRS 3, contingent consideration is recognized when payment becomes probable (see Note B.3.1. to the consolidated financial statements for the year ended December 31, 2015).

A.5. CONSOLIDATION AND FOREIGN CURRENCY TRANSLATION OF THE FINANCIAL STATEMENTS OF VENEZUELAN SUBSIDIARIES

In 2016, Sanofi continues to account for subsidiaries based in Venezuela using the full consolidation method, on the basis that the criteria for control in IFRS 10 (Consolidated Financial Statements) are still met.

Until the start of 2016, the Venezuelan foreign exchange system consisted of three exchange rates: (i) the "CENCOEX" rate, set at a fixed rate of 6.3 bolivars per U.S. dollar and restricted to essential goods; (ii) an administered exchange rate (the "SICAD" rate), which was 13.5 bolivars per U.S. dollar as of December 31, 2015 and applied to certain specific business sectors; and (iii) the "SIMADI" rate, in the region of 200 bolivars per U.S. dollar, applied to specified transactions. In preparing the consolidated financial statements, the financial statements of the Venezuelan subsidiaries were translated into euros using the "SICAD" official exchange rate, which was the estimated rate at which the profits generated by the operations of those subsidiaries would be remitted to the parent.

In February 2016, the Venezuelan government announced a further reform to the foreign exchange system, which now consists of two categories:

- a first category for essential goods to which is applied the "DIPRO" rate, set at a fixed exchange rate of 10 bolivars per U.S. dollar;
- a second category to which is applied the "DICOM" rate, which is a floating exchange rate against the U.S. dollar and stood at 628 bolivars per U.S. dollar as of June 30, 2016.

In light of these changes to the foreign exchange system, recent economic and political developments and the scarcity of U.S. dollar cash in Venezuela, Sanofi has changed the exchange rate used to translate its Venezuelan operations and has applied the DICOM rate starting January 1, 2016. This change led to the recognition of a foreign exchange loss of €102 million in the first half of 2016. Adoption of this new rate also means that Sanofi's Venezuelan subsidiaries contributed €9 million to net sales in the first half of 2016 (versus €399 million in the first half of 2016) and held cash of €6 million as of June 30, 2016 (versus €95 million as of December 31, 2015). The net assets of these subsidiaries as of June 30, 2016 were immaterial.

B/ Significant information for the first half of 2016

B.1. IMPACT OF CHANGES IN THE SCOPE OF CONSOLIDATION

Acquisitions and investments in joint ventures

During the first half of 2016, Sanofi acquired further shares in the biopharmaceutical company Regeneron Pharmaceuticals, Inc. at a cost of €115 million. As of June 30, 2016, Sanofi's investment in Regeneron had a carrying amount of €2,386 million (see Note B.5.) and represented an equity interest of 22.2% (compared with 22.1% as of December 31, 2015).

Also during the first half of 2016, Sanofi made an equity injection of $248 million into the joint venture formed with Verily (formerly Google Life Sciences) under the August 2015 collaboration agreement in diabetes. This investment is accounted for by the equity method (see Note B.5).

Exchange of the Animal Health business

Further to the exclusivity agreement of December 2015 on a future exchange of Sanofi's Animal Health business (Merial) and Boehringer Ingelheim's consumer healthcare business, the two groups announced on June 27, 2016 that they had signed contracts to secure this strategic transaction. Completion of the transaction is regarded as highly probable. Consequently, all assets of the Animal Health business included in the exchange, and all liabilities directly related to those assets, have since December 31, 2015 been classified in the line items ***Assets held for sale or exchange*** and ***Liabilities related to assets held for sale or exchange***, respectively, in the consolidated balance sheet.

Because the Animal Health business is an operating segment of Sanofi, it qualifies as a discontinued operation under IFRS 5. Consequently, the net income or loss from the Animal Health business for 2016 and for the comparative periods presented is shown separately in the consolidated income statement within the line item ***Net income/(loss) of the held-for-exchange Animal Health business***.

For detailed information about the contribution of the Animal Health business to the consolidated financial statements refer to Note B.20.

Proposed dismantling of the Sanofi Pasteur MSD joint venture

On March 8, 2016, Sanofi Pasteur and MSD (known as Merck in the United States and Canada) announced their intention to end Sanofi Pasteur MSD, their joint venture in vaccines, in order to pursue their own distinct growth strategies in Europe. Completion of this proposed transaction is regarded as highly probable. Consequently, the investment in the Sanofi Pasteur MSD joint venture has been reclassified to the line item ***Assets held for sale or exchange***, and ceased to be accounted for by the equity method as from the date the proposal was announced (see Notes B.5. and B.19.).

B.2. PROPERTY, PLANT AND EQUIPMENT

Acquisitions of property, plant and equipment during the first half of 2016 amounted to €523 million. These included €415 million of investments in the Pharmaceuticals segment, primarily in industrial facilities (€323 million). The Vaccines segment accounted for €108 million of investments during the period.

Impairment losses of €18 million were charged against property, plant and equipment in the first half of 2016, primarily in the Pharmaceuticals segment.

Firm orders for property, plant and equipment stood at €551 million as of June 30, 2016.

B.3. GOODWILL AND OTHER INTANGIBLE ASSETS

Movements in **other intangible assets** during the first half of 2016 were as follows:

(€ million)	Acquired R&D	Products, trademarks and other rights	Software	Total other intangible assets
Gross value at January 1, 2016	**3,854**	**52,002**	**1,231**	**57,087**
Acquisitions and other increases	46	24	55	125
Disposals and other decreases	(39)	(56)	(37)	(132)
Currency translation differences	(10)	(150)	(1)	(161)
Transfers [1]	(34)	24	(6)	(16)
Gross value at June 30, 2016	**3,817**	**51,844**	**1,242**	**56,903**
Accumulated amortization & impairment at January 1, 2016	**(2,301)**	**(41,888)**	**(872)**	**(45,061)**
Amortization expense	—	(886)	(51)	(937)
Impairment losses, net of reversals [2]	(19)	(33)	—	(52)
Disposals and other decreases	38	56	36	130
Currency translation differences	4	105	—	109
Transfers	4	(2)	—	2
Accumulated amortization & impairment at June 30, 2016	**(2,274)**	**(42,648)**	**(887)**	**(45,809)**
Carrying amount at December 31, 2015	1,553	10,114	359	12,026
Carrying amount at June 30, 2016	**1,543**	**9,196**	**355**	**11,094**

(1) The "Transfers" line mainly relates to acquired R&D that came into commercial use during the period and is being amortized from the date of marketing approval.
(2) See Note B.4.

Acquisitions of other intangible assets (excluding software) during the first half of 2016 amounted to €70 million.

"Products, trademarks and other rights" (excluding items relating to the Animal Health business, reported within the line item ***Assets held for sale or exchange***, see Note B.20.), mainly comprise:

- marketed products, with a carrying amount of €8.5 billion as of June 30, 2016 (versus €9.4 billion as of December 31, 2015) and a weighted average amortization period of approximately 10 years;
- trademarks, with a carrying amount of €0.2 billion as of June 30, 2016 (compared with €0.3 billion as of December 31, 2015) and a weighted average amortization period of approximately 13 years.

The table below provides information about the principal marketed products, which represented approximately 90% of the carrying amount of that item as of June 30, 2016:

(€ million)	Gross value	Accumulated amortization & impairment	Carrying amount June 30, 2016	Amortization period (years)[1]	Residual amortization period (years)[2]	Carrying amount December 31, 2015
Genzyme	10,805	(5,495)	5,310	10	7	5,759
Aventis	34,903	(33,581)	1,322	9	4	1,548
Chattem	1,342	(432)	910	22	17	956
Zentiva	905	(750)	155	9	4	187
Total: principal marketed products	**47,955**	**(40,258)**	**7,697**			**8,450**

(1) Weighted averages. The amortization periods for these products vary between 1 and 25 years.
(2) Weighted averages.

Goodwill amounted to €39,420 million as of June 30, 2016, compared with €39,557 million as of December 31, 2015. The change during the period was due to currency translation differences.

B.4. IMPAIRMENT OF INTANGIBLE ASSETS

The results of impairment tests conducted in accordance with IAS 36 (Impairment of Assets) as of June 30, 2016 led to the recognition of a net impairment loss of €52 million. This relates to discontinued development projects (€19 million) and to marketed products (€33 million).

B.5. INVESTMENTS IN ASSOCIATES AND JOINT VENTURES

Investments in associates and joint ventures are accounted for by the equity method. For definitions of the terms "associate" and "joint venture", refer to Note B.1. to the consolidated financial statements for the year ended December 31, 2015.

Investments in associates and joint ventures comprise:

(€ million)	% interest	June 30, 2016	December 31, 2015
Regeneron Pharmaceuticals, Inc.	22.2	2,386	2,245
DM LLC [(1)]	50.0	184	—
Sanofi Pasteur MSD [(1)/(2)]	50.0	—	252
Infraserv GmbH & Co. Höchst KG [(1)]	31.2	69	85
Entities and companies managed by Bristol-Myers Squibb [(3)]	49.9	43	43
Other investments	—	45	51
Total		**2,727**	**2,676**

(1) Joint ventures.

(2) Reclassified to ***Assets held for sale or exchange*** in accordance with IFRS 5 (see Note B.1.).

(3) Under the terms of the agreements with BMS (see Note C.2. to the consolidated financial statements for the year ended December 31, 2015), our share of the net assets of entities majority-owned by BMS is recorded in ***Investments in associates and joint ventures***.

As of June 30, 2016, the market value of Sanofi's investment in Regeneron was €7,367 million (based on a quoted stock market price of $349.23 per share as of that date), versus €11,523 million as of December 31, 2015 (based on a quoted stock market price of U.S. $542.87 per share as of that date).

The financial statements include arm's length commercial transactions between Sanofi and some associates and joint ventures that are classified as related parties. The principal transactions and balances with related parties are summarized below:

(€ million)	June 30, 2016	June 30, 2015	December 31, 2015
Sales [(1)]	28	55	218
Royalties [(1)]	67	11	91
Accounts receivable	63	83	81
Purchases and other expenses (including research expenses) [(1)]	392	329	762
Accounts payable	179	234	196
Other liabilities	66	14	10

(1) In the six months ended June 30, 2016, these items include transactions with Sanofi Pasteur MSD from January 1 through March 8, 2016, the date on which it was announced that the joint venture would be dismantled (see Note B.1.).

B.6. OTHER NON-CURRENT ASSETS

Other non-current assets comprise:

(€ million)	June 30, 2016	December 31, 2015
Available-for-sale financial assets [1]	1,202	1,609
Pre-funded pension obligations	49	49
Long-term loans and advances and other non-current receivables	627	671
Financial assets recognized under the fair value option	286	276
Derivative financial instruments	152	120
Total	**2,316**	**2,725**

(1) Includes the investment in Alnylam Pharmaceuticals Inc. As of June 30, 2016, the aggregate amount of the successive acquisition prices paid for the equity interest was €788 million. The market value was €513 million at that date.

B.7. ACCOUNTS RECEIVABLE

An analysis of ***Accounts receivable*** is set forth below:

(€ million)	June 30, 2016	December 31, 2015
Gross value	7,492	7,553
Allowances	(202)	(167)
Carrying amount	**7,290**	**7,386**

The impact of allowances against accounts receivable in the first half of 2016 was a net expense of €22 million (versus €4 million for the first half of 2015).

The table below shows the ageing profile of overdue accounts receivable, based on gross value:

(€ million)	Overdue accounts Gross value	Overdue <1 month	Overdue 1 to 3 months	Overdue 3 to 6 months	Overdue 6 to 12 months	Overdue > 12 months
June 30, 2016	746	174	145	163	66	198
December 31, 2015	677	171	147	117	83	159

Amounts overdue by more than one month relate mainly to public-sector customers.

Some Sanofi subsidiaries have assigned receivables to factoring companies or banks, without recourse. The amount of receivables that met the conditions described in Note B.8.7. to the consolidated financial statements for the year ended December 31, 2015 and hence were derecognized was €288 million as of June 30, 2016 (versus €414 million as of December 31, 2015). The residual guarantees relating to these transfers were immaterial as of June 30, 2016.

B.8. CONSOLIDATED SHAREHOLDERS' EQUITY

B.8.1. Share capital

As of June 30, 2016, the share capital was €2,574,211,426 and consisted of 1,287,105,713 shares (the total number of shares outstanding) with a par value of €2.

Treasury shares held by Sanofi are as follows:

	Number of shares (million)	% of share capital for the period
June 30, 2016	0.1	0.01%
December 31, 2015	4.0	0.30%
June 30, 2015	4.9	0.37%
January 1, 2015	9.5	0.72%

A total of 307,244 shares were issued in the first half of 2016 as a result of the exercise of Sanofi stock subscription options.

In addition, a total of 3,661,059 shares vested and were issued under restricted share plans in the first half of 2016.

B.8.2. Repurchase of Sanofi shares

On May 4, 2016, the Annual General Meeting of Sanofi shareholders approved a share repurchase program for a period of 18 months. No shares were repurchased under that program during May or June 2016.

On May 4, 2015, the Annual General Meeting of Sanofi shareholders approved a share repurchase program for a period of 18 months. Under that program (and that program alone), Sanofi repurchased 18,764,233 of its own shares during the first half of 2016 for a total amount of €1,402 million.

In addition, transactions carried out under the liquidity contract in the six months ended June 30, 2016 reduced equity by €0.2 million.

B.8.3. Reductions in share capital

On April 28, 2016, the Board of Directors approved the cancellation of 22,561,090 treasury shares (€1,700 million including additional paid-in capital), representing 1.75% of the share capital as of June 30, 2016.

The cancellations had no effect on shareholders' equity.

B.8.4. Restricted share plans

Restricted share plans are accounted for in accordance with the policies described in Note B.24.3. to the consolidated financial statements for the year ended December 31, 2015. The principal features of the plan awarded in 2016 are set forth below:

Type of plan	2016 Performance share plan
Date of Board meeting approving the plan	May 4, 2016
Total number of shares awarded subject to a 3-year service period	4,097,925
Fair value per share awarded [(1)]	61.06
Fair value of plan at the date of grant (€ million)	**250**

(1) Quoted market price per share at the date of grant, adjusted for dividends expected during the vesting period.

The total expense recognized for all restricted and performance share plans in the six months ended June 30, 2016 was €97 million, versus €81 million in the comparable period of 2015.

The number of restricted shares not yet fully vested as of June 30, 2016 was 13,682,913, comprising 4,097,925 under the 2016 plans; 3,707,390 under the 2015 plans; 3,625,610 under the 2014 plans; and 2,251,988 under the 2013 plans.

On March 5, 2014, the Board of Directors approved a performance share unit (PSU) plan, vesting at the end of a three-year service period and subject to performance conditions.

Because PSUs are cash-settled instruments, they are measured at the grant date, at the end of each reporting period, and at the settlement date. The fair value of each PSU awarded corresponds to the market price of the share at the end of the reporting period, adjusted for dividends expected during the residual vesting period.

The fair value of the PSU plan (based on vested rights and inclusive of social security charges) as of June 30, 2016, and recognized as a liability as of that date, was €26 million.

B.8.5. Capital increases

On March 3, 2016, the Sanofi Board of Directors approved an employee share ownership plan in the form of a capital increase reserved for employees. Employees were offered the opportunity to subscribe to the capital increase at a price of €57.25 per share, representing 80% of the average of the quoted market prices of Sanofi shares during the 20 trading days preceding June 8, 2016.

The subscription period was open from June 13 through June 24, 2016. The plan resulted in a total of 1,756,972 shares being subscribed for, and the issuance of a further 47,014 shares as an employer's contribution under the terms of the plan.

An expense of €17 million was recognized for this plan in the six months ended June 30, 2016, of which €3 million was for the employer's contribution.

The shares were issued, and the capital increase recognized in equity, on July 22, 2016 (see Note C.).

No employee share ownership plans were awarded in 2015.

B.8.6. Stock option plans

On May 4, 2016, the Board of Directors granted 402,750 stock subscription options at an exercise price of €75.90 per share. The vesting period is four years, and the plan expires on May 4, 2020.

The following assumptions were used in determining the fair value of the plan:

- dividend yield: 4.51%;
- plan maturity: 7 years;
- volatility of Sanofi shares, computed on a historical basis: 24.54%;
- risk-free interest rate: 0.056%.

On that basis, the fair value of one option is €6.60, and the fair value of the stock subscription option plan awarded in June 2016 is €3 million. That amount is recognized as an expense over the vesting period, with the opposite entry recognized directly in equity.

The total expense recognized for all stock options in the six months ended June 30, 2016 was €3 million, the same amount as in the comparable period of 2015.

The table below provides summary information about options outstanding and exercisable as of June 30, 2016:

	Outstanding			Exercisable	
Range of exercise prices per share	Number of options	Average residual life (years)	Weighted average exercise price per share (€)	Number of options	Weighted average exercise price per share (€)
From €30.00 to €40.00 per share	144,831	2.75	38.08	144,831	38.08
From €40.00 to €50.00 per share	2,149,611	2.67	45.09	2,149,611	45.09
From €50.00 to €60.00 per share	4,507,468	4.08	54.04	4,507,468	54.04
From €60.00 to €70.00 per share	6,562,114	0.97	64.54	6,562,114	64.54
From €70.00 to €80.00 per share	1,993,399	7.80	73.56	—	—
From €80.00 to €90.00 per share	433,500	8.99	89.38	—	—
Total	**15,790,923**			**13,364,024**	

B.8.7. Number of shares used to compute diluted earnings per share

Diluted earnings per share is computed using the number of shares outstanding plus stock options with dilutive effect and restricted shares.

(million)	June 30, 2016	June 30, 2015	December 31, 2015
Average number of shares outstanding	1,287.6	1,307.2	1,306.2
Adjustment for stock options with dilutive effect	2.8	6.6	6.0
Adjustment for restricted shares	6.2	8.2	8.5
Average number of shares outstanding used to compute diluted earnings per share	**1,296.6**	**1,322.0**	**1,320.7**

As of June 30, 2016, 2.4 million stock options were not taken into account in computing diluted earnings per share because they had no dilutive effect, versus 0.4 million as of December 31, 2015 and 0.4 million as of June 30, 2015.

B.8.8. Other comprehensive income

Movements in other comprehensive income are shown below:

(€ million)	June 30 2016 (6 months)	June 30, 2015 (6 months)	December 31, 2015 (12 months)
Balance, beginning of period	**45**	**(2,315)**	**(2,315)**
Attributable to equity holders of Sanofi	*68*	*(2,287)*	*(2,287)*
Attributable to non-controlling interests	*(23)*	*(28)*	*(28)*
Actuarial gains/(losses):			
· Impact of asset ceiling	—	—	—
· Actuarial gains/(losses) excluding associates and joint ventures	(924)	772	650
· Actuarial gains/(losses) of associates and joint ventures, net of taxes	—	—	2
· Tax effects	253	(180)	(187)
Items not subsequently reclassifiable to profit or loss[1]	**(671)**	**592**	**465**
Available-for-sale financial assets:			
· Change in fair value excluding associates and joint ventures[2]	(421)	201	(29)
· Change in fair value: associates and joint ventures, net of taxes	(1)	(7)	(8)
· Tax effects	83	(71)	16
Cash flow hedges:			
· Change in fair value excluding associates and joint ventures[3]	—	(6)	(3)
· Change in fair value: associates and joint ventures, net of taxes	—	—	—
· Tax effects	—	2	1
Change in currency translation differences:			
· Currency translation differences on foreign subsidiaries[3]	26	1,696	1,681
· Currency translation differences on associates and joint ventures	(63)	164	243
· Hedges of net investments in foreign operations	—	(2)	(9)
· Tax effects	—	—	3
Items subsequently reclassifiable to profit or loss[4]	**(376)**	**1,977**	**1,895**
Balance, end of period	**(1,002)**	**254**	**45**
Attributable to equity holders of Sanofi	*(976)*	*275*	*68*
Attributable to non-controlling interests	*(26)*	*(21)*	*(23)*

(1) Items not subsequently reclassifiable to profit or loss and attributable to the Animal Health business: zero in the six months ended June 30, 2016 and 2015, and €(6) million in the year ended December 31, 2015.

(2) Includes reclassifications to profit or loss: €(8) million in the six months ended June 30, 2016, €(22) million in the six months ended June 30, 2015 and €(35) million in the year ended December 31, 2015.

(3) Amounts reclassified to profit or loss were immaterial.

(4) Items subsequently reclassifiable to profit or loss and attributable to the Animal Health business (currency translation differences): €4 million in the six months ended June 30, 2016, €76 million in the six months ended June 30, 2015 and €92 million in the year ended December 31, 2015.

B.9. DEBT, CASH AND CASH EQUIVALENTS

Changes in Sanofi's financial position during the period were as follows:

(€ million)	June 30, 2016	December 31, 2015
Long-term debt	14,850	13,118
Short-term debt and current portion of long-term debt	2,427	3,436
Interest rate and currency derivatives used to hedge debt	(189)	(156)
Total debt	**17,088**	**16,398**
Cash and cash equivalents[(1)]	(6,076)	(9,148)
Interest rate and currency derivatives used to hedge cash and cash equivalents	—	4
Debt, net of cash and cash equivalents	**11,012**	**7,254**

(1) Includes an immaterial amount of cash held by Venezuelan subsidiaries as of June 30, 2016, versus €90 million as of December 31, 2015 (see Note A.5.).

"Debt, net of cash and cash equivalents" is a financial indicator used by management and investors to measure our overall net indebtedness.

B.9.1. Debt at value on redemption

A reconciliation of the carrying amount of debt to value on redemption as of June 30, 2016 is shown below:

				Value on redemption	
(€ million)	Carrying amount at June 30, 2016	Amortized cost	Adjustment to debt measured at fair value	June 30, 2016	December 31, 2015
Long-term debt	14,850	64	(174)	14,740	13,023
Short-term debt and current portion of long-term debt	2,427	—	—	2,427	3,422
Interest rate and currency derivatives used to hedge debt	(189)	—	130	(59)	(35)
Total debt	**17,088**	**64**	**(44)**	**17,108**	**16,410**
Cash and cash equivalents	(6,076)	—	—	(6,076)	(9,148)
Interest rate and currency derivatives used to hedge cash and cash equivalents	—	—	—	—	4
Debt, net of cash and cash equivalents	**11,012**	**64**	**(44)**	**11,032**	**7,266**

The table below shows an analysis of debt, net of cash and cash equivalents by type, at value on redemption:

	June 30, 2016			December 31, 2015		
(€ million)	non-current	current	Total	non-current	current	Total
Bond issues	14,213	121	14,334	12,484	2,991	15,475
Other bank borrowings	472	288	760	477	176	653
Commercial paper	—	1,799	1,799	—	—	—
Finance lease obligations	42	18	60	49	18	67
Other borrowings	13	8	21	13	9	22
Bank credit balances	—	193	193	—	228	228
Interest rate and currency derivatives used to hedge debt	(19)	(40)	(59)	(11)	(24)	(35)
Total debt	**14,721**	**2,387**	**17,108**	**13,012**	**3,398**	**16,410**
Cash and cash equivalents	—	(6,076)	(6,076)	—	(9,148)	(9,148)
Interest rate and currency derivatives used to hedge cash and cash equivalents	—	—	—	—	4	4
Debt, net of cash and cash equivalents	**14,721**	**(3,689)**	**11,032**	**13,012**	**(5,746)**	**7,266**

Principal financing and debt reduction transactions during the period

In April 2016, Sanofi carried out a €1.8 billion bond issue in three tranches:

- €500 million of bonds maturing April 2019, bearing interest at an annual rate of 0%;
- €600 million of bonds maturing April 2024, bearing interest at an annual rate of 0.625%;
- €700 million of bonds maturing April 2028, bearing interest at an annual rate of 1.125%.

Two bond issues were redeemed on maturity during the first half of 2016:

- the March 2011 fixed-rate bond issue of $1,500 million, which matured on March 29, 2016;
- the May 2009 fixed-rate bond issue of €1,500 million, which matured on May 18, 2016.

Sanofi had the following arrangements in place as of June 30, 2016 to manage its liquidity in connection with current operations:

- a syndicated credit facility of €4 billion, drawable in euros and in U.S. dollars, now due to expire on December 17, 2020 following the exercise of a second one-year extension option in November 2015;
- a syndicated credit facility of €4 billion, drawable in euros and in U.S. dollars, now due to expire on December 7, 2020 following the exercise of an initial one-year extension option in November 2015. This facility has one more one-year extension option available.

As of June 30, 2016, there were no drawdowns under either of these facilities.

Sanofi also has two commercial paper programs, of €6 billion in France and $10 billion in the United States. During the first half of 2016, only the U.S. program was used, with an average drawdown of $2.3 billion. As of June 30 2016, the only drawdowns were under the U.S. program, and amounted to $2 billion.

The financing in place as of June 30, 2016 at the level of the holding company (which manages most of our financing needs centrally) is not subject to any financial covenants, and contains no clauses linking credit spreads or fees to the credit rating.

B.9.2. Market value of debt

The market value of debt, net of cash and cash equivalents and of derivatives and excluding accrued interest, amounted to €11,770 million as of June 30, 2016 (versus €7,633 million as of December 31, 2015). This compares with a value on redemption of €11,032 million as of June 30, 2016 (versus €7,266 million as of December 31, 2015).

B.10. DERIVATIVE FINANCIAL INSTRUMENTS

B.10.1. Currency derivatives used to manage operating risk exposures

The table below shows operating currency hedging instruments in place as of June 30, 2016. The notional amount is translated into euros at the relevant closing exchange rate.

			Of which derivatives designated as cash flow hedges			Of which derivatives not eligible for hedge accounting	
June 30, 2016 (€ million)	**Notional amount**	**Fair value**	**Notional amount**	**Fair value**	**Of which recognized in equity**	**Notional amount**	**Fair value**
Forward currency sales	**3,069**	**(60)**	**—**	**—**	**—**	**3,069**	**(60)**
of which U.S. dollar	*1,089*	*(14)*	—	—	—	*1,089*	*(14)*
of which Chinese yuan renminbi	*419*	*(3)*	—	—	—	*419*	*(3)*
of which Japanese yen	*326*	*(20)*	—	—	—	*326*	*(20)*
of which Brazilian real	*158*	*(10)*	—	—	—	*158*	*(10)*
of which Singapore dollar	*142*	*(2)*	—	—	—	*142*	*(2)*
Forward currency purchases	**1,021**	**11**	**—**	**—**	**—**	**1,021**	**11**
of which U.S. dollar	*288*	—	—	—	—	*288*	—
of which Singapore dollar	*239*	*6*	—	—	—	*239*	*6*
of which Japanese yen	*81*	*3*	—	—	—	*81*	*3*
of which Hungarian forint	*80*	—	—	—	—	*80*	—
of which Chinese yuan renminbi	*62*	—	—	—	—	*62*	—
Total	**4,090**	**(49)**	**—**	**—**	**—**	**4,090**	**49**

The above positions mainly hedge material foreign-currency cash flows arising after the end of the reporting period in relation to transactions carried out during the six months ended June 30, 2016 and recognized in the balance sheet at that date. Gains and losses on hedging instruments (forward contracts) are calculated and recognized in parallel with the recognition of gains and losses on the hedged items. Due to this hedging relationship, the commercial foreign exchange difference on these items (hedging instruments and hedged transactions) will be immaterial in the second half of 2016.

B.10.2. Currency and interest rate derivatives used to manage financial exposure

The cash pooling arrangements for foreign subsidiaries outside the euro zone, and some of our financing activities, expose certain Sanofi entities to financial foreign exchange risk (i.e., the risk of changes in the value of loans and borrowings denominated in a currency other than the functional currency of the lender or borrower).

That foreign exchange exposure is hedged by Sanofi using firm financial instruments (usually currency swaps or forward contracts) contracted with banking counterparties.

The table below shows financial currency hedging instruments in place as of June 30, 2016. The notional amount is translated into euros at the relevant closing exchange rate.

(€ million)	June 30, 2016		
	Notional amount	Fair value	Latest possible expiry
Forward currency sales	**2,923**	**(14)**	
of which U.S. dollar	*1,730*	*(2)*	*2016*
of which Pound sterling	*361*	*11*	*2016*
of which Japanese yen	*349*	*(21)*	*2017*
Forward currency purchases	**1,967**	**13**	
of which U.S. dollar[(1)]	*585*	*—*	*2018*
of which Singapore dollar	*556*	*13*	*2017*
of which Czech koruna	*314*	*(1)*	*2016*
Total	**4,890**	**(1)**	

(1) Includes $90 million designated as a cash flow hedge as of June 30, 2016.

To limit risk and optimize the cost of its short-term and medium-term net debt, Sanofi uses derivative instruments that alter the interest rate and/or currency structure of its debt and cash.

The table below shows instruments of this type in place as of June 30, 2016:

	Notional amounts by expiry date as of June 30, 2016								Of which designated as fair value hedges		Of which designated as cash flow hedges		
(€ million)	2016	2017	2018	2019	2020	2021	Total	Fair value	Notional amount	Fair value	Notional amount	Fair value	Of which recognized in equity
Interest rate swaps													
pay capitalized Eonia / receive 1.58%	—	—	—	1,550	—	—	1,550	125	1,550	125	—	—	—
pay 3-month Euribor / receive 1.15%	—	428	—	—	—	—	428	—	—	—	—	—	—
pay 3-month U.S. dollar Libor / receive 2.22%	—	—	—	—	450	—	450	27	450	27	—	—	—
pay 1.22% / receive 3-month & 6-month U.S. dollar Libor	—	450	—	—	—	—	450	(4)	—	—	450	(4)	(3)
Currency swaps[(1)]													
pay USD / receive €	1,801	—	—	—	—	—	1,801	41	—	—	—	—	—
Total	**1,801**	**878**	**—**	**1,550**	**450**	**—**	**4,679**	**189**	**2,000**	**152**	**450**	**(4)**	**(3)**

(1) Currency swaps used to hedge drawdowns under U.S. dollar-denominated commercial paper programs (see Note B.9.1.).

B.11. LIABILITIES RELATING TO BUSINESS COMBINATIONS AND TO NON-CONTROLLING INTERESTS

For a description of the nature of the liabilities reported in the line item ***Liabilities relating to business combinations and to non-controlling interests***, refer to Note B.8.5. to the consolidated financial statements for the year ended December 31, 2015.

The liabilities relating to business combinations and to non-controlling interests shown in the table below are level 3 instruments under the IFRS 7 fair value hierarchy (see Note A.4.) except for the CVRs issued in connection with the acquisition of Genzyme, which are classified as level 1 instruments.

Movements in liabilities relating to business combinations and to non-controlling interests during the first half of 2016 are shown below:

		Liabilities relating to business combinations			
(€ million)	Liabilities related to non-controlling interests [1]	CVRs issued in connection with the acquisition - Genzyme [2]	Bayer contingent consideration arising from the acquisition of Genzyme	Other	Total[4]
Balance at January 1, 2016	**181**	**24**	**1,040**	**6**	**1,251**
Payments made	—	—	(62)	(4)	(66)
Fair value remeasurements through profit or loss: (gain)/loss (including unwinding of discount) [3]	—	27	41	(1)	67
Other movements	7	—	—	—	7
Currency translation differences	(2)	—	(20)	—	(22)
Balance at June 30, 2016	**186**	**51**	**999**	**1**	**1,237**
Split as follows:					
· Current					210
· Non-current					1,027

(1) Put options granted to non-controlling interests and commitment to future buyout of non-controlling interests held by BMS.

(2) Based on the quoted market price per CVR of $0.24 as of June 30, 2016 and $0.11 as of December 31, 2015.

(3) Amounts reported in the income statement line item ***Fair value remeasurement of contingent consideration liabilities***.

(4) As of January 1, 2016, this comprised a non-current portion of €1,121 million and a current portion of €130 million.

Liabilities relating to business combinations and to non-controlling interests as of June 30, 2016 mainly comprised the Bayer contingent consideration liability arising from the acquisition of Genzyme in 2011, amounting to €999 million.

As of June 30, 2016, Bayer was still entitled to receive the following potential payments:

- a percentage of sales of alemtuzumab up to a maximum of $1,250 million or over a maximum period of ten years, whichever is achieved first;
- milestone payments based on specified levels of worldwide sales of alemtuzumab beginning in 2021, unless Genzyme exercises its right to buy out those milestone payments by making a one-time payment not exceeding $900 million.

The fair value of this liability was measured at €999 million as of June 30, 2016, versus €1,040 million as of December 31, 2015.

The fair value of the Bayer liability is determined by applying the above contractual terms to sales projections which have been weighted to reflect the probability of success, and discounted. If the discount rate were to fall by 1 percentage point, the fair value of the Bayer liability would increase by approximately 4%.

B.12. PROVISIONS AND OTHER NON-CURRENT LIABILITIES

Provisions and other non-current liabilities break down as follows:

(€ million)	Provisions for pensions & other post-employment benefits	Provisions for other long-term benefits	Restructuring provisions	Other provisions	Other non-current liabilities	Total
Balance at January 1, 2016	**4,308**	**678**	**762**	**3,146**	**275**	**9,169**
Increases in provisions and other liabilities	114 [1]	70	298	116 [2]	—	598
Provisions utilized	(165) [1]	(55)	(6)	(60)	(5)	(291)
Reversals of unutilized provisions	—	(3)	(4)	(274) [2]	—	(281)
Transfers	(66) [3]	(9)	(97) [3] [4]	(12)	(64) [4]	(248)
Net interest related to employee benefits, and unwinding of discount	55	3	2	14	1	75
Currency translation differences	(51)	(6)	(2)	4	4	(51)
Actuarial gains and losses on defined-benefit plans	924	—	—	—	—	924
Balance at June 30, 2016	**5,119**	**678**	**953**	**2,934**	**211**	**9,895**

(1) In the case of "Provisions for pensions and other post-employment benefits", the "Increases in provisions" line corresponds to rights vesting in employees during the period and past service cost, and the "Provisions utilized" line corresponds to contributions paid into pension funds and to plan settlements.

(2) Amounts charged and reversed during the first half of 2016 were largely due to reassessments of tax risks and the resolution of various procedures under way with the tax authorities of several countries.

(3) Includes €66 million transferred to restructuring provisions during the first half of 2016 following implementation of an organizational transformation program in France and worldwide as part of the 2020 strategic roadmap.

(4) Includes transfers between current and non-current.

Provisions for pensions and other post-employment benefits

For an analysis of the sensitivity of obligations in respect of pensions and other employee benefits, and the assumptions used as of December 31, 2015, see Note D.19.1. to the consolidated financial statements for the year ended December 31, 2015.

The principal assumptions used (in particular, changes in discount rates and in the market value of plan assets) for the euro zone, the United States and the United Kingdom were reviewed as of June 30, 2016 to take into account changes during the first half of 2016.

Actuarial gains and losses arising on pensions and other post-employment benefits and recognized directly in equity are as follows (amounts reported before tax):

(€ million)	June 30, 2016 (6 months)	June 30, 2015 (6 months)	December 31, 2015 (12 months)
Actuarial gains/(losses) on plan assets	485	140	(141)
Actuarial gains/(losses) on benefit obligations	(1,409) [1]	632	791

(1) The movement during the first half of 2016 includes the effect of the fall in discount rates (in a range between -0.50% and -1.00%).

B.13. OFF BALANCE SHEET COMMITMENTS

Off balance sheet commitments to third parties arise under collaboration agreements entered into by Sanofi (see Note D.21.1. to the consolidated financial statements for the year ended December 31, 2015).

Agreements signed during the first half of 2016 gave rise to the following new commitments:

- Payments associated with projects in the research phase: €0.7 billion.
- Payments contingent on the attainment of specified sales targets once a product reaches the market: €0.2 billion.

Potential milestone payments on development projects under collaboration agreements entered into during the first half of 2016 are immaterial.

The principal commitments entered into during the period are described below:

- On January 11, 2016, Sanofi and Innate Pharma announced that they had entered into a research collaboration and licensing agreement to apply Innate Pharma's new proprietary technology to the development of innovative bispecific antibody formats engaging natural killer (NK) cells to kill tumor cells through the activating receptor NKp46.
- Also on January 11, 2016, Sanofi and Warp Drive Bio (Warp Drive) announced that they had extended and reshaped their existing collaboration utilizing Warp Drive's proprietary SMART™ (Small Molecule Assisted Receptor Targeting) and Genome Mining platforms to discover novel oncology therapeutics and antibiotics.
- On March 16, 2016, Sanofi and DiCE Molecules announced a five-year global collaboration to discover potential new therapeutics for up to 12 targets that encompass all disease areas of strategic interest to Sanofi. The collaboration builds upon DiCE's unique technology platform, which leverages directed evolution to select and optimize low molecular weight compounds.

B.14. LEGAL AND ARBITRAL PROCEEDINGS

Sanofi and its affiliates are involved in litigation, arbitration and other legal proceedings. These proceedings typically are related to product liability claims, intellectual property rights (particularly claims against generic companies seeking to limit the patent protection of Sanofi products), competition law and trade practices, commercial claims, employment and wrongful discharge claims, tax assessment claims, waste disposal and pollution claims, and claims under warranties or indemnification arrangements relating to business divestitures.

The matters discussed below constitute the most significant developments since publication of the disclosures concerning legal proceedings in the Company's financial statements for the year ended December 31, 2015.

a) Patents

- *Plavix® Patent Litigation in Australia*

In May 2016, Sanofi's and BMS's application for special leave to appeal to the High Court of Australia was denied. Consequently, the substantive claim on damages sought by the Commonwealth will continue to trial.

- *Alirocumab Patent Litigation in the U.S.*

In March 2016, a jury verdict upheld the validity of Amgen's asserted claims of two patents for antibodies targeting PCSK9. If the District Court denies Sanofi and Regeneron's motions for new trial or judgment as a matter of law, Sanofi and Regeneron plan to appeal. The parties settled one portion of the case relating to past-damages that is contingent on appeal. A permanent injunction hearing took place on March 23 and 24, 2016. At the end of May 2016, post-trial briefing was completed on several issues, including the issue of a permanent injunction. We await a ruling on the issues raised in the post-trial briefing, including the permanent injunction issue.

- *Lixisenatide-Related Patent Litigation in the U.S.*

In June 2016, the USPTO issued decisions instituting *inter partes* reviews of all challenged claims of US Patent Nos. 7,691,963; 8,445,647; and 8,951,962, finding that Sanofi had shown "a reasonable likelihood of prevailing on its assertions that [the challenged claims] are unpatentable as anticipated and/or obvious". The USPTO declined to institute an *inter partes* review of US Patent No. 7,297,761.

b) Government Investigations, Competition Law and Regulatory Claims

- *Lovenox® Antitrust Litigation*

In May 2016, the Third Circuit affirmed the District Court's decision. Eisai requested *en banc* review, which the Third Circuit denied.

In July 2016, the parties reached an agreement in principle to resolve all remaining issues at stake in the Federal antitrust litigation, as well as, a separate litigation that had been pending in New Jersey State court.

- *Cipro® Antitrust Litigation*

In January 1997, a patent litigation regarding the prescription drug Cipro and involving Barr Laboratories ("Barr") and Bayer was settled. Hoechst Marion Roussel, Inc. (one of Sanofi's predecessors) ("HMR"), had assisted Barr in funding Barr's challenge of Bayer's Cipro patent and was a party to the settlement.

Starting in 2000, both direct purchasers and indirect purchasers filed antitrust lawsuits challenging the Cipro settlement in state and federal courts across the country.

All of the federal cases were coordinated in a federal multidistrict litigation proceeding ("MDL") in the Eastern District of New York. In 2005, summary judgment was granted in the MDL, with the Court finding that because the settlement was within the scope of the patent, there was no antitrust violation. The grant of summary judgment in the federal cases was affirmed in the Second and Federal Circuits, and the Supreme Court denied certiorari in the Cipro cases in 2009 (Federal Circuit) and 2011 (Second Circuit).

However, in 2013, in a case not involving Sanofi, the U.S. Supreme Court rejected the scope of the patent test in the FTC v. Actavis case, while a parallel State Court litigation over the Cipro settlement was still pending in California.

In May 2015, the California Supreme Court reversed an earlier grant of summary judgment, and also rejected the scope of the patent test. The case was eventually remanded back to the Superior Court of San Diego County for further proceedings.

If pending dispositive motions are not granted, a trial will take place in October 2016.

c) Other litigation and arbitration

- *U.S. Shareholder Securities Class Action*

On June 24, 2016, the court denied plaintiffs' motion for reconsideration of the dismissal order and leave to amend. On July 25, 2016, plaintiffs filed a notice of appeal of (i) the January 2016 motion to dismiss decision and (ii) the June 2016 decision on plaintiffs' motion for reconsideration and leave to amend.

- *CVR Class Action*

In March 2016, the Second Circuit Court of Appeals issued an opinion affirming the dismissal of the CVR securities class action and the AG Funds action. The deadline for plaintiffs to file a motion for rehearing has run. The case is over.

- *CVR Trustee Claim*

Discovery is ongoing. In May 2016, the original Trustee sent a notice of resignation. In June 2016, a new Trustee was appointed and confirmed it will pursue the litigation. A hearing is set for August 17, 2016, at which the Court will hear oral argument on (i) Sanofi's pending motion to dismiss Counts II ("Breach of contract for failure to use diligent efforts to meet the product sales milestones") and III ("Breach of the implied covenant of good faith and fair dealing") of the Complaint and (ii) Plaintiff's motion for summary judgment regarding its claim for declaratory judgment relating to the payment of its fees and expenses.

B.15. OTHER OPERATING INCOME AND EXPENSES

Other operating income for the first half of 2016 includes an arbitration award of €192 million in respect of a contractual dispute.

Other operating expenses for the period include the foreign exchange loss arising on our Venezuelan operations (€102 million in the first half of 2016, versus €100 million in the first half of 2015).

B.16. RESTRUCTURING COSTS AND SIMILAR ITEMS

Restructuring costs and similar items comprise restructuring costs as defined in Note B.20.1. to the consolidated financial statements for the year ended December 31, 2015 plus, with effect from January 1, 2016, similar expenses incurred in connection with transformation programs implemented as part of the transformation strategy announced in November 2015 intended to deliver a global information systems solution, to standardize and consolidate processes, and to transition towards a worldwide services platform.

Restructuring costs and similar items comprise the following:

(€ million)	June 30, 2016 (6 months) [1]	June 30, 2015 (6 months) [1]	December 31, 2015 (12 months) [1]
Employee-related expenses	536	48	307
Expenses related to property, plant and equipment	46	95	132
Compensation for early termination of contracts (other than contracts of employment)	3	(3)	7
Decontamination costs	3	1	1
Other restructuring costs	39	239	348
Total	**627**	**380**	**795**

(1) The results of the Animal Health business are presented separately in accordance with IFRS 5 (Non-Current Assets Held for Sale and Discontinued Operations); see Notes B.1 and B.20.

The restructuring costs recognized in the first half of 2016 relate mainly to the implementation of an organizational transformation program in France and worldwide as part of the 2020 strategic roadmap. Costs relating to transformation programs included on the “Other restructuring costs” line amounted to €11 million in the first half of 2016.

B.17. FINANCIAL INCOME AND EXPENSES

Financial income and expenses comprise the following items:

(€ million)	June 30, 2016 (6 months) [1]	June 30, 2015 (6 months) [1]	December 31, 2015 (12 months)[1]
Cost of debt [2]	(146)	(169)	(331)
Interest income	28	30	57
Cost of debt, net of cash and cash equivalents	**(118)**	**(139)**	**(274)**
Unwinding of discount on provisions [3]	(17)	(21)	(44)
Net interest cost related to employee benefits	(58)	(57)	(114)
Gains/(losses) on disposals of financial assets	19 [4]	22	46
Impairment losses on financial assets, net of reversals	(12)	(4)	(50)
Other items	(5)	(6)	55
Net financial income/(expense)	**(191)**	**(205)**	**(381)**
comprising: Financial expenses	**(241)**	**(262)**	**(559)**
Financial income	**50**	**57**	**178**

(1) The results of the Animal Health business are presented separately in accordance with IFRS 5 (Non-Current Assets Held for Sale and Discontinued Operations); see Notes B.1 and B.20.

(2) Includes net gain on interest and currency derivatives used to hedge debt: €44 million for the six months ended June 30, 2016, versus €41 million for the six months ended June 30, 2015 and €85 million for the year ended December 31, 2015.

(3) Primarily on provisions for environmental risks, restructuring provisions, and provisions for product-related risks (see Note B.12.).

(4) Mainly comprises the gain arising on the disposal of the equity interest in Nichi-Iko.

The impact of hedge ineffectiveness during the six months ended June 30, 2016 was immaterial.

B.18. INCOME TAX EXPENSE

Sanofi has opted for tax consolidations in a number of countries, principally France, Germany, the United Kingdom and the United States.

The table below shows the split of income tax expense between current and deferred taxes:

(€ million)	June 30, 2016 (6 months) [1]	June 30, 2015 (6 months)[1]	December 31, 2015 (12 months) [1]
Current taxes	(978)	(1,271)	(1,978)
Deferred taxes	481	579	1,269
Total	**(497)**	**(692)**	**(709)**
Income before tax and associates and joint ventures	**2,399**	**3,033**	**5,243**

(1) The results of the Animal Health business are presented separately in accordance with IFRS 5 (Non-Current Assets Held for Sale and Discontinued Operations); see Notes B.1. and B.20.

The difference between the effective tax rate (on income before taxes and associates and joint ventures) and the standard corporate income tax rate applicable in France is explained as follows:

(as a percentage)	June 30, 2016 (6 months) [1][2]	June 30, 2015 (6 months) [1][2]	December 31, 2015 (12 months) [1]
Standard tax rate applicable in France	34.4	34.4	34.4
Difference between the standard French tax rate and the rates applicable to Sanofi[3]	(13.3)	(15.8)	(17.7)
Tax rate differential on intragroup margin on inventory[4]	(1.8)	0.8	1.7
Tax effects of the share of profits reverting to BMS	(0.6)	(0.5)	(0.6)
Contribution on distributed income (3%) [5]	4.7	3.7	2.1
CVAE tax in France[6]	1.3	0.8	1.3
Revisions to tax exposures and settlements of tax disputes	(9.3)	3.0	0.3
Fair value remeasurement of contingent consideration liabilities	0.4	(0.4)	(1.1)
Other items[7]	4.9	(3.2)	(6.9)
Effective tax rate	**20.7**	**22.8**	**13.5**

(1) The results of the Animal Health business are presented separately in accordance with IFRS 5 (Non-Current Assets Held for Sale and Discontinued Operations); see Notes B.1. and B.20.

(2) Rate calculated on the basis of the estimated effective tax rate for the full financial year (see Note A.2.).

(3) The difference between the French tax rate and tax rates applicable to foreign subsidiaries reflects the fact that Sanofi has operations in many countries, most of which have lower tax rates than France.

(4) When internal margin included in inventory is eliminated, a deferred tax asset is recognized on the basis of the tax rate applicable to the subsidiary that holds the inventory, which may differ from the tax rate of the subsidiary that generated the eliminated intragroup margin.

(5) Entities liable to corporate income tax in France are also liable to pay an additional tax contribution in respect of amounts distributed by the entity.

(6) Net impact on the effective tax rate (current taxes, impact of the tax deduction, and deferred taxes).

(7) "Other items" includes the net impact (current and deferred taxes) of the *Contribution Exceptionnelle* in France, which is immaterial at consolidated level. It also includes the net tax effect associated with holdings in Sanofi subsidiaries.

B.19. SEGMENT INFORMATION

Sanofi has three operating segments: Pharmaceuticals, Human Vaccines (Vaccines) and Animal Health. All other activities are combined in a separate segment, Other.

The Pharmaceuticals segment covers research, development, production and marketing of medicines, including those originating from Genzyme. The Sanofi pharmaceuticals portfolio consists of flagship products, plus a broad range of prescription medicines, generic medicines, and consumer health products. This segment also includes all associates whose activities are related to pharmaceuticals, in particular Regeneron Pharmaceuticals, Inc. and the entities majority owned by BMS.

The Vaccines segment is wholly dedicated to vaccines, including research, development, production and marketing. This segment includes the Sanofi Pasteur MSD joint venture.
Following the announcement on March 8, 2016 that Sanofi and MSD are to end their joint venture, Sanofi's investment in the Sanofi Pasteur MSD joint venture was reclassified to the line item ***Assets held for sale or exchange*** as of the date of the announcement (see Notes B.1. and B.5.).

The Animal Health segment comprises the research, development, production and marketing activities of Merial, which offers a complete range of medicines and vaccines for a wide variety of animal species.

Following the signature of the exclusivity agreement with Boehringer Ingelheim (see Note D.2.1. to the consolidated financial statements for the year ended December 31, 2015) and in accordance with IFRS 5 requirements on the presentation of discontinued operations, the net income/loss of the Animal Health business is presented in a separate line item in the consolidated income statements for 2016 and the prior periods reported. Until final completion of the transaction, expected in the fourth quarter of 2016, Sanofi will continue to monitor the performance of the Animal Health business. As of June 30, 2016, the Animal Health business remains an operating segment of Sanofi within the meaning of IFRS 8.

The "Other" segment includes all activities that do not qualify as reportable segments under IFRS 8.

Inter-segment transactions are not material.

B.19.1. Segment results

We report segment results on the basis of "Business operating income". This indicator is compliant with IFRS 8 and is used internally to measure operational performance and allocate resources.

"Business operating income" is derived from ***Operating income***, adjusted as follows:

- the amounts reported in the line items ***Restructuring costs and similar items***, ***Fair value remeasurement of contingent consideration liabilities*** and ***Other gains and losses, and litigation*** are eliminated;
- amortization and impairment losses charged against intangible assets (other than software and other rights) are eliminated;
- the share of profits/losses of associates and joint ventures is added;
- net income attributable to non-controlling interests is deducted;
- other acquisition-related effects (primarily the workdown of acquired inventories remeasured at fair value at the acquisition date, and the impact of acquisitions on investments in associates and joint ventures) are eliminated; and
- restructuring costs relating to associates and joint ventures are eliminated.

Segment results are shown in the table below:

(€ million)	June 30, 2016 (6 months)				
	Pharmaceuticals	Vaccines	Other	Total Sanofi	Animal Health[1]
Net sales	**14,504**	**1,422**	**—**	**15,926**	**1,485**
Other revenues	122	188	—	310	18
Cost of sales	(4,143)	(827)	—	(4,970)	(488)
Research and development expenses	(2,246)	(268)	—	(2,514)	(89)
Selling and general expenses	(4,261)	(348)	—	(4,609)	(459)
Other operating income and expenses	110	(1)	(39)	70	(14)
Share of profit/(loss) of associates and joint ventures	44	9	—	53	—
Net income attributable to non-controlling interests	(50)	—	—	(50)	—
Business operating income	**4,080**	**175**	**(39)**	**4,216**	**453**

(1) The results of the Animal Health business are presented separately in accordance with IFRS 5 (Non-Current Assets Held for Sale and Discontinued Operations).

(€ million)	June 30, 2015 (6 months)				
	Pharmaceuticals	Vaccines[1]	Other	Total Sanofi	Animal Health[2]
Net sales	**15,255**	**1,374**	**—**	**16,629**	**1,349**
Other revenues	129	224	—	353	20
Cost of sales	(4,442)	(826)	—	(5,268)	(456)
Research and development expenses	(2,143)	(262)	—	(2,405)	(84)
Selling and general expenses	(4,310)	(344)	—	(4,654)	(432)
Other operating income and expenses	(39)	2	(55)	(92)	5
Share of profit/(loss) of associates and joint ventures	61	—	—	61	—
Net income attributable to non-controlling interests	(62)	—	—	(62)	—
Business operating income	**4,449**	**168**	**(55)**	**4,562**	**402**

(1) Due to a change in accounting presentation, sales of non-Sanofi products recorded by VaxServe are included in ***Other revenues*** from 2016 onwards. The presentation of prior period ***Net sales*** and ***Other revenues*** has been amended accordingly (see Note A.1.2.).

(2) The results of the Animal Health business are presented separately in accordance with IFRS 5 (Non-Current Assets Held for Sale and Discontinued Operations).

(€ million)	December 31, 2015 (12 months)				
	Pharmaceuticals	Vaccines[1]	Other	Total Sanofi	Animal Health[2]
Net sales	**29,799**	**4,261**	**—**	**34,060**	**2,515**
Other revenues	288	513	—	801	41
Cost of sales	(8,788)	(2,131)	—	(10,919)	(885)
Research and development expenses	(4,530)	(552)	—	(5,082)	(177)
Selling and general expenses	(8,656)	(726)	—	(9,382)	(865)
Other operating income and expenses	(121)	27	(114)	(208)	5
Share of profit/(loss) of associates and joint ventures	146	23	—	169	1
Net income attributable to non-controlling interests	(125)	(1)	—	(126)	—
Business operating income	**8,013**	**1,414**	**(114)**	**9,313**	**635**

(1) Due to a change in accounting presentation, VaxServe sales of non-Sanofi products are included in ***Other revenues*** from 2016 onwards. The presentation of prior period ***Net sales*** and ***Other revenues*** has been amended accordingly (see Note A.1.2.).

(2) The results of the Animal Health business are presented separately in accordance with IFRS 5 (Non-Current Assets Held for Sale and Discontinued Operations).

The table below shows a reconciliation, presented in compliance with IFRS 8, between "Business operating income" and ***Income before tax and associates and joint ventures***:

(€ million)	June 30, 2016 (6 months)	June 30, 2015 (6 months)	December 31, 2015 (12 months)
Business operating income[1]	**4,216**	**4,562**	**9,313**
Share of profit/(loss) of associates and joint ventures[2]	(53)	(61)	(169)
Net income attributable to non-controlling interests[3]	50	62	126
Amortization of intangible assets	(877)	(988)	(2,137)
Impairment of intangible assets	(52)	(28)	(767)
Fair value remeasurement of contingent consideration liabilities	(67)	71	53
Restructuring costs and similar items	(627)	(380)	(795)
Operating income	**2,590**	**3,238**	**5,624**
Financial expenses	(241)	(262)	(559)
Financial income	50	57	178
Income before tax and associates and joint ventures	**2,399**	**3,033**	**5,243**

(1) Excluding the Animal Health business, the net income/loss of which is presented in a separate line item, ***Net income/(loss) of the held-for-exchange Animal Health business***, in the consolidated income statements for the six months ended June 30, 2016 and prior periods (see Notes B.1 and B.20.).

(2) Excluding (i) restructuring costs of associates and joint ventures and (ii) expenses arising from the impact of acquisitions on associates and joint ventures.

(3) Excluding (i) restructuring costs and (ii) other adjustments attributable to non-controlling interests.

B.19.2. Other segment information

The tables below show the split by operating segment of (i) the carrying amount of investments in associates and joint ventures, (ii) acquisitions of property, plant and equipment, and (iii) acquisitions of other intangible assets.

The principal associates and joint ventures are: for the Pharmaceuticals segment, Regeneron Pharmaceuticals, Inc. (see Note C.1. to the consolidated financial statements for the year ended December 31, 2015), the entities majority owned by BMS (see Note C.2. to the consolidated financial statements for the year ended December 31, 2015), and Infraserv GmbH & Co. Höchst KG; and for the Vaccines segment, Sanofi Pasteur MSD.

Acquisitions of intangible assets and property, plant and equipment correspond to acquisitions paid for during the period.

	June 30, 2016			
(€ million)	Pharmaceuticals	Vaccines[1]	Animal Health[2]	Total
Investments in associates and joint ventures	2,724	259	6	2,989
Acquisitions of property, plant and equipment	439	149	53	641
Acquisitions of other intangible assets	580	32	3	615

(1) The investment in Sanofi Pasteur MSD has been reclassified to ***Assets held for sale or exchange*** in accordance with IFRS 5 (see Notes B.1. and B.5.).

(2) The assets of Merial were reclassified to ***Assets held for sale or exchange*** in December 2015 in accordance with IFRS 5 (see Notes B.1. and B.20.).

	June 30, 2015			
(€ million)	Pharmaceuticals	Vaccines	Animal Health	Total
Investments in associates and joint ventures	2,193	259	6	2,458
Acquisitions of property, plant and equipment	443	117	34	594
Acquisitions of other intangible assets	200	11	130	341

(€ million)	December 31, 2015 Pharmaceuticals	Vaccines	Animal Health[1]	Total
Investments in associates and joint ventures	2,422	254	6	2,682
Acquisitions of property, plant and equipment	945	258	90	1,293
Acquisitions of other intangible assets	1,533	36	144	1,713

(1) The assets of Merial were reclassified to ***Assets held for sale or exchange*** in December 2015 in accordance with IFRS 5 (see Notes B.1. and B.20.).

B.19.3. Information by geographical region

The geographical information on net sales provided below is based on the geographical location of the customer.

In accordance with IFRS 8, the non-current assets reported below exclude financial instruments, deferred tax assets, and pre-funded pension obligations.

(€ million)	June 30, 2016 Total	Europe	of which France	North America	of which United States	Other countries
Net sales[1]	**15,926**	**4,412**	**1,153**	**5,629**	**5,356**	**5,885**
Non-current assets:						
· property, plant and equipment[2]	9,819	5,954	3,423	2,782	2,385	1,083
· goodwill	39,420	15,019		17,363		7,038
· other intangible assets[2]	11,094	3,514		5,440		2,140

(1) Excluding the Animal Health business, the net income/loss of which is presented in a separate line item, ***Net income/(loss) of the held-for-exchange Animal Health business*** in the consolidated income statement (see Notes B.1. and B.20.).

(2) The assets and liabilities of Merial were reclassified to ***Assets held for sale or exchange*** *and* ***Liabilities related to assets held for sale or exchange***, respectively, in December 2015 in accordance with IFRS 5 (see Notes B.1. and B.20.).

(€ million)	June 30, 2015 Total	Europe	of which France	North America	of which United States	Other countries
Net sales [1][2]	**16,629**	**4,345**	**1,169**	**5,663**	**5,365**	**6,621**
Non-current assets:						
· property, plant and equipment	10,540	6,203	3,759	3,024	2,598	1,313
· goodwill[3]	39,191	15,022		17,258		6,911
· other intangible assets	14,401	2,716		8,855		2,830

(1) Due to a change in accounting presentation, VaxServe sales of non-Sanofi products are included in ***Other revenues*** from 2016 onwards. The presentation of prior period ***Net sales*** and ***Other revenues*** has been amended accordingly (see Note A.1.2.).

(2) Excluding the Animal Health business, the net income/loss of which is presented in a separate line item, ***Net income/(loss) of the held-for-exchange Animal Health business*** in the consolidated income statement (see Notes B.1. and B.20.).

(3) Excluding the goodwill allocated in full to the Animal Health segment (see Note D.5. to the consolidated financial statements for the year ended December 31, 2015). Goodwill allocated to the Animal Health segment amounted to €1,470 million as of June 30, 2015.

(€ million)	December 31, 2015					
	Total	Europe	of which France	North America	of which United States	Other countries
Net sales [1][2]	**34,060**	**9,861**	**2,248**	**12,369**	**11,764**	**11,830**
Non-current assets:						
· property, plant and equipment[3]	9,943	5,956	3,480	2,879	2,498	1,108
· goodwill	39,557	15,021		17,663		6,873
· other intangible assets[3]	12,026	3,719		5,980		2,327

(1) Due to a change in accounting presentation, VaxServe sales of non-Sanofi products are included in ***Other revenues*** from 2016 onwards. The presentation of prior period ***Net sales*** and ***Other revenues*** has been amended accordingly (see Note A.1.2.).

(2) Excluding the Animal Health business, the net income/loss of which is presented in a separate line item, ***Net income/(loss) of the held-for-exchange Animal Health business*** in the consolidated financial statements (see Notes B.1. and B.20.).

(3) The assets and liabilities of Merial were reclassified to ***Assets held for sale or exchange*** *and* ***Liabilities related to assets held for sale or exchange***, respectively, in December 2015 in accordance with IFRS 5 (see Notes B.1. and B.20.).

As stated in Notes B.6.1. and D.5. to the consolidated financial statements for the year ended December 31, 2015, France is not a cash-generating unit. Consequently, information about goodwill is provided for Europe.

B.20. ASSETS HELD FOR SALE OR EXCHANGE AND LIABILITIES RELATED TO ASSETS HELD FOR SALE OR EXCHANGE

Assets held for sale or exchange, and liabilities related to assets held for sale or exchange, comprise:

(€ million)	June 30, 2016	December 31, 2015
Animal Health business	5,745	5,626
Sanofi Pasteur MSD[1]	256	—
Other	9	126
Assets held for sale or exchange	**6,010**	**5,752**
Animal Health business	976	983
Liabilities related to assets held for sale or exchange	**976**	**983**

(1) The investment in Sanofi Pasteur MSD, previously presented within the line item ***Investments in associates and joint ventures***, has been reclassified to ***Assets held for sale or exchange*** (see Note B.1.).

Merial

In accordance with IFRS 5 (see Notes B.1. and D.2. to the consolidated financial statements for the year ended December 31, 2015), all assets of the Animal Health business and all liabilities directly related to those assets are classified in the line items ***Assets held for sale or exchange*** and ***Liabilities related to assets held for sale or exchange***, respectively, in the consolidated balance sheet as of December 31, 2015 and June 30, 2016 (see Note D.8. to the consolidated financial statements for the year ended December 31, 2015). An analysis of these line items is provided below:

(€ million)	June 30, 2016	December 31, 2015
Assets		
Property, plant and equipment	705	657
Goodwill	1,481	1,510
Other intangible assets	2,110	2,147
Investments in associates and joint ventures	6	6
Other non-current assets	54	46
Deferred tax assets	152	177
Inventories	560	526
Accounts receivable	583	479
Other current assets	68	55
Cash and cash equivalents	26	23
Total assets held for sale or exchange	**5,745**	**5,626**
Liabilities		
Long-term debt	4	4
Non-current provisions	144	149
Deferred tax liabilities	162	163
Short-term debt	11	18
Accounts payable	222	218
Other current liabilities	433	431
Total liabilities related to assets held for sale or exchange	**976**	**983**

Merial acquisition (2009)

When Sanofi took control of Merial in 2009, intangible assets (other than goodwill) were recognized at a total fair value of €3,980 million. This figure included €3,104 million for marketed products (in particular fipronil-based products), €674 million for in-process research and development projects, and €131 million for the Merial brand.

None of the assets derived from the acquired research and development was brought into commercial use in the year ended December 31, 2015 or the six months ended June 30, 2016.

In accordance with IFRS 5, the net income/loss of the Animal Health business is presented in a separate line item within the income statement (see Notes B.1. and D.2. to the consolidated financial statements for the year ended December 31, 2015). The table below provides an analysis of the main items included in the line item ***Net income/(loss) of the held-for-exchange Animal Health business***:

(€ million)	June 30, 2016 (6 months)	June 30, 2015 (6 months)	December 31, 2015 (12 months)
Net sales	**1,485**	**1,349**	**2,515**
Gross profit	1,030	913	1,671
Operating income	452	160	101
Income before tax and associates and joint ventures	449	156	92
Income tax expense	(163)	(47)	(216)
Net income/(loss) of the held-for-exchange Animal Health business	**286**	**109**	**(124)**

The table below presents basic and diluted earnings per share for the held-for-exchange Animal Health business, in accordance with IAS 33 (Earnings per Share):

(€ million)	June 30, 2016 (6 months)	June 30, 2015 (6 months)	December 31, 2015 (12 months)
Net income/(loss) of the held-for-exchange Animal Health business	286	109	(124)
Average number of shares outstanding (million)	1,287.6	1,307.2	1,306.2
Average number of shares outstanding after dilution (million)	1,296.6	1,322.0	1,320.7
– Basic earnings per share (in euros)	0.22	0.08	(0.10)
– Diluted earnings per share (in euros)	0.22	0.08	(0.09)

The table below provides a reconciliation between "Business operating income" for the Animal Health business and ***Net income/(loss) of the held-for-exchange Animal Health business***:

(€ million)	June 30, 2016 (6 months)	June 30, 2015 (6 months)	December 31, 2015 (12 months)
Business operating income [(1)]	**453**	**402**	**635**
Discontinuation of depreciation of property, plant and equipment and software[(2)]	27	—	1
Amortization of intangible assets	—	(241)	(500)
Impairment of intangible assets	—	—	(3)
Restructuring costs	4	(1)	(6)
Costs associated with the exchange transaction	(32)	—	(27)
Financial income and expenses	(3)	(4)	(9)
Income tax expense [(3)]	(163)	(47)	(216)
Net income/(loss) of the held-for-exchange Animal Health business	**286**	**109**	**(124)**

(1) See Note B.19.
(2) Discontinuation of depreciation of property, plant and equipment and software from the date of reclassification to ***Assets held for sale or exchange***.
(3) Includes the net tax effect arising from taxable temporary differences relating to holdings in subsidiaries, given that it has become probable that those differences will reverse.

C/ Events subsequent to June 30, 2016

Medivation

On July 5, 2016, Sanofi confirmed that it had entered into a confidentiality agreement with Medivation, Inc. under which Sanofi will be provided due diligence access and confidential information. Sanofi indicated that it had been advised by Medivation that Sanofi is being given the same opportunity as others to participate in a process relating to a potential transaction. Sanofi also confirmed that on June 27, 2016 it advised Medivation that upon signing a confidentiality agreement and being provided information, Sanofi would increase its offer to $58.00 in cash and $3.00 in the form of a contingent value right (CVR) relating to the sales performance of talazoparib.

Share issue

On July 22, 2016, a total of 1,803,986 shares (approximately 0.14% of the share capital), were issued as part of the Action 2016 worldwide employee share ownership plan (see Note B.8.5.).

2 HALF-YEAR MANAGEMENT REPORT

A/ Significant events of the first half of 2016

A.1. PHARMACEUTICALS

A.1.1. Acquisitions and alliances

- On January 11, 2016, Sanofi announced a collaboration and licensing agreement in immuno-oncology with **Innate Pharma**. Under the terms of the licensing agreement, Sanofi will be responsible for the development, manufacturing and commercialization of products resulting from the collaboration. Innate Pharma will be eligible for up to €400 million in development and commercial milestone payments, and for royalties on net sales.
- Also on January 11, 2016, Sanofi and **Warp Drive Bio** (Warp Drive) announced that they had extended and reshaped their existing collaboration utilizing Warp Drive's proprietary SMART™ (Small Molecule Assisted Receptor Targeting) and Genome Mining platforms to discover novel oncology therapeutics and antibiotics. Under the terms of the agreement, Warp Drive will lead the research collaboration for a period of five years and Sanofi will receive worldwide exclusive licenses to develop and commercialize the candidates discovered during the research term. Warp Drive is eligible for cumulative payments in excess of $750 million from Sanofi across four collaboration programs, to include an equity investment by Sanofi; research, clinical trial, and regulatory milestones; and research and development services.
- On March 16, 2016, Sanofi and **DiCE Molecules** announced a five-year global collaboration to discover potential new therapeutics for up to 12 targets that encompass all disease areas of strategic interest to Sanofi. The partnership between Sanofi and DiCE represents a unique R&D commitment to small molecule discovery. DiCE's directed chemical evolution platform is expected to shorten drug development timelines through the rapid and efficient discovery of a greater breadth of molecules for each target in the collaboration. The collaboration provides for funding in excess of $50 million in equity, upfront fees, target exclusivity fees, technology access fees and research services, along with up to $184 million in research, clinical development and regulatory milestone payments per target, and royalty payments based on any future annual net sales of each compound developed by Sanofi.
- On April 28, 2016, Sanofi sent a letter to **Medivation, Inc.** (Medivation) offering to acquire Medivation for $52.50 per share. Medivation is a biopharmaceutical company with one marketed prostate cancer therapy (Xtandi®) and two other oncology assets in clinical development. Following Medivation's rejection of the offer, Sanofi commented on April 29, 2016 that the combination would represent a compelling strategic and financial opportunity to drive immediate and certain value for the shareholders and employees of both companies, as well as for patients and healthcare professionals. In mid-June 2016, Sanofi filed consent solicitation materials seeking to remove and replace each member of Medivation's Board of Directors (for subsequent developments, see "B. – Events subsequent to June 30, 2016" below).
- On June 27, 2016, Sanofi and Boehringer Ingelheim announced that they had signed contracts to secure the strategic transaction involving the exchange of Sanofi's animal health business (Merial) and Boehringer Ingelheim's consumer healthcare (CHC) business (see "A.3. – Animal Health" below).

A.1.2. Filings for marketing authorization for new products

- On January 8, 2016, Sanofi and Regeneron Pharmaceuticals Inc. (Regeneron) announced that the U.S. Food and Drug Administration (FDA) had accepted for review the Biologics License Application (BLA) for **sarilumab**. Under the Prescription Drug User Fee Act (PDUFA), the target action date is October 30, 2016. Sarilumab is an investigational human monoclonal antibody directed against the IL-6 receptor that is intended for the treatment of patients with active, moderate-to-severe rheumatoid arthritis[1]. IL-6 is the most abundant cytokine in the serum and synovial fluid of patients with rheumatoid arthritis and levels correlate with both disease activity and joint destruction[2].
- On May 25, 2016, the FDA's Endocrinologic and Metabolic Drugs Advisory Committee (EMDAC) recommended approval of New Drug Applications (NDAs) for (i) **the investigational fixed-ratio combination of basal insulin glargine 100 Units/mL with lixisenatide (LixiLan**[3]) and (ii) the investigational drug lixisenatide (**Adlyxin™**), for the treatment of adults with type 2 diabetes. The NDAs for Adlyxin™ and LixiLan are undergoing FDA review, with decisions anticipated in July and August 2016, respectively (for subsequent developments, see section "B. – Events subsequent to June 30, 2016" below). Lixisenatide is already approved in more than 60 countries worldwide under the proprietary name **Lyxumia®**. The fixed-ratio combination of insulin glargine 100 Units/mL with lixisenatide was also submitted for regulatory review in the European Union in March 2016.

A.1.3. Research and Development

For an update on our research and development (R&D) pipeline, refer to the appendix in Section G of this half-year management report.

The principal clinical trial results announced during the first half of 2016 were as follows:

- On March 3, 2016, Sanofi and its Sanofi Genzyme specialty care global business unit presented data from NEO1, a Phase I/II clinical study evaluating the investigational novel enzyme replacement therapy **neoGAA** in 24 patients with late-onset Pompe disease. The safety and efficacy data from this study, which were presented at WORLDSymposium 2016 in San Diego, support further clinical development of the therapy. Sanofi Genzyme has begun enrolling patients in a pivotal Phase III trial for neoGAA.
- On March 11, 2016, Sanofi and Regeneron announced that a Phase III monotherapy study had met its primary endpoint demonstrating that **sarilumab** was superior to adalimumab (marketed by AbbVie as HUMIRA®) in improving signs and symptoms in patients with active rheumatoid arthritis at week 24. The study (SARIL-RA-MONARCH) also met important secondary endpoints including other measures assessing improvements in signs and symptoms of rheumatoid arthritis and physical function. Sarilumab is an investigational human IL-6 receptor antibody.
- On March 23, 2016, Sanofi and Regeneron announced positive results from the Phase III ODYSSEY ESCAPE trial evaluating **Praluent®** (alirocumab) Injection in patients with an inherited form of high cholesterol known as heterozygous familial hypercholesterolemia (HeFH) whose cholesterol levels required weekly or bi-weekly apheresis therapy. The trial met its primary endpoint, demonstrating that patients who added Praluent® to their existing treatment regimen significantly reduced the frequency of their apheresis therapy by 75% compared to placebo ($p<0.0001$); 63% of patients treated with Praluent® no longer required apheresis, compared to 0% of placebo patients. Apheresis is a procedure where bad (LDL) cholesterol is removed from the blood, in a process similar to kidney dialysis.

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[1] Huizinga TWJ, Fleischmann RM, Jasson M, et al. "Sarilumab, a fully human monoclonal antibody against IL-6Ralpha in patients with rheumatoid arthritis and an inadequate response to methotrexate: efficacy and safety results from the randomized SARIL-RA-MOBILITY Part A trial." Annals of Rheumatic Diseases 2014; 73(9): 1626-1634.

[2] Dayer JM, et al. Rheumatology (Oxford). 2010;49(1):15-24. 3. Rose-John S, et al. J Leukoc Biol. 2006;80(2):227-236.

[3] LixiLan is the project name, and is not intended to be the name under which the product will ultimately be sold.

- On April 1, 2016, Sanofi and Regeneron announced that two placebo-controlled Phase III studies evaluating investigational **dupilumab** in adult patients with inadequately controlled moderate-to-severe atopic dermatitis had met their primary and key secondary endpoints. In the studies (LIBERTY AD SOLO 1 and SOLO 2), treatment with dupilumab as monotherapy significantly improved measures of overall disease severity, skin clearing, itching, quality of life, and mental health.
- On June 6, 2016, Sanofi and Regeneron announced that LIBERTY AD CHRONOS, a one-year Phase III study evaluating investigational **dupilumab**, had met its primary and secondary endpoints. In the study, dupilumab with topical corticosteroids (TCS) was compared to TCS alone in adult patients with moderate-to-severe atopic dermatitis. Patients enrolled in the study were inadequately controlled by topical TCS with or without topical calcineurin inhibitor. Dupilumab with TCS significantly improved measures of overall disease severity at 16 and 52 weeks, when compared to placebo with TCS.
- On June 12, 2016, Sanofi announced results from the pivotal Phase III LixiLan-O and LixiLan-L clinical trials with an **investigational titratable fixed-ratio combination of basal insulin glargine 100 Units/mL and the GLP-1 receptor agonist lixisenatide** in adults with type 2 diabetes. Both studies met their primary endpoints, demonstrating statistically superior reduction of HbA1c (average blood glucose over the previous three months) with the titratable fixed-ratio combination versus comparators (lixisenatide and insulin glargine 100 Units/mL, respectively).

The principal decisions taken during the first half of 2016 in terms of project development were as follows:

- The Data Monitoring Committee (DMC) of the ODYSSEY OUTCOMES study evaluating **Praluent®** has completed the first interim analysis based on unblinded study data. In addition to the review of the safety data, the DMC performed a futility assessment and recommended the study continue with no changes. Sanofi remains blinded to the actual results of this analysis. The second interim analysis for futility and overwhelming efficacy could potentially take place in the second half of 2016 once 75% of the targeted number of primary events have occurred.
- **SAR422459**, a gene therapy targeting ABC4A, entered Phase IIa in Stargardt's disease, a rare eye condition.
- **SAR439684**, a PD-1 inhibitor (developed in collaboration with Regeneron), entered Phase II in advanced phase squamous cell cutaneous carcinoma.
- In light of results from the FIRSTANA Phase III study comparing **Jevtana®** (cabazitaxel) with Taxotere® (docetaxel) in patients with hormone refractory metastatic prostate cancer who had not previously received chemotherapy, it was decided not to submit Jevtana® as a first line therapy. The results from the study failed to demonstrate the level of benefit needed to support this new indication. Jevtana® is currently used as a second line therapy, and the FIRSTANA study was carried out to meet FDA post-marketing requirements.
- It has been decided to discontinue development of **SAR438544**, a stable glucagon analog, in diabetes.

A.1.4. Investments

- On April 19, 2016, Sanofi announced a €300 million investment to expand its site in Geel, Belgium. This investment reflects Sanofi's commitment to driving the future of biologics by adding new manufacturing and commercial capacity to maintain quality and scale up production. The expansion will support Sanofi's pipeline of monoclonal antibodies. Over 8,000m² of extra manufacturing floor space will be added to the site's state-of-the-art facilities, increasing overall production capacity and enabling diversification into other drugs and therapeutic areas. In support of this expansion, Sanofi intends to recruit highly-skilled biotechnology professionals.

A.2. HUMAN VACCINES (Vaccines)

A.2.1. Vaccines operations in Europe

- On March 8, 2016, Sanofi Pasteur and MSD (known as Merck in the United States and Canada) announced their intention to end Sanofi Pasteur MSD, their joint venture in vaccines, in order to pursue their own distinct growth strategies in Europe. Sanofi Pasteur MSD, owned on a 50/50 basis by Sanofi Pasteur and MSD, was created in 1994 to develop and commercialize vaccines originating from both companies' pipelines. Over the past twenty years, Sanofi Pasteur MSD has launched numerous innovative vaccines originating from Sanofi Pasteur and MSD's development pipelines, addressing key unmet medical needs and helping to protect millions of lives. Sanofi Pasteur and MSD expect the project to be completed by the end of 2016, subject to local labor laws and regulations and regulatory approvals.

A.2.2. Partnership

- On January 14, 2016, Sanofi Pasteur (Sanofi's vaccines division) signed an agreement to partially fund the **Human Vaccines Project**, a non-profit, public-private global consortium bringing together leading academic researchers and industrial partners to solve key issues impeding vaccine/immunotherapy development by decoding the human immune system. Sanofi Pasteur is supporting the project by providing research funding to oversee, coordinate and conduct the scientific and administrative activities of the Human Vaccines Project Research Program during 2016. The funds will be used by the project to launch and execute pilot studies, build partnerships with and across the stakeholder community, and set up the infrastructure and operational support needed for the Human Vaccines Project Research Program.

A.2.3. Filings for marketing authorization for new products

- **PR5i** (DTP-HepB-Polio-Hib), a new hexavalent pediatric vaccine, was approved in the European Union in February.

A.2.4. Research and Development

- On February 2, 2016, Sanofi Pasteur announced the launch of a vaccine research and development project targeting the prevention of **Zika virus** infection and disease.
- **Men Quad TT**, a second generation combined ACYW meningococcal vaccine indicated for a broader population (children to seniors), has entered Phase III.

A.2.5. Other matters

- On April 15, 2016, Sanofi and Sanofi Pasteur announced that the Strategic Advisory Group of Experts on Immunization (SAGE) had issued recommendations to the World Health Organization (WHO) on the use of Dengvaxia® dengue vaccine. SAGE advised that countries with high dengue transmission consider introducing the vaccine as part of an integrated disease prevention strategy including vector control to effectively lower their dengue disease burden. Successful introduction of dengue immunization alongside other prevention efforts should help endemic countries to achieve the WHO objectives of reducing dengue morbidity by 25% and mortality by 50% by 2020.

A.3. ANIMAL HEALTH

On June 27, 2016, Sanofi and Boehringer Ingelheim announced that they had signed contracts to secure the strategic transaction initiated in December 2015 involving the exchange of Sanofi's animal health business (Merial) and Boehringer Ingelheim's consumer healthcare (CHC) business. This step marks a major milestone towards the closing of the transaction, which is expected by end 2016 and remains subject to approval by regulatory authorities in the relevant territories. Integration of the respective businesses would start after closing, with Boehringer Ingelheim's CHC business (valued at €6.7 billion) transferred to Sanofi, and Merial (valued at €11.4 billion) transferred to

Boehringer Ingelheim. The transaction includes a gross payment of €4.7 billion from Boehringer Ingelheim to Sanofi to reflect the difference between the value of the two businesses. Taking into account the expected contribution from the acquired CHC business, the progressive implementation of synergies and the use of part of the net proceeds for a share repurchase program, Sanofi expects that overall the transaction will be business EPS neutral in 2017 and accretive thereafter. Under the terms of the transaction, Sanofi would integrate Boehringer Ingelheim's CHC business in all countries except China. Combined CHC sales would amount to approximately €4.9 billion[1] based on 2015 global sales. Thanks to the addition of a highly complementary product and brand portfolio, Sanofi would enhance its positions in several of its strategic categories – Pain Care, Allergy Solutions, Cough & Cold Care, Feminine Care, Digestive Health and Vitamins, Minerals and Supplements. The two companies have reviewed and discussed the details of the transaction, including the exact scope of the exchange and compliance with regulatory requirements. In recent months, Boehringer Ingelheim and Sanofi have also been in close consultation with the relevant employee representative bodies in France and Germany and with the appropriate regulatory authorities to lay the groundwork for a successful completion of the exchange. In accordance with their commitment when negotiations began, the companies have agreed that Lyon (France) and Toulouse (France) would be key operational centers for Boehringer Ingelheim's Animal Health business, including the commercial operations, R&D and manufacturing facilities at Lyon production site in Toulouse. As the U.S. market is an important part of Merial's business, Boehringer Ingelheim will pay particular attention to sustaining the momentum of Merial's U.S. operations. Germany would become a key center of Sanofi's CHC business, especially in the Digestive Health and Cough & Cold segments where the existing Boehringer Ingelheim teams are particularly strong.

A.4. OTHER SIGNIFICANT EVENTS OF THE FIRST HALF OF 2016

A.4.1. Corporate governance

- On May 4, 2016, the Annual General Meeting of Sanofi shareholders was held in Paris. All of the resolutions submitted to the vote were adopted. The meeting approved a cash dividend of €2.93 per share, payable on May 12, 2016. It also approved the appointment of Diane Souza and Thomas Südhof as independent directors, and the reappointment of Laurent Attal, Claudie Haigneré and Carole Piwnica as directors, to serve for a four-year term expiring at the Annual General Meeting called to approve the 2019 financial statements. Following the General Meeting, the new Board of Directors has 13 members, 6 of whom are women and the vast majority of whom are independent. The Board meeting that followed the Annual General Meeting appointed Diane Souza as a member of the Compensation Committee.

- On May 23, 2016, Olivier Brandicourt MD, Sanofi's Chief Executive Officer, announced a number of changes to the Executive Committee in line with the strategic road map for 2020 unveiled in November 2015. With effect from June 1, 2016, the Executive Committee (chaired by Olivier Brandicourt) will comprise:
    - Olivier Charmeil, Executive Vice President and General Manager, General Medicines and Emerging Markets
    - Jérôme Contamine, Executive Vice President, Chief Financial Officer
    - Peter Guenter, Executive Vice President and General Manager, Diabetes & Cardiovascular
    - Carsten Hellmann, Executive Vice President and General Manager of Merial (until December 31, 2016)
    - Karen Linehan, Executive Vice President, Legal Affairs and General Counsel
    - David Loew, Executive Vice President and General Manager of Sanofi Pasteur
    - Philippe Luscan, Executive Vice President, Global Industrial Affairs
    - Muzammil Mansuri, Executive Vice President, Strategy & Business Development
    - David Meeker MD, Executive Vice President and General Manager of Sanofi Genzyme

[1] Excluding Venezuela

- Ameet Nathwani MD, Executive Vice President, Medical Affairs
- Roberto Pucci Executive Vice President, Human Resources
- Elias Zerhouni MD, President, Global Research & Development

A.4.2. Legal and arbitration proceedings

For a description of the most significant developments in legal and arbitration proceedings since publication of the financial statements for the year ended December 31, 2015, refer to Note B.14. to the condensed half-year consolidated financial statements.

The following events have occurred in respect of litigation, arbitration and other legal proceedings in which Sanofi and its affiliates are involved:

Patents

- Genzyme Myozyme®/Lumizyme® patent litigation in the US

In June 2016, the Federal circuit upheld the PTAB (Patent Trial and Appeal Board)'s decision ordering inter alia that BioMarin's claim 1 of the '410 patent and that claims 1 and 3-6 of the '226 patent are determined to be un-patentable.

A.4.3. Other matters

- On February 2, 2016, Sanofi management announced plans for a voluntary redundancy program, in line with the 2020 strategic road map. This program could lead to a net reduction of approximately 600 jobs in France over the next three years, but with no plant closures and no impact on R&D headcount. The main component of the program would be an early retirement scheme wholly funded by Sanofi, supported by other measures, with an estimated cost in the region of €500 million. The program does not apply to Merial, given that Sanofi is in the process of concluding a transaction to exchange Merial for Boehringer Ingelheim's consumer health care business, as announced on December 15, 2015 (see section A.3. above).
- On March 29, 2016, Sanofi announced that it had successfully placed a €1.8 billion bond issue in three tranches under the Euro Medium Term Note program. This issue reduces the average cost and extends the average maturity of Sanofi's debt. The net proceeds will be used for general corporate purposes, including the repayment of existing debt.

B/ Events subsequent to June 30, 2016

- On July 5, 2016, Sanofi and Regeneron announced that the Ministry of Health, Labor and Welfare in Japan had granted marketing and manufacturing authorization for **Praluent®** (alirocumab) for the treatment of uncontrolled low-density lipoprotein (LDL) cholesterol, in certain adult patients with hypercholesterolemia at high cardiovascular risk. Praluent® is a human monoclonal antibody targeting PCSK9 (proprotein convertase subtilisin/kexin type 9). In Japan, Praluent® is indicated for the treatment of patients with hypercholesterolemia and familial hypercholesterolemia who are at high cardiovascular risk and in whom treatment with statins (HMG-CoA reductase inhibitors) is not sufficient. Praluent® 75 mg and 150 mg will be available in Japan as a single-dose pre-filled pen and syringes. The monthly 300 mg dose has also been submitted for approval in the United States and Europe.
- On July 5, 2016, Sanofi confirmed that it had entered into a confidentiality agreement with Medivation under which Sanofi will be provided due diligence access and confidential information. Sanofi indicated that it had been advised by Medivation that Sanofi is being given the same opportunity as others to participate in a process relating to a potential transaction. Sanofi also confirmed that on June 27, 2016 it advised Medivation that upon signing a confidentiality agreement and being provided information, Sanofi would increase its offer to $58.00 in cash and $3.00 in the form of a contingent value right (CVR) relating to the sales performance of Talazoparib. Under the confidentiality agreement, Sanofi agreed to a customary standstill for six months subject to limited early termination events and agreed to withdraw its consent solicitation seeking to remove and replace each member of Medivation's Board of Directors. Sanofi is confident that its due diligence can be quickly completed and that if an agreement is reached on a mutually acceptable transaction, Sanofi can close promptly given that it has received U.S. regulatory clearance, and there would be no financing condition.
- On July 6, 2016, Sanofi and its vaccines global business unit Sanofi Pasteur announced a Cooperative Research and Development Agreement with the Walter Reed Army Institute of Research (WRAIR) on the co-development of a Zika vaccine candidate. According to the terms of the agreement, WRAIR will transfer its Zika purified inactivated virus (ZPIV) vaccine technology to Sanofi Pasteur, opening the door for a broader collaboration with the U.S. government. The agreement also includes Sanofi Pasteur's production of clinical material in compliance with current GMP (Good Manufacturing Practices) to support phase II testing, optimization of the upstream process to improve production yields, and characterization of the vaccine product. Sanofi Pasteur will also create a clinical development and regulatory strategy. WRAIR will share data related to the development of immunologic assays designed to measure neutralizing antibody responses following natural infection and vaccination with ZPIV, biologic samples generated during the performance of non-human primate studies, and biologic samples generated during the performance of human safety and immunogenicity studies using ZPIV.
- On July 22, 2016, a total of 1,803,986 shares (approximately 0.14% of the share capital) were issued as part of Action 2016, a worldwide employee share ownership plan to give employees an increased stake in the future development and performance of Sanofi. During the subscription period, open from June 13 through June 24, 2016, 24,218 employees signed up for the plan, subscribing for Sanofi shares at a price of €57.25 per share. Every employee subscribing for at least five shares received one additional new share as an employer's contribution, and every employee subscribing for at least ten shares received two additional new shares as an employer's contribution.
- In late July 2016, the submission for marketing approval for **sarilumab** for the treatment of rheumatoid arthritis was accepted for review by the European Medicines Agency (EMA).
- On July 28, 2016, **Adlyxin™** (lixisenatide, a GLP-1 receptor agonist) was approved by the FDA.

C/ Consolidated financial statements for the first half of 2016

For definitions of financial indicators, refer to the appendix provided in Section F of this report. Unless otherwise indicated, all financial data in this report are presented in accordance with international financial reporting standards (IFRS), including international accounting standards and interpretations (see Note A.1 to the condensed half-year consolidated financial statements).

VaxServe is a U.S.-based Vaccines segment entity, whose activities include the distribution within the United States of vaccines and other products manufactured by third parties.

In order to improve the clarity of the financial information published by the Company, with effect from January 1, 2016 VaxServe sales of non-Sanofi products are presented within the line item ***Other revenues***. Previously, all VaxServe sales were recognized within the income statement line item ***Net sales***.

The impact of this presentational change on comparative periods is a reclassification from ***Net sales*** to ***Other revenues*** of €210 million for the first half of 2015 and €482 million for the year ended December 31, 2015.

C.1. CONSOLIDATED RESULTS FOR THE FIRST HALF OF 2016

Consolidated income statements for the six months ended June 30, 2015 and June 30, 2016

(€ million)	June 30, 2016 (6 months)[a]	as % of net sales	June 30, 2015 (6 months)[a][b]	as % of net sales
Net sales	**15,926**	**100.0%**	**16,629**	**100.0%**
Other revenues	310	1.9%	353	2.1%
Cost of sales	(4,970)	(31.2%)	(5,268)	(31.7%)
Gross profit	**11,266**	**70.7%**	**11,714**	**70.4%**
Research and development expenses	(2,514)	(15.8%)	(2,405)	(14.5%)
Selling and general expenses	(4,609)	(28.9%)	(4,654)	(28.0%)
Other operating income	265		74	
Other operating expenses	(195)		(166)	
Amortization of intangible assets	(877)		(988)	
Impairment of intangible assets	(52)		(28)	
Fair value remeasurement of contingent consideration liabilities	(67)		71	
Restructuring costs and similar items	(627)		(380)	
Other gains and losses, and litigation	—		—	
Operating income	**2,590**	**16.3%**	**3,238**	**19.5%**
Financial expenses	(241)		(262)	
Financial income	50		57	
Income before tax and associates and joint ventures	**2,399**	**15.1%**	**3,033**	**18.2%**
Income tax expense	(497)		(692)	
Share of profit/(loss) of associates and joint ventures	98		(66)	
Net income excluding the held-for-exchange Animal Health business	**2,000**	**12.6%**	**2,275**	**13.7%**
Net income/(loss) of the held-for-exchange Animal Health business	286		109	
Net income	**2,286**	**14.4%**	**2,384**	**14.3%**
Net income attributable to non-controlling interests	41		59	
Net income attributable to equity holders of Sanofi	**2,245**	**14.1%**	**2,325**	**14.0%**
Average number of shares outstanding (million)	1,287.6		1,307.2	
Average number of shares outstanding after dilution (million)	1,296.6		1,322.0	
– Basic earnings per share (in euros)	1.74		1.78	
– Basic earnings per share (in euros) excluding the held-for-exchange Animal Health business	1.52		1.70	
– Diluted earnings per share (in euros)	1.73		1.76	
– Diluted earnings per share (in euros) excluding the held-for-exchange Animal Health business	1.51		1.68	

(a) The results of the Animal Health business are presented separately in accordance with IFRS 5 (Non-Current Assets Held for Sale and Discontinued Operations); see Notes B.1 and B.20. to the condensed half-year consolidated financial statements.

(b) Due to a change in accounting presentation, Vaxserve sales of non-Sanofi are included in ***Other revenues*** from 2016 onwards. The presentation of prior period ***Net sales*** and ***Other revenues*** has been amended accordingly (see Note A.1.2).

C.2. SEGMENT INFORMATION

C.2.1. Operating segments

In accordance with IFRS 8 (Operating Segments), the segment information reported by Sanofi is prepared on the basis of internal management data provided to the Chief Executive Officer, who is our chief operating decision maker. The performance of those segments is monitored individually using internal reports and common indicators. The operating segment disclosures required under IFRS 8 are provided in Note B.19. to the condensed half-year consolidated financial statements.

Sanofi has three operating segments: Pharmaceuticals, Human Vaccines (Vaccines) and Animal Health. All of our other activities are combined in a separate segment, ***Other***.

Following the signature of the exclusivity agreement with Boehringer Ingelheim and in accordance with IFRS 5 requirements on the presentation of discontinued operations, the net income/loss of the Animal Health business is presented in a separate line item in the consolidated income statements for the first half of 2016 and the prior periods reported. Sanofi will continue to monitor the performance of the Animal Health business until final completion of the transaction. As of the date of this report, the Animal Health business is an operating segment of Sanofi within the meaning of IFRS 8.

C.2.2. Business operating income

We report segment results on the basis of "**Business operating income**"[1]. This indicator is compliant with IFRS 8 and is used internally to measure the performance of operating segments and to allocate resources.

The table below, presented in compliance with IFRS 8, shows a reconciliation between "Business operating income" and ***Income before tax and associates and joint ventures***. These two indicators reflect the results of our continuing operations as defined in IFRS 5.

(€ million)	June 30, 2016 (6 months)	June 30, 2015 (6 months)	December 31, 2015 (12 months)
Business operating income[(a)]	**4,216**	**4,562**	**9,313**
Share of profit/(loss) of associates and joint ventures[(b)]	(53)	(61)	(169)
Net income attributable to non-controlling interests[(c)]	50	62	126
Amortization of intangible assets	(877)	(988)	(2,137)
Impairment of intangible assets	(52)	(28)	(767)
Fair value remeasurement of contingent consideration liabilities	(67)	71	53
Restructuring costs and similar items	(627)	(380)	(795)
Operating income	**2,590**	**3,238**	**5,624**
Financial expenses	(241)	(262)	(559)
Financial income	50	57	178
Income before tax and associates and joint ventures	**2,399**	**3,033**	**5,243**

(a) Excluding the Animal Health business, the net income/loss of which is presented in a separate line item, ***Net income/(loss) of the held-for-exchange Animal Health business***, in the consolidated income statement.

(b) Excluding (i) restructuring costs of associates and joint ventures and (ii) expenses arising from the impact of acquisitions on associates and joint ventures.

(c) Excluding (i) restructuring costs and (ii) other adjustments attributable to non-controlling interests.

C.2.3. Business net income

We believe that investors' understanding of our operational performance is enhanced by reporting "**Business net income**"[2]. This non-GAAP financial measure is obtained by making the following adjustments to "Business operating income": (i) adding back the operating profit of the held-for exchange Animal Health business; (ii) subtracting net financial expense, including for the held-for-exchange Animal Health business; and (iii) subtracting aggregate income tax expense, including for the held-for-exchange Animal Health business.

Business net income for the first half of 2016 was €3,402 million, 4.6% down on the first half of 2015 (€3,566 million). This represents 21.4% of net sales (19.5% of aggregate net sales[3]), compared with 21.4% of net sales (19.8% of aggregate net sales) in the first half of 2015.

We also report "business earnings per share", a non-GAAP financial measure which we define as business net income divided by the weighted average number of shares outstanding.

Business earnings per share was €2.64 in the first half of 2016, 3.3% lower than the 2015 first-half figure of€2.73, based on an average number of shares outstanding of 1,287.6 million in the first half of 2016 and 1,307.2 million in the first half of 2015.

[1] Refer to the appendix in section F for a definition.

[2] Refer to the appendix in section F for a definition.

[3] Non-GAAP financial indicator. For a definition, refer to the appendix in Section F.

The table below reconciles our business net income to ***Net income attributable to equity holders of Sanofi*:**

(€ million)	June 30,[(a)] 2016 (6 months)	June 30,[(a)] 2015 (6 months)	December 31,[(a)] 2015 (12 months)
Business net income	**3,402**	**3,566**	**7,371**
Amortization of intangible assets	(877)	(988)	(2,137)
Impairment of intangible assets	(52)	(28)	(767)
Fair value remeasurement of contingent consideration liabilities	(67)	71	53
Restructuring costs and similar items	(627)	(380)	(795)
Other gains and losses, and litigation	—	—	—
Tax effects:	548	473	1,331
- Amortization of intangible assets	*307*	*343*	*757*
- Impairment of intangible assets	*16*	*10*	*262*
- Fair value remeasurement of contingent consideration	*15*	*(14)*	*39*
- Restructuring costs and similar items	*210*	*134*	*273*
Other tax items [(b)]	(113)	(111)	(111)
Share of items listed above attributable to non-controlling interests	9	3	25
Associates and joint ventures: restructuring costs and expenses arising from the impact of acquisitions	54	(127)	(191)
Items relating to the Animal Health business [(c)]	(13)	(154)	(492)
Other items relating to the Sanofi Pasteur MSD joint venture [(d)]	(19)	—	—
Net income attributable to equity holders of Sanofi	**2,245**	**2,325**	**4,287**

(a) The Animal Health business is presented separately in accordance with IFRS 5.

(b) Tax contribution on income distributed to equity holders of Sanofi.

(c) Includes (i) elimination of depreciation and impairment charged against property, plant and equipment from the IFRS 5 application date and included in business net income; (ii) amortization and impairment charged against property, plant and equipment until the IFRS 5 application date; (iii) costs directly related to the exchange transaction; and (iv) tax effects of the above items. This line also includes income tax expense arising from taxable temporary differences relating to holdings in subsidiaries, given that it has become probable that those differences will reverse (€14 million in the first half of 2016, €149 million in the second half of 2015).

(d) Includes (i) elimination of our share of the business net income of Sanofi Pasteur MSD from the date when Sanofi and Merck announced their intention to end their joint venture and (ii) an income tax charge arising from the taxable temporary difference relating to the investment in the joint venture, given that it has become probable that the difference will reverse (€10 million in the first half of 2016).

The table below reconciles our business operating income to our business net income:

(€ million)	June 30, 2016 (6 months)	June 30, 2015 (6 months)	December 31, 2015 (12 months)
Business operating income[(a)]	**4,216**	**4,562**	**9,313**
Animal Health business operating income [(b)]	453	402	635
Net financial income/(expense), including the held-for-exchange Animal Health business	(194)	(209)	(390)
Aggregate income tax expense, including the held-for-exchange Animal Health business	(1,073)	(1,189)	(2,187)
Business net income	**3,402**	**3,566**	**7,371**

(a) Business operating income of continuing operations.

(b) See section “C.3.20. – Segment Results” below.

C.3. ANALYSIS OF CONSOLIDATED RESULTS FOR THE FIRST HALF OF 2016

C.3.1. Net sales

Consolidated net sales for the first half of 2016 amounted to €15,926 million, 4.2% lower than in the first half of 2015. Exchange rate fluctuations had a negative effect of 3.4 percentage points overall, as the positive impact of the yen/euro exchange rate failed to compensate for adverse trends in the U.S. dollar and a number of Emerging Markets currencies. At constant exchange rates (CER)[1], net sales were down 0.8%.

Reconciliation of 2016 first-half reported net sales to net sales at constant exchange rates

(€ million)	June 30, 2016 (6 months)	June 30, 2015 (6 months)[(b)]	Change
Reported net sales[(a)]	**15,926**	**16,629**	**(4.2)%**
Effect of exchange rates	568		
Net sales at constant exchange rates	**16,494**	**16,629**	**(0.8)%**

(a) In accordance with the presentation requirements of IFRS 5, the consolidated income statement line item ***Net sales*** does not include the net sales of the Animal Health business.

(b) Due to a change in accounting presentation, Vaxserve sales of non-Sanofi are included in ***Other revenues*** from 2016 onwards. The presentation of prior period ***Net sales*** and ***Other revenues*** has been amended accordingly (see Note A.1.2)

C.3.1.1. Net sales by business segment

Our net sales comprise the net sales generated by our Pharmaceuticals and Human Vaccines (Vaccines) segments, in accordance with IFRS 5.

Following the announcement of exclusive negotiations with Boehringer Ingelheim regarding the divestment of our Animal Health business (Merial), the net profit or loss of that business is now presented in a separate line item in the consolidated income statement, ***Net income/(loss) of the held-for-exchange Animal Health business***, in accordance with IFRS 5. Consequently, the net sales reported in our consolidated income statement do not include the net sales of the Animal Health business.

Until final completion of the transaction, expected in the fourth quarter of 2016, we will continue to monitor and report the performance of the Animal Health business (which remains an operating segment within the meaning of IFRS 8). In our analysis of our financial performance for the first half of 2016 we discuss our aggregate net sales, which combines our net sales as reported in the consolidated income statement with the net sales of the Animal Health business. Aggregate net sales is a non-GAAP financial measure.

Aggregate net sales for the first half of 2016 amounted to €17,411 million, 3.2% lower than in the first half of 2015. Exchange rate fluctuations had a negative effect of 3.4 percentage points. At constant exchange rates, aggregate net sales rose by 0.2% year-on-year.

This performance includes the negative effects of a change in the exchange rate applied in translating the results of our Venezuelan operations into euros. This change reflects reforms to the Venezuelan foreign exchange system in February 2016, and the fact that virtually none of Sanofi's operations in the country qualify for conversion from bolivars to U.S. dollars at the official preferential exchange rate[2]. Consequently, net sales from Venezuelan

[1] Refer to the appendix in section F for a definition.

[2] The exchange rate used in the first half of 2016 was the "DICOM" rate of 628 bolivars per U.S. dollar, as opposed to the "CENCOEX" official preferential rate of 6.3 bolivars per U.S. dollar that was used in the first half of 2015.

operations amounted to €9 million in the first half of 2016, versus €399 million in the first half of 2015. Excluding Venezuela, aggregate net sales rose by 2.5% CER.

Reconciliation of 2016 first-half net sales to aggregate net sales at constant exchange rates[1]

(€ million)	June 30, 2016 (6 months)	June 30, 2015 (6 months)[(c)]	Change
Net sales[(a)]	**15,926**	**16,629**	**(4.2)%**
Net sales of the Animal Health business[(b)]	1,485	1,349	10.1%
Aggregate net sales	**17,411**	**17,978**	**(3.2)%**
Effect of exchange rates	610		
Aggregate net sales at constant exchange rates	**18,021**	**17,978**	**0.2%**

(a) In accordance with the presentation requirements of IFRS 5, the consolidated income statement line item ***Net sales*** does not include the net sales of the Animal Health business.

(b) Presented in a separate line item in the consolidated income statement, ***Net income/(loss) of the held-for-exchange Animal Health business***, in accordance with IFRS 5.

(c) Due to a change in accounting presentation, Vaxserve sales of non-Sanofi are included in ***Other revenues*** from 2016 onwards. The presentation of prior period ***Net sales*** and ***Other revenues*** has been amended accordingly (see Note A.1.2)

Net sales by Global Business Unit (GBU)

The table below shows net sales for our Global Business Units (GBUs), reflecting the new structure in place since January 1, 2016. In this structure, Emerging Markets pharmaceuticals sales are included in the General Medicines and Emerging Markets GBU. The new structure is intended to simplify our organization, sharpen our focus and concentrate our efforts on growth drivers.

Net sales by Global Business Unit (GBU) (€ million)	June 30, 2016 (6 months)	June 30, 2015 (6 months)	Change on a reported basis	Change at constant exchange rates
Sanofi Genzyme GBU[(a)] (Specialty Care)[(b)]	2,414	2,016	19.7%	20.3%
Diabetes & Cardiovascular GBU[(a)]	3,102	3,268	(5.1)%	(4.6)%
General Medicines & Emerging Markets GBU[(c)(d)]	8,988	9,971	(9.9)%	(4.9)%
Total Pharmaceuticals	**14,504**	**15,255**	**(4.9)%**	**(1.5)%**
Sanofi Pasteur GBU (Vaccines)[(e)]	**1,422**	**1,374**	**3.5%**	**7.1%**
Total Net Sales [(f)]	**15,926**	**16,629**	**(4.2)%**	**(0.8)%**
Merial GBU (Animal Health)[(g)]	**1,485**	**1,349**	**10.1%**	**13.2%**
Total Aggregate Net Sales	**17,411**	**17,978**	**(3.2)%**	**0.2%**

(a) Does not include Emerging Markets net sales.

(b) Rare Diseases, Multiple Sclerosis, Oncology.

(c) Includes net sales in Emerging Markets of Specialty Care and Diabetes & Cardiovascular products.

(d) Emerging Markets: World excluding United States, Canada, Western and Eastern Europe (apart from Russia, Ukraine, Georgia, Belarus, Armenia and Turkey), Japan, South Korea, Australia, New Zealand and Puerto Rico.

(e) Due to a change in accounting presentation, Vaxserve sales of non-Sanofi are included in ***Other revenues*** from 2016 onwards. The presentation of prior period ***Net sales*** and ***Other revenues*** has been amended accordingly (see Note A.1.2).

(f) In accordance with the presentation requirements of IFRS 5, the consolidated income statement line item ***Net sales*** does not include the net sales of the Animal Health business.

(g) Presented in a separate line item in the consolidated income statement, ***Net income/(loss) of the held-for-exchange Animal Health business***, in accordance with IFRS 5.

[1] Refer to the appendix in section F for a definition.

Net sales by franchise

The table below sets forth our first-half net sales by franchise, along with our aggregate net sales including the net sales of the Animal Health business (which remains an operating segment within the meaning of IFRS 8). An analysis of our performance by franchise allows for a reconciliation with our previous reporting structure and comparison with our peers. The table analyzing our Pharmaceuticals segment net sales by geographical region (see page 25 below) provides a detailed reconciliation of net sales by franchise to net sales by GBU for that segment.

Net sales by franchise (€ million)	June 30, 2016 (6 months)	June 30, 2015 (6 months)	Change on a reported basis	Change at constant exchange rates
Rare Diseases franchise	1,353	1,260	7.4%	11.4%
Multiple Sclerosis franchise	790	468	68.8%	71.6%
Oncology franchise	721	747	(3.5)%	(1.2)%
Total Specialty Care franchise	**2,864**	**2,475**	**15.7%**	**19.0%**
of which Developed Markets (Sanofi Genzyme GBU)	**2,414**	**2,016**	**19.7%**	**20.3%**
of which Emerging Markets[(a) (b)]	**450**	**459**	**(2.0)%**	**13.3%**
Diabetes franchise	3,591	3,825	(6.1)%	(3.8)%
Cardiovascular franchise	203	170	19.4%	20.6%
Total Diabetes & Cardiovascular franchise	**3,794**	**3,995**	**(5.0)%**	**(2.8)%**
of which Developed Markets (Diabetes & Cardiovascular GBU)	**3,102**	**3,268**	**(5.1)%**	**(4.6)%**
of which Emerging Markets[(a) (b)]	**692**	**727**	**(4.8)%**	**5.6%**
Established Prescription Products franchise[(a)]	5,208	5,918	(12.0)%	(9.0)%
Consumer Health Care franchise[(a)]	1,705	1,869	(8.8)%	(3.6)%
Generics franchise[(a)]	933	998	(6.5)%	0.6%
Total Pharmaceuticals	**14,504**	**15,255**	**(4.9)%**	**(1.5)%**
Vaccines (Sanofi Pasteur GBU) [(c)]	**1,422**	**1,374**	**3.5%**	**7.1%**
Total Net Sales[(d)]	**15,926**	**16,629**	**(4.2)%**	**(0.8)%**
Animal Health (Merial GBU)[(e)]	**1,485**	**1,349**	**10.1%**	**13.2%**
Total Aggregate Net Sales	**17,411**	**17,978**	**(3.2)%**	**0.2%**

(a) These items are aggregated to form the General Medicines and Emerging Markets GBU.

(b) Emerging Markets: World excluding United States, Canada, Western and Eastern Europe (apart from Russia, Ukraine, Georgia, Belarus, Armenia and Turkey), Japan, South Korea, Australia, New Zealand and Puerto Rico.

(c) Due to a change in accounting presentation, Vaxserve sales of non-Sanofi are included in ***Other revenues*** from 2016 onwards. The presentation of prior period ***Net sales*** and ***Other revenues*** has been amended accordingly (see Note A.1.2)

(d) In accordance with the presentation requirements of IFRS 5, the consolidated income statement line item ***Net sales*** does not include the netsales of the Animal Health business.

(e) Presented in a separate line item in the consolidated income statement, ***Net income/(loss) of the held-for-exchange Animal Health business***, in accordance with IFRS 5.

Pharmaceuticals segment

Net sales of the **Pharmaceuticals** segment were €14,504 million in the first half of 2016, down 4.9% on a reported basis and 1.5% at constant exchange rates.

This year-on-year fall of €751 million reflects the negative effect of exchange rates (€518 million) on the one hand, and the following impacts at constant exchange rates on the other:

- lower net sales for the Established Prescription Products franchise (down €531 million), the Diabetes franchise (down €145 million) and the Consumer Health Care franchise (down €68 million);
- growth in net sales for the Multiple Sclerosis franchise (up €335 million) and the Rare Diseases franchise (up €144 million);
- positive mix effects totaling €32 million.

Excluding Venezuela, pharmaceuticals net sales rose by 1% CER.

Net sales by product and franchise

(€ million)	Indication	June 30, 2016 (6 months)	June 30, 2015 (6 months)	Change on a reported basis	Change at constant exchange rates
Cerezyme®	Gaucher disease	381	388	(1.8)%	5.9%
Cerdelga®	Gaucher disease	49	26	88.5%	88.5%
Myozyme® / Lumizyme®	Pompe disease	348	321	8.4%	11.2%
Fabrazyme®	Fabry disease	316	287	10.1%	12.2%
Aldurazyme®	Mucopolysaccharidosis	98	98	0.0%	5.1%
Other		161	140	15.0%	15.7%
Total Rare Diseases franchise		**1,353**	**1,260**	**7.4%**	**11.4%**
Aubagio®	Multiple sclerosis	594	374	58.8%	61.0%
Lemtrada™	Multiple sclerosis	196	94	108.5%	113.8%
Total Multiple Sclerosis franchise		**790**	**468**	**68.8%**	**71.6%**
Jevtana®	Prostate cancer	178	159	11.9%	12.6%
Thymoglobulin®	Organ rejection	134	124	8.1%	10.5%
Taxotere®	Breast, lung, prostate, stomach, and head & neck cancer	92	115	(20.0)%	(16.5)%
Eloxatin®	Colorectal cancer	86	111	(22.5)%	(17.1)%
Mozobil®	Hematologic malignancies	72	69	4.3%	7.2%
Zaltrap®	Colorectal cancer	34	40	(15.0)%	(15.0)%
Other		125	129	(3.1)%	(2.3)%
Total Oncology franchise		**721**	**747**	**(3.5)%**	**(1.2)%**
Total Specialty Care franchise		**2,864**	**2,475**	**15.7%**	**19.0%**
Lantus®	Diabetes	2,860	3,293	(13.1)%	(11.1)%
Toujeo®	Diabetes	244	20	1,120.0%	1,125.0%
Amaryl®	Diabetes	181	206	(12.1)%	(7.3)%
Apidra®	Diabetes	178	184	(3.3)%	0.0%
Insuman®	Diabetes	66	67	(1.5)%	4.5%
Blood glucose meters	Diabetes	34	32	6.3%	6.3%
Lyxumia®	Diabetes	17	18	(5.6)%	0.0%
Afrezza®	Diabetes	3	3	0.0%	0.0%
Other	Diabetes	8	2	300.0%	300.0%
Total Diabetes franchise		**3,591**	**3,825**	**(6.1)%**	**(3.8)%**
Multaq®	Atrial fibrillation	170	170	0.0%	0.6%
Praluent®	Hypercholesterolemia	33	-	-	-
Total Cardiovascular franchise		**203**	**170**	**19.4%**	**20.6%**
Total Diabetes & Cardiovascular franchise		**3,794**	**3,995**	**(5.0)%**	**(2.8)%**
Lovenox®	Thrombosis	818	871	(6.1)%	(1.7)%
Plavix®	Atherothrombosis	780	1,028	(24.1)%	(22.2)%
Renagel®/Renvela®	Hyperphosphatemia	442	457	(3.3)%	(2.4)%
Aprovel® / Avapro®	Hypertension	344	425	(19.1)%	(14.6)%
Depakine®	Epilepsy	206	212	(2.8)%	2.8%
Synvisc® / Synvisc-One®	Arthritis	197	201	(2.0)%	0.0%
Allegra®	Allergic rhinitis, urticaria	114	117	(2.6)%	(7.7)%
Stilnox®/Ambien®/Myslee®	Sleep disorders	148	149	(0.7)%	0.0%
Tritace®	Hypertension	125	145	(13.8)%	(11.0)%
Targocid®	Bacterial infections	75	82	(8.5)%	(3.7)%
Lasix®	Edema, hypertension	77	89	(13.5)%	(11.2)%
Cordarone®	Arrhythmia	63	67	(6.0)%	(1.5)%
Xatral®	Benign prostatic hypertrophy	54	48	12.5%	18.8%
Orudis®	Rheumatoid arthritis, osteoarthritis	50	93	(46.2)%	(38.7)%
Other		1,715	1,934	(11.3)%	(8.0)%
Total Established Prescription Products franchise		**5,208**	**5,918**	**(12.0)%**	**(9.0)%**
Consumer Health Care franchise		**1,705**	**1,869**	**(8.8)%**	**(3.6)%**
Generics franchise		**933**	**998**	**(6.5)%**	**0.6%**
Total Pharmaceuticals		**14,504**	**15,255**	**(4.9)%**	**(1.5)%**

Rare Diseases franchise

Net sales for the **Rare Diseases** franchise reached €1,353 million in the first half of 2016, up 7.4% on a reported basis and 11.4% at constant exchange rates.

In Gaucher disease, net sales of **Cerezyme®** advanced by 5.9% at constant exchange rates (CER) to €381 million, as strong growth in Emerging Markets[1] (+24.2% CER, at €126 million) more than compensated for lower sales in the United States (-9.1% CER, at €89 million) due to the launch of **Cerdelga®**, net sales of which were €49 million (including €39 million in the United States). In Europe, where Cerdelga® is now available in a number of European countries (including Germany, France, Italy and some Nordic countries), net sales of the product were up 700% CER at €8 million.

Net sales of **Myozyme® / Lumizyme®** rose by 11.2% CER to €348 million, driven by sales in the United States (+14.1% CER, at €113 million) and Europe (+10% CER, at €163 million). In Emerging Markets, sales were up 3.9% CER at €46 million.

Fabrazyme® posted net sales growth of 12.2% CER to €316 million. The product reported growth in many countries due to a rise in the number of patients treated, with notable performances in Europe (+14.7% CER, at €77 million), the United States (+11.6% CER, at €164 million) and Japan (+19.2% CER, at €34 million). Emerging Markets sales were stable year-on-year at €27 million.

Multiple Sclerosis franchise

Net sales for the **Multiple Sclerosis** franchise reached €790 million in the first half of 2016, up 68.8% on a reported basis and 71.6% at constant exchange rates. Net sales of **Aubagio®** advanced by 61% CER to €594 million. In the United States, net sales reached €404 million (+52.8% CER). In Europe, the product continued to extend its geographical reach, and net sales rose by 84.5% CER to €154 million. Net sales of **Lemtrada®** amounted to €196 million (+113.8% CER), including €102 million in the United States and €75 million in Europe, mainly in Germany and the United Kingdom.

Oncology franchise

The **Oncology** franchise generated net sales of €721 million, down 3.5% on a reported basis and 1.2% at constant exchange rates, reflecting lower sales of Taxotere®, Eloxatin® and Zaltrap®, though the effect was partially compensated for by increased sales of Jevtana®, Thymoglobulin® and Mozobil®.

Net sales of **Jevtana®** totaled €178 million in the first half of 2016 (+12.6% CER), driven by a strong performance in the United States (+25% CER, at €75 million) and by sales growth in Japan (+142.9% CER, at €19 million).

Net sales of **Thymoglobulin®** rose by 10.5% CER to €134 million on good performances in Emerging Markets (+16% CER, at €27 million), the United States (+10% CER, at €76 million) and the Rest of the World[2] (+22.2% CER, at €11 million).

Taxotere® saw net sales fall by 16.5% CER, to €92 million. The product is facing competition from generics in Emerging Markets (-1.4% CER, at €64 million) and in Japan (-56.3% CER, at €15 million), though the effect was mitigated by sales growth in China (+30.4% CER, at €29 million).

Net sales of **Eloxatin®** were down 17.1% CER at €86 million, hit by a slump in sales in Canada (-78.8% CER, at €6 million), reflecting competition from generics.

Net sales of **Mozobil®** reached €72 million, up 7.2% CER, mainly on sales growth in the United States (+12.8% CER, at €44 million).

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[1] World excluding United States, Canada, Western and Eastern Europe (apart from Russia, Ukraine, Georgia, Belarus, Armenia and Turkey), Japan, South Korea, Australia, New Zealand and Puerto Rico.

[2] Japan, South Korea, Canada, Australia, New Zealand and Puerto Rico.

Zaltrap® (aflibercept, developed in collaboration with Regeneron) saw net sales fall by 15% CER to €34 million. This reflects lower sales in the United States (-41.7% CER, at €7 million) and also in Europe (-7.7% CER, at €24 million).

Diabetes franchise

Net sales for the **Diabetes** franchise amounted to €3,591 million in the first half of 2016, down 6.1% on a reported basis and 3.8% at constant exchange rates. The main factor was reduced sales of Lantus® in the United States. In the United States, net sales for the Diabetes franchise were €1,983 million, down 9% CER. Outside the United States, Diabetes franchise net sales reported growth in Europe (+2.4% CER, at €676 million, boosted by the launch of Toujeo®) and in Emerging Markets (+5.7% CER, at €689 million, +11.8% CER excluding Venezuela).

Net sales of **glargine insulins** (Lantus® and Toujeo®) fell by 4.3% CER to €3,104 million.

Net sales of **Lantus®** fell by 11.1% CER in the first half to €2,860 million. In the United States, sales were down 16.7% CER at €1,739 million, mainly on a reduction in the average price and the switching of patients to Toujeo®. Net sales in Europe fell by 6.4% CER to €464 million, due largely to the launch of a biosimilar of Lantus® in July 2015. In Emerging Markets, net sales were up 5.8% CER at €478 million (+9.9% CER excluding Venezuela). The drop in sales in Latin America (-4.5% CER, at €99 million), which mainly reflected the situation in Venezuela, was more than compensated for by growth in Asia (+17.7% CER, at €177 million).

Toujeo®, a new-generation basal insulin which saw its first launches in 2015, posted net sales of €244 million, including €184 million in the United States and €46 million in Europe. Worldwide rollout is ongoing, and we expect Toujeo® to be available in more than 40 countries by the end of 2016.

Net sales of **Amaryl®** fell by 7.3% CER to €181 million, reflecting a weaker performance in Emerging Markets (-4.3% CER, at €145 million) due primarily to the situation in Venezuela (+9.1% CER excluding Venezuela) and competition from generics, especially in Japan (-29.2% CER, at €19 million).

First-half net sales of **Apidra®** were stable at €178 million. Lower sales in the United States (-20.3% CER, at €55 million) were compensated for by sales growth in Emerging Markets (+31.4% CER, at €40 million) and in Europe (+3.3% CER, at €63 million).

Lyxumia® generated 2016 first-half net sales of €17 million, in line with the 2015 first-half figure.

Cardiovascular franchise

In the first half of 2016, net sales of **Praluent®** (alirocumab, developed in collaboration with Regeneron) reached €33 million, of which €27 million was generated in the United States and €6 million in Europe, where the product is now available in a number of countries including Germany, Spain, the Netherlands, the United Kingdom, and some Nordic countries. The first-half sales figures reflect current restrictions on the part of payers, which are preventing sales of the product from taking off.

Net sales of **Multaq®** reached €170 million (+0.6% CER), of which €143 million was generated in the United States (-0.7% CER).

Established Prescription Products

Net sales of **Established Prescription Products** in the first half of 2016 amounted to €5,208 million, down 12% on a reported basis and 9% at constant exchange rates. This reflects the situation in Venezuela (excluding Venezuela, net sales were down 5.7% CER), and reduced sales of Plavix® in Japan. In Europe and the United States, net sales of established prescription products fell by 4.3% (to €1,875 million) and 5.8% (to €744 million), respectively.

Net sales of **Lovenox®** were €818 million, down 1.7% CER, due to competition from generics in the United States and the situation in Venezuela (excluding Venezuela, net sales fell by just 0.7%). Net sales of the product were stable year-on-year in Emerging Markets (at €218 million) and in Europe (at €524 million). In July 2016, two biosimilars containing enoxaparin sodium received a positive opinion from the Committee for Medicinal Products for Human Use (CHMP) of the EMA.

First-half net sales of **Plavix®** were €780 million, a drop of 22.2% CER, reflecting competition from generics in Europe (-10.5% CER, at €85 million) and in Japan from June 2015 (-57.6% CER, at €185 million), although the effect was partly compensated for by a strong performance in China (+16.8%, at €349 million). Sales of Plavix® in the United States and Puerto Rico are handled by BMS under the terms of the Sanofi-BMS alliance[1].

First-half net sales of **Renvela®/Renagel®** fell by 2.4% CER, to €442 million. In the United States, net sales advanced by 7.4% CER, to €364 million. Generics of this product are now being sold in some European countries, as a result of which net sales of Renvela®/Renagel® in Europe slipped by 35.8% to €43 million. We expect potential generic competition in the United States during 2016.

First-half net sales of **Aprovel®/Avapro®** came to €344 million, down 14.6% CER, mainly due to Venezuela. Excluding Venezuela, sales of Aprovel®/Avapro® fell by 1.9%, largely as a result of generic competition in Japan.

In the first half of 2015, sales of **Auvi-Q®/Allerject®** amounted to €52 million. Sanofi no longer sells this product in the United States, and no sales have been recognized there in 2016.

We have no comments on sales of our other prescription products.

Consumer Health Care

In the first half of 2016, net sales for the **Consumer Health Care** business fell by 8.8% on a reported basis and 3.6% at constant exchange rates, to €1,705 million. Excluding Venezuela and disposals of minor products, net sales of Consumer Health Care products rose by 3.4% CER.

Net sales in the United States rose by 3.6% CER to €513 million, despite lower sales of Allegra® (-6.9% CER, at €148 million) due to a poor allergy season. In Emerging Markets, net sales slipped by 11.4% to €600 million, reflecting the impact of Venezuela but also lower sales in Russia and China. In the Rest of the World region, first-half net sales were up 15.3% at €137 million, driven by sales of anti-allergy products and vitamins in Australia. In Europe, net sales for the period were down 3.6% CER at €455 million, largely as a result of disposals of minor products.

On June 27, 2016, Sanofi and Boehringer Ingelheim announced that they had signed contracts to secure the strategic transaction involving the exchange of Sanofi's animal health business (Merial) and Boehringer Ingelheim's consumer healthcare business. This step marks a major milestone towards the closing of the transaction, which remains subject to approval by regulatory authorities in the relevant territories.

(€ million)	June 30, 2016 (6 months)	June 30, 2015 (6 months)	Change on a reported basis	Change at constant exchange rates
Allegra®	237	258	(8.1)%	(5.0)%
Doliprane®	154	155	(0.6)%	-
Essentiale®	71	95	(25.3)%	(17.9)%
Enterogermina®	85	93	(8.6)%	(3.2)%
Nasacort®	68	74	(8.1)%	(6.8)%
Maalox®	45	54	(16.7)%	(11.1)%
Lactacyd®	41	68	(39.7)%	(32.4)%
Dorflex®	34	43	(20.9)%	(2.3)%
No Spa®	40	44	(9.1)%	2.3%
Magné B6®	36	41	(12.2)%	(4.9)%
Other products	894	944	(5.3)%	-
Total Consumer Health Care	**1,705**	**1,869**	**(8.8)%**	**(3.6)%**

[1] See Note C.2 to the consolidated financial statements for the year ended December 31, 2015, on page F-32 of our Annual Report on Form 20-F; this document is available on our corporate website, *www.sanofi.com*.

Generics

The **Generics** business reported 2016 first-half net sales of €933 million, down 6.5% on a reported basis but up 0.6% at constant exchange rates (and up 3.3% excluding Venezuela).

Emerging Markets generated net sales of €380 million (+1.4% CER), boosted by Latin America and Turkey. In the United States, net sales rose by 3.3% CER to €94 million, mainly due to increased sales of authorized generics of Lovenox®. In the Rest of the World region, sales fell by 13.7% CER to €46 million, mainly as a result of lower sales of the authorized generic version of Plavix® in Japan (-14.6% CER, at €37 million).

2016 first-half Pharmaceuticals net sales by geographical region

(€ million)	Total GBUs	Europe[a]	Change at constant exchange rates	United States	Change at constant exchange rates	Rest of the world[b]	Change at constant exchange rates	Emerging Markets[c]	Change at constant exchange rates	Total Franchise	Change at constant exchange rates
Cerezyme®	255	142	1.4%	89	(9.1)%	24	0.0%	126	24.2%	381	5.9%
Cerdelga®	49	8	700.0%	39	56.0%	2	-	—	-	49	88.5%
Myozyme®/Lumizyme®	302	163	10.0%	113	14.1%	26	23.8%	46	3.9%	348	11.2%
Fabrazyme®	289	77	14.7%	164	11.6%	48	21.1%	27	0.0%	316	12.2%
Aldurazyme®	71	38	2.6%	21	5.0%	12	20.0%	27	3.3%	98	5.1%
Other	142	36	45.8%	60	10.9%	46	0.0%	19	31.3%	161	15.7%
Total Rare Diseases	**1,108**	**464**	**10.9%**	**486**	**9.7%**	**158**	**12.3%**	**245**	**14.9%**	**1,353**	**11.4%**
Aubagio®	578	154	84.5%	404	52.8%	20	57.1%	16	81.8%	594	61.0%
Lemtrada™	188	75	92.5%	102	126.7%	11	140.0%	8	150.0%	196	113.8%
Total Multiple Sclerosis	**766**	**229**	**87.1%**	**506**	**63.5%**	**31**	**78.9%**	**24**	**100.0%**	**790**	**71.6%**
Jevtana®	167	71	(5.3)%	75	25.0%	21	90.0%	11	0.0%	178	12.6%
Thymoglobulin®	107	20	0.0%	76	10.0%	11	22.2%	27	16.0%	134	10.5%
Taxotere®	28	2	(25.0)%	2	(33.3)%	24	(41.0)%	64	(1.4)%	92	(16.5)%
Eloxatin®	20	2	0.0%	—	(100.0)%	18	(54.8)%	66	9.2%	86	(17.1)%
Mozobil®	68	21	5.0%	44	12.8%	3	0.0%	4	(16.7)%	72	7.2%
Zaltrap®	32	24	(7.7)%	7	(41.7)%	1	0.0%	2	100.0%	34	(15.0)%
Other	118	26	(10.0)%	81	2.5%	11	(9.1)%	7	(11.1)%	125	(2.3)%
Total Oncology	**540**	**166**	**(5.1)%**	**285**	**7.9%**	**89**	**(25.0)%**	**181**	**4.2%**	**721**	**(1.2)%**
Sanofi Genzyme (Specialty Care)	**2,414**	**859**	**20.1%**	**1,277**	**25.6%**	**278**	**1.1%**	**450**	**13.3%**	**2,864**	**19.0%**
Lantus®	2,382	464	(6.4)%	1,739	(16.7)%	179	(6.6)%	478	5.8%	2,860	(11.1)%
Toujeo®	243	46	4,500.0%	184	927.8%	13	1,200.0%	1	-	244	1,125.0%
Amaryl®	36	16	23.1%	1	0.0%	19	(37.9)%	145	(4.3)%	181	(7.3)%
Apidra®	138	63	3.3%	55	(20.3)%	20	5.3%	40	31.4%	178	0.0%
Insuman®	44	43	(10.4)%	1	0.0%	—	-	22	38.9%	66	4.5%
Blood glucose meters	34	33	10.0%	—	-	1	(100.0)%	—	0.0%	34	6.3%
Lyxumia®	15	11	0.0%	—	-	4	0.0%	2	0.0%	17	0.0%
Afrezza®	3	—	-	3	0.0%	—	-	—	-	3	0.0%
Other	7	—	-	—	-	7	600.0%	1	0.0%	8	300.0%
Total Diabetes	**2,902**	**676**	**2.4%**	**1,983**	**(9.0)%**	**243**	**(2.0)%**	**689**	**5.7%**	**3,591**	**(3.8)%**
Multaq®	167	23	9.5%	143	(0.7)%	1	0.0%	3	0.0%	170	0.6%
Praluent®	33	6	-	27	-	—	-	—	-	33	-
Total Cardiovascular	**200**	**29**	**38.1%**	**170**	**18.1%**	**1**	**50.0%**	**3**	**0.0%**	**203**	**20.6%**
Total Diabetes & Cardiovascular	**3,102**	**705**	**3.5%**	**2,153**	**(7.3)%**	**244**	**(1.6)%**	**692**	**5.6%**	**3,794**	**(2.8)%**
Lovenox®	818	524	(0.4)%	29	(32.6)%	47	6.3%	218	(0.8)%	818	(1.7)%
Plavix®	780	85	(10.5)%	1	-	211	(53.9)%	483	3.2%	780	(22.2)%
Renagel®/Renvela®	442	43	(35.8)%	364	7.4%	15	21.4%	20	(40.5)%	442	(2.4)%
Aprovel®/CoAprovel®	344	66	(13.0)%	6	(25.0)%	61	(12.2)%	211	(15.4)%	344	(14.6)%
Depakine®	206	81	(1.2)%	—	-	7	14.3%	118	4.9%	206	2.8%
Synvisc® / Synvisc-One®	197	17	0.0%	151	(1.9)%	7	0.0%	22	13.6%	197	0.0%
Allegra®	114	5	(14.3)%	—	-	109	(7.3)%	—	-	114	(7.7)%
Stilnox®/Ambien®/Myslee®	148	22	(4.3)%	39	14.3%	60	(11.1)%	27	10.7%	148	0.0%
Tritace®	125	79	(4.8)%	—	-	2	(50.0)%	44	(18.6)%	125	(11.0)%
Targocid®	75	39	(7.1)%	—	-	3	0.0%	33	0.0%	75	(3.7)%
Lasix®	77	38	(2.6)%	—	(100.0)%	12	(42.1)%	27	3.4%	77	(11.2)%
Cordarone®	63	14	0.0%	—	-	15	(12.5)%	34	2.8%	63	(1.5)%
Xatral®	54	19	0.0%	—	-	2	0.0%	33	34.6%	54	18.8%
Orudis®	50	9	0.0%	—	-	2	0.0%	39	(44.4)%	50	(38.7)%
Other	1,715	834	(3.1)%	154	(26.8)%	171	(14.9)%	556	(6.5)%	1,715	(8.0)%
Total Established Prescription Products	**5,208**	**1,875**	**(4.3)%**	**744**	**(5.8)%**	**724**	**(29.2)%**	**1,865**	**(5.1)%**	**5,208**	**(9.0)%**
Consumer Health Care	**1,705**	455	(3.6)%	513	3.6%	137	15.3%	600	(11.4)%	**1,705**	(3.6)%
Generics	**933**	413	1.0%	94	3.3%	46	(13.7)%	380	1.4%	**933**	0.6%
Total Emerging Markets - Specialty Care	450							450	13.3%		
Total Emerging Markets - Diabetes & Cardiovascular	692							692	5.6%		
General Medicines & Emerging Markets	**8,988**	**2,743**	**(3.4)%**	**1,351**	**(1.8)%**	**907**	**(23.8)%**	**3,987**	**(2.0)%**		
Total Pharmaceuticals	**14,504**	**4,307**	**1.7%**	**4,781**	**1.4%**	**1,429**	**(16.5)%**	**3,987**	**(2.0)%**	**14,504**	**(1.5)%**

(a) Western Europe and Eastern Europe excluding Eurasia (Russia, Ukraine, Georgia, Belarus, Armenia and Turkey).

(b) Japan, South Korea, Canada, Australia, New Zealand and Puerto Rico.

(c) World excluding United States, Canada, Western and Eastern Europe (apart from Eurasia), Japan, South Korea, Australia, New Zealand and Puerto Rico.

Human Vaccines (Vaccines) segment

In the first half of 2016, net sales of the **Vaccines** segment reached €1,422 million, up 3.5% on a reported basis and 7.1% CER, driven by sales of Polio/Pertussis/Hib vaccines in Emerging Markets and by Menactra®.

First-half Vaccines net sales in the United States were €575 million, down 9.2% CER due to expected supply shortages of Pentacel® and increased competition for Adacel®. In Emerging Markets, Vaccines net sales advanced by 20.7% CER, driven by growth in sales of Pentaxim® and Hexaxim®.

(€ million)	June 30, 2016 (6 months)	June 30, 2015 (6 months)	Change on a reported basis	Change at constant exchange rates
Polio/Pertussis/Hib Vaccines (incl. Pentacel® and Pentaxim®)	627	555	13.0%	17.1%
Influenza Vaccines (including Vaxigrip® and Fluzone®)	116	136	(14.7)%	(8.1)%
Meningitis/Pneumonia Vaccines (including Menactra®)	261	242	7.9%	10.3%
Adult Booster Vaccines (including Adacel®)	184	213	(13.6)%	(12.2)%
Travel and Other Endemics Vaccines	184	179	2.8%	6.1%
Dengvaxia®	20	-	-	-
Other vaccines[(a)]	30	49	(38.8)%	(34.7)%
Total Vaccines segment[(a)]	**1,422**	**1,374**	**3.5%**	**7.1%**

(a) Due to a change in accounting presentation, Vaxserve sales of non-Sanofi are included in ***Other revenues*** from 2016 onwards. The presentation of prior period ***Net sales*** and ***Other revenues*** has been amended accordingly (see Note A.1.2)

Polio/Pertussis/Hib vaccines posted net sales of €627 million, up 17.1% CER. In Emerging Markets, sales for this franchise reached €358 million (+47.5% CER) due to sales growth for Hexaxim® in the Middle East and Africa. This more than compensated for the expected drop in sales of Pentacel® in the United States, where sales of Polio/Pertussis/Hib vaccines were down 28.5% CER at €148 million. As previously announced, Sanofi Pasteur is experiencing delays in production of Pentacel® and will not be able to meet current demand in full. Supplies are expected to improve in the second half of 2016.

Dengvaxia®, the world's first dengue vaccine, is now approved in five countries: Mexico, the Philippines, Brazil, El Salvador and Costa Rica. Dengvaxia® was launched in the Philippines in the first quarter of 2016 and in El Salvador in July 2016. In addition, a public vaccination program covering half a million people in Parana state (Brazil) was announced in late July. In spite of these advances, sales growth for Dengvaxia® has been held back by recent political developments and economic volatility in Latin America. Given the limited number of public immunization programs confirmed to date in endemic countries, and that approval in a significant number of Asian countries is still pending, it is unlikely that Dengvaxia® will reach the sales targets initially expected by Sanofi for 2016. Sales of Dengvaxia® for the first half of 2016 amounted to €20 million, representing the sale of the initial dose in the first public dengue vaccination program conducted in the Philippines in the first quarter of 2016.

Net sales of **influenza vaccines** fell by 8.1% CER to €116 million, affected by a decline in sales in Brazil as a result of an increase in supplies sourced from the Butantan Institute.

Net sales of **Menactra®** totaled €237 million, up 10% due largely to trends in orders placed by the Centers for Disease Control and Prevention (CDC) in the United States.

First-half sales of **adult booster vaccines** were €184 million, down 12.2%, reflecting increased competition for Adacel® in the United States.

Travel and other endemics vaccines posted a 6.1% rise in net sales to €184 million in the first half, boosted by sales of rabies and typhoid vaccines.

Sanofi Pasteur MSD, our joint venture with Merck & Co. in Europe, reported first-half net sales (not included in our consolidated net sales) of €340 million, up 13.4% on a reported basis. The main drivers were growth in sales of Gardasil® (+25% on a reported basis, at €90 million), the new hexavalent pediatric vaccine Hexyon® (+65% on a reported basis, at €34.9 million), and the chickenpox vaccine Varivax® (+90% on a reported basis, at €27.2 million). In March 2016, Sanofi Pasteur and Merck announced their intention to end Sanofi Pasteur MSD, their joint venture in vaccines, in order to pursue their own distinct growth strategies in Europe. Sanofi Pasteur and MSD expect the project to be completed by the end of 2016, subject to local labor laws and regulations and regulatory approvals.

2016 first-half Vaccines net sales by geographical region

(€ million)	Europe[(a)]	Change at constant exchange rates	United States	Change at constant exchange rates	Rest of the world[(b)]	Change at constant exchange rates	Emerging Markets[(c)]	Change at constant exchange rates
Polio/Pertussis/Hib Vaccines (including Pentacel® and Pentaxim®)	58	56.8%	148	(28.5)%	63	19.2%	358	47.5%
Influenza Vaccines (including Vaxigrip® and Fluzone®)	1	-	3	(250.0)%	20	40.0%	92	(18.0)%
Meningitis/Pneumonia Vaccines (including Menactra®)	3	200.0%	204	10.2%	8	100.0%	46	-
Adult Booster Vaccines (including Adacel®)	26	44.4%	127	(19.5)%	13	18.2%	18	(20.0)%
Travel and Other Endemics Vaccines	16	(11.1)%	69	38.0%	23	(19.4)%	76	-
Dengvaxia®	-	-	-	-	-	-	20	-
Other vaccines[(d)]	1	100.0%	24	(32.4)%	3	(20.0)%	2	(83.3)%
Total Vaccines segment[(d)]	**105**	**39.5%**	**575**	**(9.2)%**	**130**	**12.7%**	**612**	**20.7%**

(a) Western Europe and Eastern Europe excluding Eurasia (Russia, Ukraine, Georgia, Belarus, Armenia and Turkey).

(b) Japan, South Korea, Canada, Australia, New Zealand and Puerto Rico.

(c) World excluding United States, Canada, Western and Eastern Europe (apart from Eurasia), Japan, South Korea, Australia, New Zealand and Puerto Rico.

(d) Due to a change in accounting presentation, Vaxserve sales of non-Sanofi are included in ***Other revenues*** from 2016 onwards. The presentation of prior period ***Net sales*** and ***Other revenues*** has been amended accordingly (see Note A.1.2)

Animal Health

Net sales for the **Animal Health** segment for the first half of 2016 were €1,485 million, up 10.1% on a reported basis and 13.2% at constant exchange rates.

Net sales for the **Companion Animals** franchise were up 14.2% CER at €1,022 million, boosted by the success in the United States, Europe and Japan of the NexGard® range, Merial's new-generation anti-parasite treatment targeting dog ticks and fleas. This more than compensated for a drop in sales of the Frontline® range. HeartGard® also contributed to sales growth for the Companion Animals franchise.

First-half net sales for the **Production Animals** franchise reached €463 million, up 11.1% CER, reflecting solid performances in the avian sector in Emerging Markets and the ruminants sector in the United States and Europe.

(€ million)	June 30, 2016 (6 months)	June 30, 2015 (6 months)	Change on a reported basis	Change at constant exchange rates
Companion animals	1,022	907	12.7%	14.2%
Production animals	463	442	4.8%	11.1%
Total Animal Health	**1,485**	**1,349**	**10.1%**	**13.2%**
Of which fipronil products	*350*	*387*	*(9.6)%*	*(7.5)%*
Of which vaccines	*417*	*391*	*6.6%*	*11.3%*
Of which avermectin products	*312*	*288*	*8.3%*	*10.4%*
Of which Nexgard®	*246*	*139*	*77.0%*	*79.1%*

2016 first-half Animal Health net sales by geographical region

(€ million)	Europe[(a)]	Change at constant exchange rates	United States	Change at constant exchange rates	Rest of the world[(b)]	Change at constant exchange rates	Emerging Markets[(c)]	Change at constant exchange rates
Fipronil products	116	(7.1)%	165	(13.5)%	19	-	50	11.8%
Vaccines	105	6.0%	99	5.3%	28	(24.3)%	185	26.3%
Avermectin products	27	-	215	12.6%	40	-	30	21.4%
Nexgard®	22	100.0%	177	56.1%	35	218.2%	12	366.7%
Antimicrobials	18	20.0%	11	22.2%	-	-	11	18.2%
Other Animal Health products	32	6.9%	61	15.4%	7	66.7%	20	9.5%
Total Animal Health	**320**	**4.2%**	**728**	**11.8%**	**129**	**16.8%**	**308**	**25.2%**

(a) Western Europe and Eastern Europe excluding Eurasia (Russia, Ukraine, Georgia, Belarus, Armenia and Turkey).
(b) Japan, South Korea, Canada, Australia, New Zealand and Puerto Rico.
(c) World excluding United States, Canada, Western and Eastern Europe (apart from Eurasia), Japan, South Korea, Australia, New Zealand and Puerto Rico.

C.3.1.2. Net sales by geographical region

Consolidated net sales by geographical region

(€ million)	June 30, 2016 (6 months)	June 30, 2015 (6 months)	Change on a reported basis	Change at constant exchange rates
United States	5,356	5,365	(0.2)%	0.1%
Emerging Markets[(a)]	4,599	5,097	(9.8)%	0.5%
Of which Latin America	*1,146*	*1,709*	*(32.9)%*	*(17.7)%*
Of which Asia (excluding South Asia)	*1,529*	*1,467*	*4.2%*	*9.5%*
Of which Africa, Middle East and South Asia	*1,342*	*1,308*	*2.6%*	*9.9%*
Of which Eurasia[(b)]	*515*	*563*	*(8.5)%*	*6.4%*
Europe[(c)]	4,412	4,345	1.5%	2.3%
Rest of the world[(d)]	1,559	1,822	(14.4)%	(14.6)%
Of which Japan	*850*	*1,094*	*(22.3)%*	*(27.1)%*
Total net sales	**15,926**	**16,629**	**(4.2)%**	**(0.8)%**

(a) World excluding United States, Canada, Western and Eastern Europe (apart from Eurasia), Japan, South Korea, Australia, New Zealand and Puerto Rico.
(b) Russia, Ukraine, Georgia, Belarus, Armenia and Turkey.
(c) Western Europe and Eastern Europe (excluding Eurasia).
(d) Japan, South Korea, Canada, Australia, New Zealand and Puerto Rico.

Aggregate net sales by geographical region

(€ million)	June 30, 2016 (6 months)	June 30, 2015 (6 months)	Change on a reported basis	Change at constant exchange rates
United States	6,084	6,017	1.1%	1.4%
Emerging Markets[(a)]	4,907	5,371	(8.6)%	1.7%
Of which Latin America	*1,269*	*1,828*	*(30.6)%*	*(15.0)%*
Of which Asia (excluding South Asia)	*1,637*	*1,560*	*4.9%*	*10.2%*
Of which Africa, Middle East and South Asia	*1,404*	*1,355*	*3.6%*	*11.0%*
Of which Eurasia[(b)]	*529*	*576*	*(8.2)%*	*6.9%*
Europe[(c)]	4,732	4,655	1.7%	2.5%
Rest of the world[(d)]	1,688	1,935	(12.8)%	(12.8)%
Of which Japan	*893*	*1,114*	*(19.8)%*	*(24.9)%*
Total aggregate net sales	**17,411**	**17,978**	**(3.2)%**	**0.2%**

(a) World excluding United States, Canada, Western and Eastern Europe (apart from Eurasia), Japan, South Korea, Australia, New Zealand and Puerto Rico.

(b) Russia, Ukraine, Georgia, Belarus, Armenia and Turkey.

(c) Western Europe and Eastern Europe (excluding Eurasia).

(d) Japan, South Korea, Canada, Australia, New Zealand and Puerto Rico.

First-half net sales in the **United States** were stable year-on-year at €5,356 million. However, aggregate net sales increased year-on-year (+1.4% CER) to €6,084 million. Solid performances in Multiple Sclerosis (+63.5% CER), Cardiovascular (+18.1% CER), Animal Health (+11.8%) and Rare Diseases (+9.7% CER) more than compensated for a 9% fall in net sales for the Diabetes franchise.

In **Emerging Markets**, net sales were €4,599 million (+0.5% CER). Aggregate net sales were up 1.7% CER at €4,907 million, with Vaccines (+20.7% CER) and Animal Health (+25.2% CER) cancelling out lower sales for Established Prescription Products (-5.1% CER) and Consumer Health Care. Excluding Venezuela, net sales in Emerging Markets rose by 9.7% in the first half. In Asia, first-half aggregate net sales rose by 10.2% CER to €1,637 million, driven by a good performance in China (+9.7% CER, at €1,066 million) on the back of sales of Plavix® and Lantus®. Aggregate net sales in Latin America totaled €1,269 million, down 15.0% CER but up 8.1% CER excluding Venezuela thanks to the level of sales in Argentina and Colombia. In Brazil, aggregate net sales slipped by 1.3% CER to €497 million, on lower sales of influenza vaccines and Renagel®. In the Africa, Middle East and South Asia region, 2016 first-half aggregate net sales reached €1,404 million (+11% CER), driven by a good performance in Africa. Aggregate net sales in Eurasia advanced by 6.9% CER to €529 million thanks to a strong performance in Turkey (+21.7% CER) and despite weaker sales in Russia (-5.8% CER).

In **Europe**, first-half aggregate net sales were up 2.5% CER, at €4,732 million. Multiple Sclerosis (+87.1% CER), Rare Diseases (+10.9% CER), Diabetes (+2.4% CER) and Vaccines (+39.5% CER) all performed well, but there were lower sales in Established Prescription Products (-4.3% CER) and Consumer Health Care (-3.6% CER).

In the **Rest of the World** region, net sales fell by 14.6% CER to €1,559 million. Aggregate net sales were down 12.8% CER at €1,688 million, with good performances in Vaccines, Consumer Health Care and Animal Health insufficient to compensate for a decline in sales of Established Prescription Products (-29.2% CER). In Japan, first-half aggregate net sales were down 24.9% CER at €893 million, affected by competition from generics of Plavix® (-57.6% CER).

C.3.2. Other revenues

Other revenues mainly comprise royalties under licensing agreements contracted in the ordinary course of business. Due to a change in accounting presentation, VaxServe sales of non-Sanofi products are included in ***Other revenues*** from 2016 onwards. The presentation of prior period ***Net sales*** and ***Other revenues*** has been amended accordingly. Other revenues fell by 12.2% to €310 million in the first half of 2016 (versus €353 million in the first half of 2015), reflecting a lower level of sales of non-Sanofi products by VaxServe.

Aggregate other revenues (including the Animal Health business) declined by 12.1% to €328 million (versus €373 million in the first half of 2015).

C.3.3. Gross profit

Gross profit amounted to €11,266 million in the first half of 2016 (70.7% of net sales), compared with €11,714 million in the first half of 2015 (70.4% of net sales). This represents a year-on-year fall of 3.8%, but an improvement of 0.3 of a percentage point in the gross margin ratio.

Aggregate gross profit (including the Animal Health business) was €12,281 million in the first half of 2016 (70.5% of aggregate net sales), compared with €12,627 million in the first half of 2015 (70.2% of aggregate net sales). This represents a year-on-year fall of 2.7%, but an improvement of 0.3 of a percentage point in the gross margin ratio.

The gross margin ratio for the Pharmaceuticals segment was 0.6 of a percentage point higher at 72.3%. The main factor was an improvement in the ratio of cost of sales to net sales, reflecting a positive impact from Specialty Care and a negative impact from Diabetes in the United States and the loss of exclusivity for Plavix® in Japan.

The gross margin ratio for the Vaccines segment was 1.1 percentage points lower at 55.1%.

The gross margin ratio for the Animal Health segment improved by 0.7 of a percentage point to 68.4%, mainly as a result of favorable exchange rate effects.

C.3.4. Research and development expenses

Research and development (R&D) expenses amounted to €2,514 million in the first half of 2016 (versus €2,405 million in the first half of 2015) and represented 15.8% of net sales (versus 14.5% in the first half of 2015).

Aggregate R&D expenses (including the Animal Health business) totaled €2,603 million in the first half of 2016 (versus €2,489 million in the first half of 2015) and represented 15.0% of aggregate net sales (versus 13.8% in the first half of 2015). Overall, aggregate R&D expenses rose by €114 million (+4.6%), comprising €103 million for Pharmaceuticals (+4.8%), €6 million for Vaccines (+2.3%), and €5 million for Animal Health (+6.0%).

C.3.5. Selling and general expenses

Selling and general expenses were €4,609 million in the first half of 2016, compared with €4,654 million for the first half of 2015.

Aggregate selling and general expenses (including the Animal Health business) were virtually unchanged year-on-year at €5,068 million (29.1% of net sales), compared with €5,086 million (28.3% of net sales) in the first half of 2015.

Selling and general expenses were fairly stable both for Pharmaceuticals (-1.1%, at €4,261 million) and Vaccines (+1.2%, at €348 million), but rose by 6.3% to €459 million for Animal Health.

C.3.6. Other operating income and expenses

Other operating income for the first half of 2016 reached €265 million (versus €74 million in the first half of 2015), while other operating expenses totaled €195 million (versus €166 million in the first half of 2015).

In the first half of 2016, other operating income includes an arbitration award of €192 million in respect of a contractual dispute.

Other operating expenses include the foreign exchange loss on our Venezuelan operations (€102 million in the first half of 2016, versus €100 million in the first half of 2015).

Aggregate other operating income and expenses (including the Animal Health business) represented overall net income of €56 million in the first half of 2016, compared with overall net expense of €87 million in the first half of 2015.

C.3.7. Amortization of intangible assets

Amortization charged against intangible assets in the first half of 2016 amounted to €877 million, versus €988 million in the comparable period of 2015. The year-on-year decrease of €111 million was mainly due to a reduction in amortization charged against intangible assets recognized on the acquisitions of Aventis (€276 million in the first half of 2016, versus €354 million in the first half of 2015) and Genzyme (€431 million in the first half of 2016, versus €449 million in the first half of 2015) as some pharmaceutical products reached the end of their life cycles.

C.3.8. Impairment of intangible assets

For the six months ended June 30, 2016 this line item shows impairment losses of €52 million against intangible assets (versus €28 million in the first half of 2015), mainly relating to impairment of marketed product rights in the Pharmaceuticals segment and the discontinuation of research and development projects.

The impairment losses booked in the first half of 2015 related mainly to the discontinuation of research and development projects.

C.3.9. Fair value remeasurement of contingent consideration liabilities

Fair value remeasurements of contingent consideration liabilities recognized on acquisitions in accordance with the revised IFRS 3 represented a net expense of €67 million in the first half of 2016, versus a net gain of €71 million in the first half of 2015.

This item mainly relates to the contingent value rights (CVRs) issued by Sanofi in connection with the Genzyme acquisition and to the contingent consideration payable to Bayer as a result of an acquisition made by Genzyme prior to the latter's acquisition by Sanofi (see Note B.11. to our condensed half-year consolidated financial statements).

C.3.10. Restructuring costs and similar items

Restructuring costs represent an estimated expense of €627 million for the first half of 2016 (versus €380 million for the first half of 2015). Most of these restructuring costs arise from the voluntary redundancy program in France announced by management on February 2, 2016, which forms part of the 2020 strategic roadmap. The main component of the program is an early retirement scheme wholly funded by Sanofi, supported by other measures, with an estimated cost in the region of €430 million in the first half of 2016. Restructuring costs also include ongoing transformation programs in other countries where Sanofi has operations, especially in Europe and the United States.

C.3.11. Other gains and losses, and litigation

Nothing was recorded within this line item in either the first half of 2016 or the first half of 2015.

C.3.12. Operating income

Operating income for the first half of 2016 was €2,590 million, 20.0% lower than the 2015 first-half figure of €3,238 million, due partly to the drop in gross profit and partly to the increase in R&D expenses and restructuring costs.

C.3.13. Financial income and expenses

Net financial expense for the period was €191 million, versus €205 million for the first half of 2015. Aggregate net financial expense (including the Animal Health business) was €194 million for the first half of 2016, an improvement of €15 million relative to the 2015 first-half figure of €209 million.

On an aggregate basis (including the Animal Health business), financial expenses directly related to debt, net of cash and cash equivalents (see definition in section C.5. below) amounted to €118 million in the first half of 2016, versus €139 million in the first half of 2015, mainly reflecting a reduction in the cost of our debt.

C.3.14. Income before tax and associates and joint ventures

Income before tax and associates and joint ventures for the first half of 2016 was €2,399 million, compared with €3,033 million for the first half of 2015, a fall of 20.9%.

C.3.15. Income tax expense

Income tax expense was €497 million in the first half of 2016, versus €692 million a year earlier. This year-on-year decrease was mainly due to the lower level of income before tax and associates and joint ventures.

The level of income tax expense is significantly impacted by tax gains arising on the amortization and impairment of intangible assets (€323 million in the first half of 2016, versus €353 million in the first half of 2015) and on restructuring costs and similar items (€210 million in the first half of 2016, versus €134 million in the first half of 2015).

For interim accounting periods, Sanofi applies an estimated effective tax rate to business operating income, in accordance with IAS 34. The effective tax rate based on business net income[1] was 24.0% for the first half of 2016, versus 25.0% for the first half of 2015 and 24.0% for 2015 as a whole. The main impacts on this tax rate are the geographical mix of the results from Sanofi entities, the tax effects of the elimination of intragroup margin on inventory, and settlements of recent proceedings involving the tax authorities in various countries.

C.3.16. Share of profit/(loss) of associates and joint ventures

Associates and joint ventures contributed net income of €98 million in the first half of 2016, versus a net expense of €66 million in the comparable period of 2015.

This line item includes our share of the profits and losses of Regeneron (income of €91 million in the first half of 2016, versus an expense of €82 million in the first half of 2015), including the impact of amortization charged against the fair value remeasurement of our share of the acquired intangible assets of Regeneron. It also includes our share of after-tax profits from territories managed by BMS under the Plavix® and Avapro® alliance (€9 million, versus €20 million in the first half of 2015), plus individually immaterial amounts for our share of profits/losses from other associates and joint ventures.

On March 8, 2016, our investment in the Sanofi Pasteur MSD joint venture was reclassified to the line item ***Assets held for sale or exchange***. With effect from that date, we ceased to recognize our share of the profits and losses from this joint venture by the equity method.

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[1] Calculated on the basis of (i) business operating income, minus net financial expenses and before the share of profit/loss of associates and joint ventures and net income attributable to non-controlling interests plus (ii) business operating income for the Animal Health business, minus the net financial expense of that business and before the share of profit/loss of associates and joint ventures and net income attributable to non-controlling interests for that business.

C.3.17. Net income

Net income excluding the held-for-exchange Animal Health business amounted to €2,000 million in the first half of 2016, versus €2,275 million in the first half of 2015.

In accordance with IFRS 5, the net income or loss of the Animal Health business is presented in a separate line item, ***Net income/(loss) of the held-for-exchange Animal Health business***. The Animal Health business generated net income of €286 million in the first half of 2016 and €109 million in the first half of 2015.

C.3.18. Net income attributable to non-controlling interests

Net income attributable to non-controlling interests for the first half of 2016 amounted to €41 million, compared with €59 million for the first half of 2015. This line item mainly comprises the share of pre-tax profits paid to BMS from territories managed by Sanofi (€44 million, versus €48 million in the first half of 2015).

C.3.19. Net income attributable to equity holders of Sanofi

Net income attributable to equity holders of Sanofi amounted to €2,245 million in the first half of 2016, compared with €2,325 million in the first half of 2015.

In accordance with IFRS 5, the net income or loss of the Animal Health business is presented in a separate line item, ***Net income/(loss) of the held-for-exchange Animal Health business***. The Animal Health business generated net income of €286 million in the first half of 2016 and €109 million in the first half of 2015. In accordance with IFRS 5, no amortization of intangible assets was recognized within this line item in the first half of 2016. In the first half of 2015, this line item included amortization expense of €241 million against intangible assets.

Basic earnings per share (EPS) was €1.74, 2.2% lower than the 2015 first-half figure of €1.78, based on an average number of shares outstanding of 1,287.6 million in the first half of 2016 and 1,307.2 million in the first half of 2015. Diluted EPS was €1.73, versus €1.76 for the first half of 2015, based on a number of shares after dilution of 1,296.6 million in the first half of 2016 and 1,322.0 million in the first half of 2015.

C.3.20. Segment results

Business operating income (refer to the appendix in section F. for a definition) amounted to €4,216 million in the first half of 2016 versus €4,562 million in the first half of 2015, a decrease of 7.6%. It represented 26.5% of net sales, compared with 27.4% in the first half of 2015.

The table below shows business operating income for the six-month periods ended June 30, 2016 and 2015:

(€ million)	June 30, 2016 (6 months)	June 30, 2015 (6 months)	Change
Pharmaceuticals	4,080	4,449	(8.3)%
Vaccines[(a)]	175	168	4.2%
Other	(39)	(55)	(29.1)%
Business operating income[(b)]	**4,216**	**4,562**	**(7.6)%**
Animal Health business operating income[(c)]	453	402	+12.7%
Total: aggregate basis[(d)]	**4,669**	**4,964**	**(5.9)%**

(a) Due to a change in accounting presentation, Vaxserve sales of non-Sanofi are included in ***Other revenues*** from 2016 onwards. The presentation of prior period ***Net sales*** and ***Other revenues*** has been amended accordingly (see Note A.1.2)

(b) Business operating income of continuing operations.

(c) The net income/loss of the Animal Health business is presented in a separate line item, ***Net income/(loss) of the held-for-exchange Animal Health business***, in the consolidated income statement. Until final completion of the transaction, the Animal Health business remains an operating segment of Sanofi within the meaning of IFRS 8.

(d) Non-GAAP financial measure that includes the Animal Health business.

The following tables present our segment results and business net income for the first half of 2016, the first half of 2015, and the year ended December 31, 2015:

First half of 2016

(€ million)	Pharmaceuticals	Vaccines	Other	Total Sanofi	Animal Health[(a)]	Total: aggregate basis[(b)]
Net sales	**14,504**	**1,422**	**—**	**15,926**	**1,485**	**17,411**
Other revenues	122	188	—	310	18	328
Cost of sales	(4,143)	(827)	—	(4,970)	(488)	(5,458)
Research and development expenses	(2,246)	(268)	—	(2,514)	(89)	(2,603)
Selling and general expenses	(4,261)	(348)	—	(4,609)	(459)	(5,068)
Other operating income and expenses	110	(1)	(39)	70	(14)	56
Share of profit/(loss) of associates and joint ventures	44	9	—	53	—	53
Net income attributable to non-controlling interests	(50)	—	—	(50)	—	(50)
Business operating income	**4,080**	**175**	**(39)**	**4,216**	**453**	**4,669**
Financial income and expenses						(194)
Income tax expense						(1,073)
Business net income						**3,402**

(a) The net income/loss of the Animal Health business is presented in a separate line item, ***Net income/(loss) of the held-for-exchange Animal Health business***, in the consolidated income statement. Until final completion of the transaction, the Animal Health business remains an operating segment of Sanofi within the meaning of IFRS 8.

(b) Non-GAAP financial measure that includes the Animal Health business.

First half of 2015

(€ million)	Pharmaceuticals	Vaccines[(a)]	Other	Total Sanofi	Animal Health[(b)]	Total: aggregate basis[(c)]
Net sales	**15,255**	**1,374**	**—**	**16,629**	**1,349**	**17,978**
Other revenues	129	224	—	353	20	373
Cost of sales	(4,442)	(826)	—	(5,268)	(456)	(5,724)
Research and development expenses	(2,143)	(262)	—	(2,405)	(84)	(2,489)
Selling and general expenses	(4,310)	(344)	—	(4,654)	(432)	(5,086)
Other operating income and expenses	(39)	2	(55)	(92)	5	(87)
Share of profit/(loss) of associates and joint ventures	61	—	—	61	—	61
Net income attributable to non-controlling interests	(62)	—	—	(62)	—	(62)
Business operating income	**4,449**	**168**	**(55)**	**4,562**	**402**	**4,964**
Financial income and expenses						(209)
Income tax expense						(1,189)
Business net income						**3,566**

(a) Due to a change in accounting presentation, Vaxserve sales of non-Sanofi are included in ***Other revenues*** from 2016 onwards. The presentation of prior period ***Net sales*** and ***Other revenues*** has been amended accordingly (see Note A.1.2).

(b) The net income/loss of the Animal Health business is presented in a separate line item, ***Net income/(loss) of the held-for-exchange Animal Health business***, in the consolidated income statement. Until final completion of the transaction, the Animal Health business remains an operating segment of Sanofi within the meaning of IFRS 8.

(c) Non-GAAP financial measure that includes the Animal Health business.

Year ended December 31, 2015

(€ million)	Pharmaceuticals	Vaccines[(a)]	Other	Total Sanofi	Animal Health[(b)]	Total: aggregate basis[(c)]
Net sales	**29,799**	**4,261**	**—**	**34,060**	**2,515**	**36,575**
Other revenues	288	513	—	801	41	842
Cost of sales	(8,788)	(2,131)	—	(10,919)	(885)	(11,804)
Research and development expenses	(4,530)	(552)	—	(5,082)	(177)	(5,259)
Selling and general expenses	(8,656)	(726)	—	(9,382)	(865)	(10,247)
Other operating income and expenses	(121)	27	(114)	(208)	5	(203)
Share of profit/(loss) of associates and joint ventures	146	23	—	169	1	170
Net income attributable to non-controlling interests	(125)	(1)	—	(126)	—	(126)
Business operating income	**8,013**	**1,414**	**(114)**	**9,313**	**635**	**9,948**
Financial income and expenses						(390)
Income tax expense						(2,187)
Business net income						**7,371**

(a) Due to a change in accounting presentation, Vaxserve sales of non-Sanofi are included in ***Other revenues*** from 2016 onwards. The presentation of prior period ***Net sales*** and ***Other revenues*** has been amended accordingly (see Note A.1.2).

(b) The net income/loss of the Animal Health business is presented in a separate line item, ***Net income/(loss) of the held-for-exchange Animal Health business***, in the consolidated income statement. Until final completion of the transaction, the Animal Health business remains an operating segment of Sanofi within the meaning of IFRS 8.

(c) Non-GAAP financial measure that includes the Animal Health business.

The tables below provide an analysis of business operating income for the Pharmaceuticals, Vaccines and Animal Health segments.

Pharmaceuticals segment first-half business operating income, 2016 and 2015

(€ million)	June 30, 2016 (6 months)	as % of net sales	June 30, 2015 (6 months)	as % of net sales	Change 2016/2015
Net sales	**14,504**	**100.0%**	**15,255**	**100.0%**	**(4.9)%**
Other revenues	122	0.8%	129	0.8%	(5.4)%
Cost of sales	(4,143)	(28.6)%	(4,442)	(29.1)%	(6.7)%
Gross profit	**10,483**	**72.3%**	**10,942**	**71.7%**	**(4.2)%**
Research and development expenses	(2,246)	(15.5)%	(2,143)	(14.0)%	4.8%
Selling and general expenses	(4,261)	(29.4)%	(4,310)	(28.3)%	(1.1)%
Other operating income and expenses	110		(39)		
Share of profit/(loss) of associates and joint ventures	44		61		
Net income attributable to non-controlling interests	(50)		(62)		
Business operating income	**4,080**	**28.1%**	**4,449**	**29.2%**	**(8.3)%**

Vaccines segment first-half business operating income, 2016 and 2015

(€ million)	June 30, 2016 (6 months)	as % of net sales	June 30, 2015 (6 months)[(a)]	as % of net sales	Change 2016/2015
Net sales	**1,422**	**100%**	**1,374**	**100.0%**	**3.5%**
Other revenues	188	13.2%	224	16.3%	(16.1)%
Cost of sales	(827)	(58.2)%	(826)	(60.1)%	0.1%
Gross profit	**783**	**55.1%**	**772**	**56.2%**	**1.4%**
Research and development expenses	(268)	(18.8)%	(262)	(19.1)%	2.3%
Selling and general expenses	(348)	(24.5)%	(344)	(25.0)%	1.2%
Other operating income and expenses	(1)		2		
Share of profit/(loss) of associates and joint ventures	9		—		
Net income attributable to non-controlling interests	—		—		
Business operating income	**175**	**12.3%**	**168**	**12.2%**	**4.2%**

(a) Due to a change in accounting presentation, Vaxserve sales of non-Sanofi are included in ***Other revenues*** from 2016 onwards. The presentation of prior period ***Net sales*** and ***Other revenues*** has been amended accordingly (see Note A.1.2)

Animal Health segment first-half business operating income, 2016 and 2015

(€ million)	June 30, 2016 (6 months)	as % of net sales	June 30, 2015 (6 months)	as % of net sales	Change 2016/2015
Net sales	**1,485**	**100.0%**	**1,349**	**100.0%**	**10.1%**
Other revenues	18	1.2%	20	1.5%	(10.0)%
Cost of sales	(488)	(32.9)%	(456)	(33.8)%	7.0%
Gross profit	**1,015**	**68.4%**	**913**	**67.7%**	**11.2%**
Research and development expenses	(89)	(6.0)%	(84)	(6.2)%	6.0%
Selling and general expenses	(459)	(30.9)%	(432)	(32.0)%	6.3%
Other operating income and expenses	(14)		5		
Share of profit/(loss) of associates and joint ventures	—		—		
Net income attributable to non-controlling interests	—		—		
Business operating income	**453**	**30.5%**	**402**	**29.8%**	**12.7%**

C.4. CONSOLIDATED STATEMENTS OF CASH FLOWS

Summarized consolidated statements of cash flows

(€ million)	June 30, 2016 (6 months)[(a)]	June 30, 2015 (6 months) [(a)]	December 31, 2015 (12 months) [(a)]
Net cash provided by/(used in) operating activities excluding the held-for-exchange Animal Health business	2,393	3,113	8,290
Net cash provided by/(used in) investing activities excluding the held-for-exchange Animal Health business	(1,414)	(849)	(3,011)
Net cash provided by/(used in) financing activities excluding the held-for-exchange Animal Health business	(4,094)	(5,083)	(3,578)
Impact of exchange rates on cash and cash equivalents	(103)	42	(232)
Net change in cash and cash equivalents excluding the Animal Health business	**(3,218)**	**(2,777)**	**1,469**
Net cash provided by/(used in) operating activities of the held-for-exchange Animal Health business	211	292	630
Net cash provided by/(used in) investing activities of the held-for-exchange Animal Health business	(56)	(178)	(246)
Net cash provided by/(used in) financing activities of the held-for-exchange Animal Health business	(9)	23	(23)
Net change in cash and cash equivalents of the Animal Health business	**146**	**137**	**361**
Impact on cash and cash equivalents of the reclassification of the Animal Health business to "Assets held for sale or exchange"	—	—	(23)
Net change in cash and cash equivalents	**(3,072)**	**(2,640)**	**1,807**

(a) Cash flows of the Animal Health business are presented separately in accordance with IFRS 5 (Non-Current Assets Held for Sale and Discontinued Operations).

Net cash provided by operating activities excluding the held-for-exchange Animal Health business amounted to €2,393 million in the first half of 2016, versus €3,113 million in the first half of 2015.

Operating cash flow before changes in working capital (excluding the net income/loss of the held-for-exchange Animal Health business) was €2,849 million in the first half of 2016, versus €3,319 million in the first half of 2015. Working capital requirements rose by €456 million in the first half of 2016, as opposed to an rise of €206 million in the first half of 2015, mainly as a result of an increase in inventories.

Net cash used in investing activities excluding the held-for-exchange Animal Health business amounted to €1,414 million in the first half of 2016, versus €849 million in the first half of 2015.

Acquisitions of property, plant and equipment and intangible assets totaled €1,200 million, versus €771 million in the first half of 2015. The main items were investments in industrial and research facilities (€638 million, versus €560 million in the first half of 2015) and contractual payments for intangible rights, mainly under license and collaboration agreements (€507 million, versus €153 million in the first half of 2015).

Acquisitions of investments during the first half of 2016 totaled €468 million, net of cash acquired and after including assumed liabilities and commitments; this compares with €160 million in the first half of 2015. The main items in the first half of 2016 were the acquisition of additional shares in Regeneron (€115 million) and an equity injection into DM LLC, the joint venture with Verily (€165 million).

After-tax proceeds from disposals amounted to €264 million in the first half of 2016, and arose mainly from the sale of the equity interest in Nichi-Iko Pharmaceutical Co., Inc. and the sale of product rights relating to Oenobiol®. In the first half of 2015, after-tax proceeds from disposals totaled €92 million, and arose on the divestment of various financial assets and product rights.

Net cash used in financing activities excluding the held-for-exchange Animal Health business amounted to €4,094 million in the first half of 2016, versus €5,083 million in the first half of 2015. The 2016 first-half figure includes net external debt finance raised (i.e. net change in short-term and long-term debt) of €1,061 million; this compares with net external debt finance repaid of €596 million in the first half of 2015. It also includes the effect of changes in our share capital (repurchases of own shares, net of capital increases), amounting to €1,387 million (versus

€782 million in the first half of 2015), and the dividend payout to our shareholders of €3,759 million (versus €3,694 million in the first half of 2015).

The net change in cash and cash equivalents in the balance sheet (excluding the held-for-exchange Animal Health business) was a decrease of €3,218 million in the first half of 2016, against a decrease of €2,777 million in the first half of 2015.

The held-for-exchange Animal Health business generated net cash inflows of €146 million in the first half of 2016 and €137 million in the first half of 2015.

The net change in cash and cash equivalents in the balance sheet in the first half of 2016 was a decrease of €3,072 million, compared with a decrease of €2,640 million in the first half of 2015.

C.5. CONSOLIDATED BALANCE SHEET

Total assets were €99,113 million as of June 30, 2016, versus €102,321 million as of December 31, 2015, a decrease of €3,208 million.

Debt, net of cash and cash equivalents as of June 30, 2016 was €11,012 million, compared with €7,254 million as of December 31, 2015. We define "debt, net of cash and cash equivalents" as (i) the sum total of short term debt, long term debt, and interest rate derivatives and currency derivatives used to hedge debt, minus (ii) the sum total of cash and cash equivalents and interest rate derivatives and currency derivatives used to hedge cash and cash equivalents. The gearing ratio (a non-GAAP financial measure that we define as the ratio of debt, net of cash and cash equivalents, to total equity) rose from 12.5% as of December 31, 2015 to 20.3% as of June 30, 2016. Analyses of our debt as of June 30, 2016 and December 31, 2015 are provided in Note B.9. to the condensed half-year consolidated financial statements.

We expect that the future cash flows generated by our operating activities will be sufficient to repay our debt.

The financing arrangements in place as of June 30, 2016 at the Sanofi parent company level are not subject to covenants regarding financial ratios and do not contain any clauses linking credit spreads or fees to Sanofi's credit rating.

Other key movements in the balance sheet are described below.

Total **equity** was €54,347 million as of June 30, 2016, versus €58,210 million as of December 31, 2015. The year-on-year change reflects the following principal factors:

- a reduction arising from the dividend payout to our shareholders in respect of the 2015 financial year (€3,759 million);
- a reduction of €671 million reflecting actuarial losses arising on pensions and other post-employment benefits and recognized through equity;
- an increase of €2,286 million representing net income for the first half of 2016.

As of June 30, 2016, Sanofi held 0.1 million of its own shares, representing 0.01% of the share capital, and recorded as a deduction from equity.

Goodwill and **Other intangible assets** (€50,514 million in total) were €1,069 million lower than a year earlier, mainly due to the amortization charge of €877 million.

Deferred taxes represented a net asset of €2,618 million, versus €1,819 million a year earlier. This increase of €799 million was mainly due to reversals of deferred tax liabilities on the remeasurement of acquired intangible assets (€352 million), tax losses available for carry-forward (€91 million), and movements in provisions for pensions and other post-employment benefits (€296 million reduction in deferred tax assets).

Provisions and other non-current liabilities (€9,895 million) rose by €726 million, mainly as a result of movements in actuarial gains and losses on defined-benefit pension plans (increase of €924 million).

Liabilities related to business combinations and to non-controlling interests decreased by €14 million to €1,237 million. The main reason for changes in this item is the impact of contingent consideration payable to Bayer as a result of an acquisition made by Genzyme prior to the latter's acquisition by Sanofi.

D/ Risk factors and related party transactions

D.1. RISK FACTORS

The risk factors to which Sanofi is exposed are described in our Annual Report on Form 20-F for the year ended December 31, 2015, filed with the U.S. Securities and Exchange Commission on March 4, 2016. The nature of these risks has not significantly changed during the first half of 2016. These risks may materialize during the second half of 2016 or during subsequent periods.

D.2. RELATED PARTY TRANSACTIONS

Our principal related parties are defined in Note D.33. to the consolidated financial statements included at item 18 of our Annual Report on Form 20-F for the year ended December 31, 2015 (page F-95)[1].

Note B.5. to the condensed half-year consolidated financial statements provides a description of the principal transactions and balances for the six months ended June 30, 2016 with associates and joint ventures that qualify as related parties.

Sanofi did not enter into any transactions with key management personnel during the first half of 2016.

Financial relations with our principal shareholders fall within the ordinary course of business and were immaterial in the first half of 2016.

E/ Outlook

We expect 2016 full-year business earnings per share[2] to be broadly stable relative to 2015 at constant exchange rates barring major unforeseen adverse events. If exchange rates for the final two quarters were to be identical to the average rates for June 2016, we estimate that this would have a negative effect in the region of 4% on 2016 full-year business earnings per share.

Full-year business net income[3] for 2015 was €7,371 million, giving business earnings per share of €5.64.

This guidance has been prepared using accounting methods consistent with those used in the preparation of our historical financial information. It draws upon assumptions defined by Sanofi and its subsidiaries, in particular regarding the following factors:

- growth in the national markets in which we operate;
- healthcare reimbursement policies, pricing reforms, and other governmental measures affecting the pharmaceutical industry;
- developments in the competitive environment, in terms of innovative products and the introduction of generics;
- respect by others for our intellectual property rights;
- progress on our research and development programs;
- the impact of our operating cost control policy, and trends in our operating costs;
- trends in exchange rates and interest rates; and
- the average number of shares outstanding.

Some of the information, assumptions and estimates concerned are derived from or based, in whole or in part, on judgments and decisions made by Sanofi management that may be liable to change or adjustment in future.

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[1] This report is available on our corporate website: www.sanofi.com.
[2] Refer to the appendix in section F for a definition.
[3] Refer to the appendix in section F for a definition.

Forward-looking statements

This document contains forward-looking statements as defined in the U.S. Private Securities Litigation Reform Act of 1995, as amended. Forward-looking statements are statements that are not historical facts. These statements include projections and estimates and their underlying assumptions, statements regarding plans, objectives, intentions and expectations with respect to future financial results, events, operations, services, product development and potential, and statements regarding future performance. Forward-looking statements are generally identified by the words "expects," "anticipates," "believes," "intends," "estimates," "plans" and similar expressions. Although Sanofi's management believes that the expectations reflected in such forward-looking statements are reasonable, investors are cautioned that forward-looking information and statements are subject to various risks and uncertainties, many of which are difficult to predict and generally beyond the control of Sanofi, that could cause actual results and developments to differ materially from those expressed in, or implied or projected by, the forward-looking information and statements.

These risks and uncertainties include among other things, the uncertainties inherent in research and development, future clinical data and analysis including post marketing, decisions by regulatory authorities such as the FDA or the EMA regarding whether and when to approve any drug, device or biological application that may be filed for any such product candidates as well as their decisions regarding labeling and other matters that could affect the availability or commercial potential of such product candidates, the absence of guarantee that the product candidates if approved will be commercially successful, the future approval and commercial success of therapeutic alternatives, Sanofi's ability to benefit from external growth opportunities and/or obtain regulatory clearances, risks associated with intellectual property and current and future intellectual property litigation and the outcome thereof, trends in exchange rates and prevailing interest rates, the instability of economic conditions, the impact of cost containment initiatives and subsequent changes thereto, and the average number of shares outstanding, as well as those discussed or identified in the public filings with the Securities and Exchange Commission (SEC) and the *Autorité des marchés financiers* (AMF) made by Sanofi, including those listed under "Risk Factors"[1] and "Cautionary Statement Regarding Forward-Looking Statements" in Sanofi's annual report on Form 20-F for the year ended December 31, 2015. For an update on litigation, refer to Note B.14. "Legal and arbitration proceedings" to our condensed half-year consolidated financial statements for the six months ended June 30, 2016, and to section "A.4.2. Legal and arbitration proceedings" and section *D/ Risk factors and related party transactions* on pages 47 and 77 respectively of the half-year management report.

Other than as required by applicable law, Sanofi does not undertake any obligation to update or revise any forward-looking information or statements.

[1] See pages 4 to 17 of our 2015 Annual Report on Form 20-F; this report is available on www.sanofi.com.

F/ Appendix – Definition of Financial Indicators

F.1. Aggregate net sales, net sales on a constant structure basis and net sales at constant exchange rates

F.1.1 Aggregate net sales

Following the announcement of exclusive negotiations with Boehringer Ingelheim regarding the divestment of our Animal Health business (Merial), the net profit or loss of that business is now presented in a separate line item in the consolidated income statement, ***Net income/(loss) of the held-for-exchange Animal Health business***, in accordance with IFRS 5. Consequently, the net sales reported in the consolidated income statement no longer include the net sales of the Animal Health business.

Until final completion of the transaction, expected in the fourth quarter of 2016, we will continue to monitor and report the performance of the Animal Health business (which remains an operating segment within the meaning of IFRS 8). In our analysis of our financial performance for the first half of 2016 we discuss our aggregate net sales, which combines our net sales as reported in the consolidated income statement with the net sales of the Animal Health business. Aggregate net sales is a non-GAAP financial measure, and is presented in the table below.

F.1.2. Net sales at constant exchange rates

When we refer to changes in our net sales or our aggregate net sales "at constant exchange rates" (or "CER"), we exclude the effect of exchange rates by recalculating net sales for the relevant period using the exchange rates that were used for the previous period.

Reconciliation of 2016 first-half reported net sales to net sales at constant exchange rates

(€ million)	June 30, 2016 (6 months)	June 30, 2015 (6 months)[(b)]	Change
Reported net sales[(a)]	**15,926**	**16,629**	**(4.2)%**
Effect of exchange rates	568		
Net sales at constant exchange rates	**16,494**	**16,629**	**(0.8)%**

Reconciliation of 2016 first-half net sales to aggregate net sales at constant exchange rates

(€ million)	June 30, 2016 (6 months)	June 30, 2015 (6 months)	Change
Net sales[(a)]	**15,926**	**16,629**	**(4.2)%**
Net sales of the Animal Health business[(b)]	1,485	1,349	10.1%
Aggregate net sales	**17,411**	**17,978**	**(3.2)%**
Effect of exchange rates	610		
Aggregate net sales at constant exchange rates	**18,021**	**17,978**	**0.2%**

(a) In accordance with the presentation requirements of IFRS 5, the consolidated income statement line item ***Net sales*** does not include the net sales of the Animal Health business.

(b) Presented in a separate line item in the consolidated income statement, ***Net income/(loss) of the held-for-exchange Animal Health business***, in accordance with IFRS 5.

F.1.3. Net sales on a constant structure basis

When we refer to changes in our net sales "on a constant structure basis", we eliminate the effect of changes in structure by restating the net sales for the previous period as follows:

- by including sales generated by entities or product rights acquired in the current period for a portion of the previous period equal to the portion of the current period during which we owned them, based on sales information we receive from the party from whom we make the acquisition;
- similarly, by excluding sales for a portion of the previous period when we have sold an entity or rights to a product in the current period;
- for a change in consolidation method, by recalculating the previous period on the basis of the method used for the current period.

F.2. Business income

F.2.1. Business operating income

We report segment results on the basis of "Business Operating Income". This indicator, adopted in compliance with IFRS 8, is used internally to measure the performance of operating segments and to allocate resources. "Business Operating Income" is derived from ***Operating income***, adjusted as follows:

- the amounts reported in the line items ***Restructuring costs and similar items***, ***Fair value remeasurement of contingent consideration liabilities*** and ***Other gains and losses, and litigation*** are eliminated;
- amortization and impairment losses charged against intangible assets (other than software and other rights of an industrial or operational nature) are eliminated;
- the share of profits/losses of associates and joint ventures is added;
- net income attributable to non-controlling interests is deducted;
- other acquisition-related effects (primarily the workdown of acquired inventories remeasured at fair value at the acquisition date, and the impact of acquisitions on investments in associates and joint ventures) are eliminated; and
- restructuring costs relating to associates and joint ventures are eliminated.

F.2.2. Business net income

"Business net income" is a non-GAAP financial measure that we define as ***Net income attributable to equity holders of Sanofi*** determined under IFRS, excluding:

- amortization and impairment losses charged against intangible assets (other than software and other rights of an industrial or operational nature);
- fair value remeasurement of contingent consideration liabilities;
- other impacts associated with acquisitions (including impacts of acquisitions on associates and joint ventures);
- restructuring costs and similar items[1];
- other gains and losses (including gains and losses on major disposals of non-current assets)[1];
- costs and provisions related to litigation[1];
- the tax effects related to the items listed above, and the effects of major tax disputes;
- the 3% tax contribution on the distribution of dividends to equity holders of Sanofi;
- items related to the Animal Health business that are not included in "Business net income"[2];
- other items relating to the Sanofi Pasteur MSD joint venture[3]; and
- the portion attributable to non-controlling interests of the items listed above.

We also report "business earnings per share" ("business EPS"), a non-GAAP financial measure that we define as business net income divided by the weighted average number of shares outstanding.

[1] Reported in the line items ***Restructuring costs and similar items*** and ***Other gains and losses, and litigation*** in the consolidated income statement.
[2] Comprising (i) depreciation and impairment charged against property, plant and equipment from the date of application of IFRS 5 (***Non-Current Assets Held for Sale and Discontinued Operations***) and included in business net income; (ii) amortization and impairment charged against intangible assets until the IFRS 5 application date; (iii) costs directly related to the exchange transaction; and (iv) tax effects of the above items.
[3] Includes (i) elimination of our share of the business net income of Sanofi Pasteur MSD from the date when Sanofi and Merck announced their intention to end their joint venture and (ii) an income tax charge arising from the taxable temporary difference relating to the investment in the joint venture.

G/ Appendix – Research and Development Pipeline

Registration

N **lixisenatide** GLP-1 agonist Type 2 diabetes, U.S.	**Dengvaxia®**[1] Mild-to-severe dengue fever vaccine
N **LixiLan** Fixed-Ratio insulin glargine+lixisenatide Type 2 diabetes, U.S., EU	**PR5i** DTP-HepB-Polio-Hib Pediatric hexavalent vaccine, U.S.
N **sarilumab** Anti-IL6R mAb Rheumatoid arthritis, U.S, EU	**VaxiGrip® QIV IM** Quadrivalent inactivated influenza vaccine (3 years+)

Phase III

N **SAR342434** insulin lispro Type 1+2 diabetes	**Clostridium difficile** Toxoid vaccine
N **sotagliflozin** Oral SGLT-1&2 inhibitor Type 1 diabetes	**VaxiGrip® QIV IM** Quadrivalent inactivated influenza vaccine (6-35 months)
N **dupilumab** Anti-IL4Rα mAb Atopic dermatitis, Asthma	**Pediatric pentavalent vaccine** DTP-Polio-Hib Japan
N **patisiran** (ALN-TTR02) siRNA inhibitor targeting TTR Familial amyloidotic polyneuropathy	**Men Quad TT** 2nd generation meningococcal ACYW conjugate vaccine
N **revusiran** (ALN-TTRsc) siRNA inhibitor targeting TTR Familial amyloidotic cardiomyopathy	

N : New Molecular Entity

[1] Approved in Brazil, Mexico, the Philippines, El Salvador and Costa Rica

Phase II

dupilumab Anti-IL4Rα mAb Nasal polyposis; Eosinophilic oesophagitis	N **isatuximab** Anti-CD38 naked mAb Multiple myeloma	**Rabies VRVg** Purified vero rabies vaccine
N **SAR156597** IL4/IL13 Bi-specific mAb Idiopathic pulmonary fibrosis	N **SAR439684** PD-1 inhibitor Advanced CSCC (Skin cancer)	**Tuberculosis** Recombinant subunit vaccine
N **SAR100842** LPA1 receptor antagonist Systemic sclerosis	N **olipudase alfa** rhASM Deficiency Niemann-Pick type B	**Fluzone® QIV HD** Quadrivalent inactivated influenza vaccine – High dose
sotagliflozin Oral SGLT-1&2 inhibitor Type 2 diabetes	N **GZ402671** Oral GCS inhibitor Fabry Disease	
N **efpeglenatide** Long-acting GLP-1 receptor agonist Type 2 diabetes	N **SAR422459** ABCA4 gene therapy Stargardt disease	
sarilumab Anti-IL6R mAb Uveitis	N Combination **ferroquine / OZ439** Antimalarial	

Phase I

N **GZ402668** GLD52 (anti-CD52 mAb) Relapsing multiple sclerosis	N **SAR566658** Maytansin-loaded anti-CA6 mAb Solid tumors	N **SAR228810** Anti-protofibrillar AB mAb Alzheimer's disease
N **GZ389988** TRKA antagonist Osteoarthritis	N **SAR408701** Maytansin-loaded anti-CEACAM5 mAb Solid tumors	N **SAR439152** Myosin inhibitor Hypertrophic cardiomyopathy
N **SAR425899** GLP-1R/GCGR dual agonist Type 2 diabetes	N **SAR428926** Maytansin-loaded anti-LAMP1 mAb Cancer	N **SAR407899** rho kinase Microvascular angina
N **SAR438335** GLP-1R/GIPR dual agonist Type 2 diabetes	N **GZ402666** neo GAA Pompe Disease	N **SAR366234** EP2 receptor agonist Elevated intraocular pressure
N **SAR440067** (LAPS Insulin 115) Long acting insulin analog Type 2 diabetes	N **SAR339375** Anti-miR21 RNA Alport syndrome	**Streptococcus pneumonia** Meningitis & pneumonia vaccine
	N **fitusiran** (ALN-AT3) siRNA targeting Anti-Thrombin Hemophilia	**Herpes Simplex Virus Type 2** HSV-2 vaccine
	N **UshStat®** Myosin 7A gene therapy Usher syndrome 1B	

3 STATUTORY AUDITORS' REVIEW REPORT ON THE 2016 HALF-YEAR FINANCIAL INFORMATION

Period from January 1, 2016 to June 30, 2016

This is a free translation into English of the statutory auditors' review report issued in French and is provided solely for the convenience of English speaking readers. This report should be read in conjunction with, and construed in accordance with, French law and professional auditing standards applicable in France.

To the Shareholders,

In compliance with the assignment entrusted to us by your annual general meetings and in accordance with the requirements of article L.451-1-2 III of the French monetary and financial code (Code monétaire et financier), we hereby report to you on:

- the review of the accompanying condensed half-year consolidated financial statements of Sanofi, for the period from January 1, 2016 to June 30, 2016;
- the verification of the information contained in the half-year management report.

These condensed half-year consolidated financial statements are the responsibility of the Board of Directors. Our role is to express a conclusion on these financial statements based on our review.

1. Conclusion on the financial statements

We conducted our review in accordance with professional standards applicable in France. A review of half-year financial information consists of making inquiries, primarily of persons responsible for financial and accounting matters, and applying analytical and other review procedures. A review is substantially less in scope than an audit conducted in accordance with professional standards applicable in France and consequently does not enable us to obtain assurance that we would become aware of all significant matters that might be identified in an audit. Accordingly, we do not express an audit opinion.

Based on our review, nothing has come to our attention that causes us to believe that the accompanying condensed half-year consolidated financial statements are not prepared, in all material respects, in accordance with IAS 34 – the standard of IFRSs as adopted by the European Union applicable to interim financial information.

Without calling into question the conclusion expressed above, we draw your attention to note A.1.2 *VaxServe revenues*, which describes the change in presentation regarding the sales of part of VaxServe's activities.

2. Specific verification

We have also verified the information presented in the half-year management report on the condensed half-year consolidated financial statements subject to our review.

We have no matters to report as to its fair presentation and consistency with the condensed half-year consolidated financial statements.

Neuilly-sur-Seine and Paris-La Défense on July 29th, 2016

The statutory auditors
French original signed by

PricewaterhouseCoopers Audit		ERNST & YOUNG et Autres
Stéphane Basset	Philippe Vogt	Nicolas Pfeuty

4 RESPONSIBILITY STATEMENT OF THE CERTIFYING OFFICER — HALF-YEAR FINANCIAL REPORT

"I hereby certify that, to the best of my knowledge, the condensed half-year consolidated financial statements have been prepared in accordance with the applicable accounting standards and present fairly the assets and liabilities, the financial position and the income of the Company and the entities included in the scope of consolidation, and that the half-year management report on page 42 provides an accurate overview of the significant events of the first six months of the financial year with their impact on the half-year consolidated financial statements, together with the major transactions with related parties and a description of the main risks and uncertainties for the remaining six months of the financial year."

Paris, July 29, 2016

Olivier Brandicourt

Chief Executive Officer

Photo credit (Front page) : Sanofi Pasteur/Norbert Domy

Picture: After 20 years of commitment, Sanofi's teams created the world's first vaccine for dengue fever, an infection caused by mosquitoes. A vaccination campaign is ongoing in the Philippines.