

Notes to the financial statements continued

19. Other intangible assets

	Computer software £m	Licences, patents, etc. £m	Amortised brands £m	Indefinite life brands £m	Total £m
Cost at 1 January 2016	2,028	13,394	387	8,074	23,883
Exchange adjustments	137	1,139	20	1,320	2,616
Capitalised development costs	–	219	21	–	240
Capitalised borrowing costs	4	–	–	–	4
Additions through business combinations	–	102	–	–	102
Other additions	238	349	–	–	587
Disposals and asset write-offs	(389)	(21)	(1)	(7)	(418)
Transfer to assets held for sale	(1)	(39)	–	(12)	(52)
Reclassifications	139	–	–	–	139
Cost at 31 December 2016	2,156	15,143	427	9,375	27,101
Exchange adjustments	(37)	(215)	(4)	(272)	(528)
Capitalised development costs	–	251	–	–	251
Capitalised borrowing costs	2	3	–	–	5
Other additions	233	221	–	–	454
Disposals and asset write-offs	(217)	(38)	–	–	(255)
Transfer to assets held for sale	(1)	(90)	–	(44)	(135)
Reclassifications	38	–	66	(66)	38
Cost at 31 December 2017	2,174	15,275	489	8,993	26,931
Amortisation at 1 January 2016	(1,294)	(4,030)	(133)	–	(5,457)
Exchange adjustments	(92)	(410)	(5)	–	(507)
Charge for the year	(152)	(553)	(91)	–	(796)
Disposals and asset write-offs	353	–	5	–	358
Transfer to assets held for sale	1	10	–	–	11
Amortisation at 31 December 2016	(1,184)	(4,983)	(224)	–	(6,391)
Exchange adjustments	25	141	–	–	166
Charge for the year	(163)	(761)	(10)	–	(934)
Disposals and asset write-offs	210	25	–	–	235
Transfer to assets held for sale	1	25	–	–	26
Amortisation at 31 December 2017	(1,111)	(5,553)	(234)	–	(6,898)
Impairment at 1 January 2016	(39)	(1,439)	(154)	(122)	(1,754)
Exchange adjustments	(3)	(266)	–	(3)	(272)
Impairment losses	(2)	(15)	–	(5)	(22)
Disposals and asset write-offs	35	40	11	–	86
Transfer to assets held for sale	–	28	–	–	28
Impairment at 31 December 2016	(9)	(1,652)	(143)	(130)	(1,934)
Exchange adjustments	–	110	–	3	113
Impairment losses	(2)	(546)	–	(132)	(680)
Disposals and asset write-offs	2	5	–	–	7
Transfer to assets held for sale	–	19	–	4	23
Impairment at 31 December 2017	(9)	(2,064)	(143)	(255)	(2,471)
Total amortisation and impairment at 31 December 2016	(1,193)	(6,635)	(367)	(130)	(8,325)
Total amortisation and impairment at 31 December 2017	(1,120)	(7,617)	(377)	(255)	(9,369)
Net book value at 1 January 2016	695	7,925	100	7,952	16,672
Net book value at 31 December 2016	963	8,508	60	9,245	18,776
Net book value at 31 December 2017	1,054	7,658	112	8,738	17,562

The weighted average interest rate for capitalised borrowing costs in the year was 4% (2016 – 3.8%).

The net book value of computer software included £669 million (2016 – £620 million) of internally generated costs.

The charge for impairments in the year included £229 million related to the progressive withdrawal of the pharmaceutical product, *Tanzeum*, which was fully impaired. The carrying value at 31 December 2017 of intangible assets, for which impairments have been charged or reversed in the year, following those impairments or reversals, was £300 million (2016 – £116 million).

The patent expiry dates of the Group's most significant assets, where relevant, are set out on pages 254 and 255.

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19. Other intangible assets continued

Amortisation and impairment losses, net of reversals, have been charged in the income statement as follows:

	Amortisation		Net impairment losses	
	2017 £m	2016 £m	2017 £m	2016 £m
Cost of sales	578	582	400	7
Selling, general and administration	116	95	2	2
Research and development	240	119	278	13
	934	796	680	22

Licences, patents, etc. includes a large number of acquired licences, patents, know-how agreements and marketing rights, which are either marketed or in use, or still in development. Note 38, 'Acquisitions and disposals' gives details of additions through business combinations in the year. The book values of the largest individual items are as follows:

	2017 £m	2016 £m
Meningitis portfolio	2,450	2,511
dolutegravir	1,389	1,487
Benlysta	965	1,019
Fluarix/FluLaval	321	380
HIV assets acquired from BMS	277	277
Selzentry	162	188
Okairos technology platform	202	173
Others	1,892	2,473
	7,658	8,508

The Meningitis portfolio includes *Menveo*, *Bexsero* and *Men ABCWY*.

Indefinite life brands comprise a portfolio of Consumer Healthcare products primarily acquired with the acquisitions of Sterling Winthrop, Inc. in 1994, Block Drug Company, Inc. in 2001, CNS, Inc. in 2006 and the Novartis Consumer Healthcare business in 2015, together with a number of pharmaceutical brands from the acquisition of Stiefel Laboratories, Inc. in 2009. The book values of the major brands are as follows:

	2017 £m	2016 £m
Voltaren	2,716	2,847
Otrivin	1,380	1,447
Fenistil	648	680
Theraflu	441	462
Panadol	386	354
Sensodyne	265	243
Lamisil	289	304
Breathe Right	236	199
Stiefel trade name	228	211
Excedrin	185	194
Physiogel	166	166
Polident	112	103
Others	1,686	2,035
	8,738	9,245

Each of these brands is considered to have an indefinite life, given the strength and durability of the brand and the level of marketing support. The brands are in relatively similar stable and profitable market sectors, with similar risk profiles, and their size, diversification and market shares mean that the risk of market-related factors causing a reduction in the lives of the brands is considered to be relatively low. The Group is not aware of any material legal, regulatory, contractual, competitive, economic or other factors which could limit their useful lives. Accordingly, they are not amortised.

Each brand is tested annually for impairment and other amortised intangible assets are tested when indicators of impairment arise. This testing applies a fair value less costs of disposal methodology, generally using post-tax cash flow forecasts with a terminal value calculation and a discount rate equal to the Group post-tax WACC of 7%, adjusted where appropriate for specific country and currency risks. This valuation methodology uses significant inputs which are not based on observable market data, and therefore this valuation technique is classified as level 3 of the fair value hierarchy. The main assumptions include future sales price and volume growth, product contribution, the future expenditure required to maintain the product's marketability and registration in the relevant jurisdictions and exchange rates. These assumptions are based on past experience and are reviewed as part of management's budgeting and strategic planning cycle for changes in market conditions and sales erosion through competition. The terminal growth rates applied of between nil% and 5% are management's estimates of future long-term average growth rates of the relevant markets. In each case the valuations indicate sufficient headroom such that a reasonably possible change to key assumptions is unlikely to result in an impairment of these intangible assets.