

## Takeda Pharm. (4502)

# Maintain Buy: guidance conservative; new drug development progressing well

Reiterate Rating: BUY | PO: 5,000 JPY | Price: 4,482 JPY

## Leave PO unchanged at ¥5,000 and maintain Buy

We revise our forecasts to reflect 3Q results and positive new drug development, such as the successful Ph2b for TAK-861 (NT1 treatment) and US approval of Eohilia (EoE treatment). As Takeda successfully demonstrated PoC for TAK-861, we raise our probability of successful development assumption from 20% to 50%. We also factor in the US approval of Eohilia, but now assume higher COGS and R&D expenses. Thus, we raise our five-year revenue forecasts by 3-4%, while reducing our Core OP forecasts by 1-4%. That said, we increase our long-term earnings forecasts. We keep the stock beta in our DCF model at 0.76, and we have not changed our ¥5,000 price objective and reiterate our Buy investment rating.

## Forecast FY3/24 Core OP of ¥1,068.5bn

Our FY3/24 revenue/Core OP forecasts of ¥4,213.2bn/¥1,068.5bn are 6%/5% above company guidance of ¥3,980bn/¥1,015bn. 3Q sales of the ADHD drug, Vyvanse, which has come off patent, declined by less than expected. On the cost front, a product mix change is driving up the COGS, while R&D expenses continue increasing. Both sales and costs are trending ahead of projections.

## R&D development update

Among the recent R&D developments, TAK-861 progress is the most important. The Ph2b trial evaluating it for NT1 was successful and Takeda plans to commence Ph3 in 1H FY3/25. Development progress of late-stage candidates included US approval of Adzynma (cTTP treatment), Fruzaqla (colon cancer treatment), and Eohilia, as well as the Hyqvia label expansion for adult CIDP. TAK-279 (disorders such as psoriasis) is currently in Ph3 for psoriasis with a Ph3 trial likely to begin in 1H FY3/25 for psoriatic arthritis. Takeda also plans to conduct Ph2b studies for Crohn's disease and ulcerative colitis.

Estimates (¥)	3/22A	3/23A	3/24E	3/25E	3/26E
	IFRS	IFRS	IFRS	IFRS	IFRS
EPS	146.55	201.94	125.60	105.21	133.62
EPS Change (YoY)	-38.8%	37.8%	-37.8%	-16.2%	27.0%
Dividend / Share	180	180	188	188	188
BPS	3,655.8	4,087.5	4,337.0	4,253.4	4,198.6
<b>Valuation</b>					
P/E	30.6x	22.2x	35.7x	42.6x	33.5x
Dividend Yield*	4.0%	4.0%	4.2%	4.2%	4.2%
P/B	1.2x	1.1x	1.0x	1.1x	1.1x
EV/ EBITDA*	10.4x	9.4x	11.2x	10.8x	10.8x
Free Cash Flow Yield*	12.5%	4.0%	2.9%	8.4%	7.2%

\* For full definitions of *IQmethod*<sup>SM</sup> measures, see page 12.

26 February 2024

## Equity

### Key Changes

(¥)	Previous	Current
2024E Rev (m)	4,061,800.0	4,213,200.0
2025E Rev (m)	4,000,300.0	4,124,300.0
2026E Rev (m)	4,047,400.0	4,154,900.0
2024E EPS	150.69	125.60
2025E EPS	137.38	105.21
2026E EPS	167.89	133.62
2024E EBITDA (m)	1,086,100.0	966,400.0
2025E EBITDA (m)	1,058,200.0	1,000,900.0
2026E EBITDA (m)	1,069,500.0	1,004,900.0

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## Stock Data

Price (Common / ADR)	4,482 JPY / 14.62 USD
Price Objective	5,000 JPY / 17.20 USD
Date Established	25-Oct-2023/ 25-Oct-2023
Investment Opinion	A-1-7 / B-1-7
52-Week Range	3,900-4,873 JPY
Market Value (mn)	7,036,145 JPY
Market Value (\$mn)	46,741 USD
Shares Outstanding (mn)	1,569.9
Average Daily Value (\$mn)	136.6 USD
Free Float	95.6%
BofA Ticker / Exchange	TKPHF / TYO
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Bloomberg / Reuters	4502 JP / 4502.T
ROE (2024E)	3.0%
Net Dbt to Eqty (Mar-2023A)	60.0%

POC: Proof-of-concept

NT1: Narcolepsy Type 1

EoE: Eosinophilic Esophagitis

cTTP: Congenital thrombotic

thrombocytopenic purpura

CIDP: Chronic inflammatory demyelinating

polyradiculoneuropathy

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**Refer to important disclosures on page 13 to 16. Analyst Certification on page 10. Price Objective Basis/Risk on page 10.**

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Timestamp: 26 February 2024 02:09AM EST

# iQprofile<sup>SM</sup> Takeda Pharm. (4502)

Key Income Statement Data	3/22A	3/23A	3/24E	3/25E	3/26E
(¥ Millions)	IFRS	IFRS	IFRS	IFRS	IFRS
<b>Sales</b>	<b>3,569,006</b>	<b>4,027,478</b>	<b>4,213,200</b>	<b>4,124,300</b>	<b>4,154,900</b>
% Change	11.6%	12.8%	4.6%	-2.1%	0.7%
Gross Profit	2,462,160	2,783,406	2,828,000	2,726,600	2,744,800
EBITDA	1,044,044	1,154,905	966,400	1,000,900	1,004,900
<b>Operating Profit</b>	<b>460,844</b>	<b>490,505</b>	<b>262,700</b>	<b>350,800</b>	<b>406,500</b>
% Change	-9.5%	6.4%	-46.4%	33.5%	15.9%
Net Interest & Other Income	(142,907)	(106,785)	(79,800)	(127,600)	(125,400)
<b>Pretax Income</b>	<b>302,570</b>	<b>375,090</b>	<b>174,270</b>	<b>214,570</b>	<b>272,470</b>
% Change	-17.4%	24.0%	-53.5%	23.1%	27.0%
<b>Net Income</b>	<b>230,058</b>	<b>317,017</b>	<b>197,170</b>	<b>165,170</b>	<b>209,770</b>

Key Cash Flow Statement Data					
Net Income from Cont Operations (GAAP)	230,058	317,017	197,170	165,170	209,770
Depreciation & Amortization	583,200	664,400	703,700	650,100	598,400
Change in Working Capital	206,913	(88,832)	(415,600)	8,900	(9,900)
Capital Expenditure	(186,037)	(633,689)	(284,400)	(235,800)	(290,200)
<b>Free Cash Flow*</b>	<b>882,560</b>	<b>279,090</b>	<b>200,870</b>	<b>588,370</b>	<b>508,070</b>
Share Issue / (Repurchase)	(77,531)	(26,929)	0	0	0
Cost of Dividends Paid	(283,665)	(279,416)	(282,400)	(295,000)	(295,000)

Key Balance Sheet Data					
Cash & Equivalents	875,000	568,939	336,717	138,900	399,600
Trade Receivables	696,644	649,429	716,230	701,100	706,300
Other Current Assets	1,021,998	1,155,257	1,375,883	1,386,400	1,396,900
Property, Plant & Equipment	1,582,800	1,691,229	1,841,499	1,820,500	1,808,600
Other Non-Current Assets	9,001,576	9,868,565	9,952,618	9,461,811	9,067,911
<b>Total Assets</b>	<b>13,178,018</b>	<b>13,933,419</b>	<b>14,222,947</b>	<b>13,508,711</b>	<b>13,379,311</b>
Short-Term Debt	203,993	339,600	370,292	370,300	370,300
Other Current Liabilities	1,941,737	2,142,340	1,911,876	1,916,200	1,922,000
Long-Term Debt	4,141,418	4,042,741	4,293,872	3,705,111	3,655,111
Other Non-Current Liabilities	1,207,346	1,078,397	904,300	904,300	904,300
<b>Total Liabilities</b>	<b>7,494,494</b>	<b>7,603,078</b>	<b>7,480,340</b>	<b>6,895,911</b>	<b>6,851,711</b>
<b>Total Equity</b>	<b>5,683,523</b>	<b>6,354,672</b>	<b>6,742,607</b>	<b>6,612,800</b>	<b>6,527,600</b>
<b>Total Equity &amp; Liabilities</b>	<b>13,178,017</b>	<b>13,957,750</b>	<b>14,222,947</b>	<b>13,508,711</b>	<b>13,379,311</b>

## Key Metrics

### iQmethod<sup>SM</sup> – Business Performance\*

Return On Capital Employed	3.3%	4.1%	2.5%	2.4%	2.9%
Return On Equity	4.2%	5.3%	3.0%	2.5%	3.2%
Operating Margin	12.9%	12.2%	6.2%	8.5%	9.8%

### iQmethod<sup>SM</sup> – Quality of Earnings\*

Cash Realization Ratio	4.6x	2.9x	2.5x	5.0x	3.8x
Asset Replacement Ratio	1.4x	4.1x	1.9x	1.4x	1.8x
Tax Rate (Reported)	23.9%	15.5%	NM	23.0%	23.0%
Net Debt-to-Equity Ratio	61.1%	60.0%	64.2%	59.5%	55.5%
Interest Cover	2.8x	2.9x	1.7x	2.3x	2.7x

\* For full definitions of iQmethod<sup>SM</sup> measures, see page 12.  
Other GAAP denotes Japanese Accounting Standards.

## Company Sector

Pharmaceuticals

## Company Description

A top Japan drug maker. Profits fell with the Actos patent expiry in 2010, but management aims to achieve recovery through Entyvio and the Shire acquisition in 2019. Core therapeutic areas are GI, rare diseases, PDT, Oncology, and Neuroscience. Management emphasis is on becoming first-ever Japan-based global pharmaceutical company, but near-term focus will be on pipeline enhancement. The management is committed to progressive dividend policy of increasing or maintaining the dividend each year.

## Investment Rationale

Buy call based on expectations deleveraging will result in (1) continued growth investment, including acquisition of potential blockbuster candidates (2) improved shareholder return. Near-term earnings prospects are harsh on imminent Vyvanse patent expiration but incentives include delayed commercialization of Entyvio biosimilars, in-licensing of psoriasis treatment TAK-279, PoC for narcolepsy treatment TAK-861. Sustained investment to cultivate growth drivers and strengthen shareholder return.

## Key Changes

(US\$)	Previous	Current
2024E EPS	0.50	0.42
2025E EPS	0.46	0.35
2026E EPS	0.56	0.44

**Exhibit 1: Takeda(4502): Consolidated earnings summary**

Sales, OP and EPS

		Sales ¥ mn	YoY %	Core OP ¥ mn	YoY %	GAAP OP ¥ mn	YoY %	GAAP NP ¥ mn	YoY %	Core EPS ¥	PER times
FY3/23 actual	IFRS	4,027,478	12.8	1,188,444	24.4	490,505	6.4	317,017	37.8	558	7.9
<b>Company estimate</b>		<b>3,980,000</b>	<b>-1.2</b>	<b>1,015,000</b>	<b>-14.6</b>	<b>225,000</b>	<b>-54.1</b>	<b>93,000</b>	<b>-70.7</b>	<b>447</b>	<b>11.7</b>
<b>FY3/23 BofA estimate</b>	<b>Revised</b>	<b>4,213,200</b>	<b>4.6</b>	<b>1,068,500</b>	<b>-10.1</b>	<b>262,700</b>	<b>-46.4</b>	<b>197,170</b>	<b>-37.8</b>	<b>492</b>	<b>9.0</b>
	Previous	4,061,800	0.9	1,076,200	-9.4	382,400	-22.0	236,570	-25.4	463	9.6
VA consensus estimate		4,068,517	1.0	1,048,122	-11.8	280,052	-42.9	145,390	-54.1	474	-15.0
<b>FY3/24 BofA estimate</b>	<b>Revised</b>	<b>4,124,300</b>	<b>-2.1</b>	<b>971,800</b>	<b>-9.1</b>	<b>350,800</b>	<b>33.5</b>	<b>165,170</b>	<b>-16.2</b>	<b>418</b>	<b>10.6</b>
	Previous	4,000,300	-1.5	997,400	-7.3	436,700	14.2	215,670	-8.8	424	10.5
VA consensus estimate		3,982,954	-2.1	979,260	-6.6	411,450	46.9	222,008	52.7	446	9.9
<b>FY3/26 BofA estimate</b>	<b>Revised</b>	<b>4,154,900</b>	<b>0.7</b>	<b>982,400</b>	<b>1.1</b>	<b>406,500</b>	<b>15.9</b>	<b>209,770</b>	<b>27.0</b>	<b>425</b>	<b>10.4</b>
	Previous	4,047,400	1.2	1,013,500	1.6	496,400	13.7	263,570	22.2	433	10.2
VA consensus estimate		4,093,698	2.8	1,045,292	6.7	485,378	18.0	288,585	30.0	489	9.1
<b>FY3/27 BofA estimate</b>	<b>Revised</b>	<b>4,242,800</b>	<b>2.1</b>	<b>1,006,000</b>	<b>2.4</b>	<b>472,600</b>	<b>16.3</b>	<b>264,570</b>	<b>26.1</b>	<b>439</b>	<b>10.1</b>
	Previous	4,135,300	2.2	1,044,000	3.0	569,100	14.6	324,070	23.0	452	9.8
VA consensus estimate		4,158,903	1.6	1,098,598	5.1	549,753	13.3	347,301	20.3	516	8.6
<b>FY3/28 BofA estimate</b>	<b>Revised</b>	<b>4,253,800</b>	<b>0.3</b>	<b>974,100</b>	<b>-3.2</b>	<b>481,500</b>	<b>1.9</b>	<b>276,370</b>	<b>4.5</b>	<b>426</b>	<b>10.4</b>
	Previous	4,141,500	0.1	1,016,200	-2.7	581,800	2.2	339,870	4.9	442	10.0
VA consensus estimate		4,235,551	1.8	1,140,422	3.8	604,414	9.9	392,149	12.9	534	8.3

Source: Company, Visible Alpha. Estimates by BofA Global Research

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**Exhibit 2: DCF Analysis**

12-year DCF implies ¥5,000 theoretical price per share

	FY3/24E	FY3/25E	FY3/26E	FY3/27E	FY3/28E	FY3/29E	FY3/30E	FY3/31E	FY3/32E	FY3/33E	FY3/34E	FY3/35E
Unlevered FCF	322,900	686,000	605,700	590,600	565,800	544,900	567,500	575,600	453,800	295,800	183,000	189,800
											Terminal FCF	339,600

	A	+ B			+ C	= D			Equity Value per Share: JPY		
WACC	FCF NPV (12Y)	PV of terminal FCF at perpetuity of			Net Cash FY3/22	Present Value of Equity			0.5%	1.0%	1.5%
		0.5%	1.0%	1.5%		0.5%	1.0%	1.5%			
3.8%	4,716,307	6,939,937	8,232,274	10,093,305	-4,345,411	7,310,833	8,603,169	10,464,200	4,657	5,480	6,666
3.9%	4,696,446	6,663,183	7,861,941	9,565,978	-4,345,411	7,014,218	8,212,976	9,917,014	4,468	5,232	6,317
4.0%	4,676,726	6,403,160	7,517,455	9,082,431	-4,345,411	6,734,475	7,848,769	9,413,746	4,290	5,000	5,997
4.1%	4,657,144	6,158,454	7,196,281	8,637,544	-4,345,411	6,470,188	7,508,014	8,949,277	4,121	4,783	5,701
4.2%	4,637,700	5,927,806	6,896,204	8,226,965	-4,345,411	6,220,095	7,188,493	8,519,254	3,962	4,579	5,427

**Assumptions:**

Shares outstanding (k)	1,569,867	WACC	4.0%
Risk free rate	1.0%	Cost of Debt (rate and weight)	2.0%
Market Risk Premium	5.5%	Cost of Equity (rate and weight)	5.2%

**Equity beta**

FCF risk rating		Quantitative volatility				
		Very low	Low	Medium	High	Very high
Qualitative volatility	High	-10%	0%	10%	20%	30%
	Medium	-20%	-10%	0%	10%	20%
	Low	-30%	-20%	-10%	0%	10%

Applied beta for PO computation				
Center column: Bloomberg 2Y adjusted beta				
0.63	0.70	0.76	0.83	0.90
0.56	0.63	0.70	0.76	0.83
0.49	0.56	0.63	0.70	0.76

Source: BofA Global Research estimates. Note: NCV = Net Cash Value. Please refer to our earnings model, available on our Research Library website.

BofA GLOBAL RESEARCH

**Exhibit 3: Income Statement**

Core operating profit is expected to around 1T yen for next five years

JPY in millions	IFRS	IFRS	IFRS	IFRS	IFRS	IFRS	IFRS	IFRS	IFRS	IFRS
Fiscal year end	FY3/22	FY3/23	FY3/24e	FY3/25e	FY3/26e	FY3/27e	FY3/28e	FY3/29e	FY3/30e	CoE
<b>Net sales</b>	<b>3,569,006</b>	<b>4,027,478</b>	<b>4,213,200</b>	<b>4,124,300</b>	<b>4,154,900</b>	<b>4,242,800</b>	<b>4,253,800</b>	<b>4,325,400</b>	<b>4,443,600</b>	<b>3,840,000</b>
<b>Gross profit</b>	<b>2,462,160</b>	<b>2,783,406</b>	<b>2,828,000</b>	<b>2,726,600</b>	<b>2,744,800</b>	<b>2,801,900</b>	<b>2,784,700</b>	<b>2,816,100</b>	<b>2,899,900</b>	
SG&A	886,361	997,309	1,040,700	1,018,700	1,026,300	1,048,000	1,050,700	1,068,400	1,097,600	
R&D	526,087	633,325	728,800	736,100	736,100	747,900	759,900	772,100	784,500	643,000
Amortization, impairment	472,915	542,443	630,800	541,000	495,600	452,800	411,600	401,900	392,600	530,000
Other income	43,123	25,424	15,000	15,000	15,000	15,000	15,000	15,000	15,000	14,000
Other expense	159,075	145,247	180,000	95,000	95,319	95,639	95,960	96,283	96,608	150,000
Equity method income	-15,367	-8,630	-8,630	-8,630	-8,630	-8,630	-8,630	-8,630	-8,630	0
<b>Operating profit</b>	<b>460,844</b>	<b>490,505</b>	<b>262,700</b>	<b>350,800</b>	<b>406,500</b>	<b>472,600</b>	<b>481,500</b>	<b>492,400</b>	<b>543,600</b>	<b>349,000</b>
Financial income	23,700	62,913	75,500	23,700	24,900	26,100	27,400	28,800	30,200	
Financial expense	166,607	169,698	155,300	151,300	150,300	146,500	141,300	136,900	131,300	
Other items, net	-15,367	-8,630	-8,630	-8,630	-8,630	-8,630	-8,630	-8,630	-8,630	
<b>EBT</b>	<b>302,571</b>	<b>375,090</b>	<b>174,300</b>	<b>214,600</b>	<b>272,500</b>	<b>343,600</b>	<b>359,000</b>	<b>375,700</b>	<b>433,900</b>	<b>185,000</b>
Tax provision	72,405	58,052	-22,900	49,400	62,700	79,000	82,600	86,400	99,800	
<b>Net income</b>	<b>230,059</b>	<b>317,017</b>	<b>197,200</b>	<b>165,200</b>	<b>209,800</b>	<b>264,600</b>	<b>276,400</b>	<b>289,300</b>	<b>334,100</b>	<b>142,000</b>
<b>Core-based earnings (Non-GAAP)</b>										
<b>Core net sales</b>	<b>3,420,500</b>	<b>4,027,478</b>	<b>4,213,200</b>	<b>4,124,300</b>	<b>4,154,900</b>	<b>4,242,800</b>	<b>4,253,800</b>	<b>4,325,400</b>	<b>4,443,600</b>	<b>3,840,000</b>
<b>Gross profit</b>	<b>2,359,900</b>	<b>2,819,078</b>	<b>2,838,000</b>	<b>2,726,600</b>	<b>2,744,800</b>	<b>2,801,900</b>	<b>2,784,700</b>	<b>2,816,100</b>	<b>2,899,900</b>	
SG&A	880,200	997,309	1,040,700	1,018,700	1,026,300	1,048,000	1,050,700	1,068,400	1,097,600	
R&D	524,500	633,325	728,800	736,100	736,100	747,900	759,900	772,100	784,500	
Other expense	0	0	0	0	0	0	0	0	0	
<b>Core OP</b>	<b>955,200</b>	<b>1,188,444</b>	<b>1,068,500</b>	<b>971,800</b>	<b>982,400</b>	<b>1,006,000</b>	<b>974,100</b>	<b>975,600</b>	<b>1,017,800</b>	<b>1,015,000</b>
<b>Core net income</b>	<b>663,700</b>	<b>866,444</b>	<b>776,300</b>	<b>662,900</b>	<b>672,900</b>	<b>695,400</b>	<b>675,400</b>	<b>681,100</b>	<b>719,800</b>	
<b>Core-based margin analysis</b>										
Gross margin	69.0%	70.0%	67.4%	66.1%	66.1%	66.0%	65.5%	65.1%	65.3%	
SG&A	25.7%	24.8%	24.7%	24.7%	24.7%	24.7%	24.7%	24.7%	24.7%	
R&D	15.3%	15.7%	17.3%	17.8%	17.7%	17.6%	17.9%	17.9%	17.7%	
Core OP margin	27.9%	29.5%	25.4%	23.6%	23.6%	23.7%	22.9%	22.6%	22.9%	26.4%
<b>% YOY change</b>										
Net sales	11.6%	12.8%	4.6%	-2.1%	0.7%	2.1%	0.3%	1.7%	2.7%	20.1%
Core OP	-1.3%	24.4%	-10.1%	-9.1%	1.1%	2.4%	-3.2%	0.2%	4.3%	4.9%
<b>Per share data</b>										
<b>EPS/GAAP</b>	<b>145.9</b>	<b>201.9</b>	<b>124.9</b>	<b>104.3</b>	<b>132.4</b>	<b>167.0</b>	<b>174.4</b>	<b>182.6</b>	<b>210.9</b>	<b>198.0</b>
<b>Core EPS</b>	<b>425.0</b>	<b>558.0</b>	<b>491.7</b>	<b>418.4</b>	<b>424.7</b>	<b>438.9</b>	<b>426.3</b>	<b>429.9</b>	<b>454.3</b>	<b>434.0</b>
BPS	3,665.6	4,087.5	4,297.2	4,214.5	4,160.2	4,140.8	4,128.9	4,125.3	4,150.2	-
DPS	180.0	180.0	188.0	188.0	188.0	188.0	188.0	188.0	188.0	180.0
Avg. shares O/S (diluted)	1,577.114	1,569.867	1,578.678	1,584.484	1,584.484	1,584.484	1,584.484	1,584.484	1,584.484	-
Basic shares O/S (FY-end)	1,550.361	1,554.529	1,568.906	1,568.906	1,568.906	1,568.906	1,568.906	1,568.906	1,568.906	-
<b>ForEHgn exchange</b>										
JPY/USD	112	135	144	145	145	145	145	145	145	111
JPY/EUR	131	141	155	155	155	155	155	155	155	124

Source: Company. Estimates by BofA Global Research.

BofA GLOBAL RESEARCH

**Exhibit 4: Cash Flow Statement & Balance Sheet**

Achievement of deleverage target set at Shire acquisition

JPY in millions	IFRS	IFRS	IFRS	IFRS	IFRS	IFRS	IFRS	IFRS	IFRS
Fiscal year end	FY3/22	FY3/23	FY3/24e	FY3/25e	FY3/26e	FY3/27e	FY3/28e	FY3/29e	FY3/30e
<b>Operating cash flow</b>	<b>1,123,105</b>	<b>977,156</b>	<b>607,300</b>	<b>921,800</b>	<b>895,900</b>	<b>884,500</b>	<b>866,000</b>	<b>850,700</b>	<b>879,800</b>
Net income before extraordinaries	230,100	317,000	197,200	165,200	209,800	264,600	276,400	289,300	334,100
Total dep & amort. CF	637,666	728,794	825,700	747,700	696,000	648,500	603,800	591,700	581,000
(Inc.)/Dec. in working capital	206,913	-88,832	-415,600	8,900	-9,900	-28,600	-14,200	-30,300	-35,300
Other operating non-cash items	48,426	20,194	0	0	0	0	0	0	0
<b>Investing cash flow</b>	<b>-198,125</b>	<b>-607,102</b>	<b>-284,400</b>	<b>-235,800</b>	<b>-290,200</b>	<b>-293,900</b>	<b>-300,200</b>	<b>-305,800</b>	<b>-312,300</b>
Capital expenditure*	-186,037	-633,689	-284,400	-235,800	-290,200	-293,900	-300,200	-305,800	-312,300
Other investing cash items	-12,088	26,587	0	0	0	0	0	0	0
<b>Financing cash flow</b>	<b>-1,070,265</b>	<b>-709,148</b>	<b>-600</b>	<b>-883,800</b>	<b>-345,000</b>	<b>-485,000</b>	<b>-555,000</b>	<b>-515,000</b>	<b>-575,000</b>
Net share issue/repurchase	-77,531	-26,929	0	0	0	0	0	0	0
Dividends paid	-283,665	-279,416	-282,400	-295,000	-295,000	-295,000	-295,000	-295,000	-295,000
Change in debt	-560,783	-241,670	281,800	-588,800	-50,000	-190,000	-260,000	-220,000	-280,000
Other financing cash flow	-148,286	-161,133	0	0	0	0	0	0	0
Adjustment	0	0	0	0	0	0	0	0	0
<b>Total cash flow</b>	<b>-145,285</b>	<b>-339,094</b>	<b>322,300</b>	<b>-197,800</b>	<b>260,700</b>	<b>105,600</b>	<b>10,800</b>	<b>29,900</b>	<b>-7,500</b>
<b>Free cash flow</b>	<b>924,980</b>	<b>370,054</b>	<b>322,900</b>	<b>686,000</b>	<b>605,700</b>	<b>590,600</b>	<b>565,800</b>	<b>544,900</b>	<b>567,500</b>
<b>CapEx, Depreciation and Amortization</b>									
CapEx, PP&E (Company)	186,000	633,700	284,400	235,800	290,200	293,900	300,200	305,800	312,300
Dep'n & Amo'n (Company)	583,151	664,400	703,700	650,100	598,400	550,900	506,200	494,100	483,400
Fiscal year end	FY3/22	FY3/23	FY3/24e	FY3/25e	FY3/26e	FY3/27e	FY3/28e	FY3/29e	FY3/30e
<b>Total Asset</b>	<b>13,178,018</b>	<b>13,957,750</b>	<b>14,222,947</b>	<b>13,508,711</b>	<b>13,379,311</b>	<b>13,171,211</b>	<b>12,904,111</b>	<b>12,694,211</b>	<b>12,467,111</b>
Current Asset	2,593,642	2,397,956	2,428,830	2,226,400	2,502,800	2,649,300	2,685,800	2,761,800	2,803,400
Cash & Equiv, Marketable securities	875,000	568,939	336,717	138,900	399,600	505,200	516,000	545,900	538,400
Account recEHvble	696,644	649,429	716,230	701,100	706,300	721,200	723,100	735,300	755,400
Inventory	853,167	986,457	1,169,640	1,180,200	1,190,700	1,216,700	1,240,500	1,274,400	1,303,400
Other current asset, net	168,831	168,800	206,243	206,200	206,200	206,200	206,200	206,200	206,200
Fixed asset	10,584,376	11,559,794	11,794,117	11,282,311	10,876,511	10,521,911	10,218,311	9,932,411	9,663,711
PP&E	1,582,800	1,691,229	1,841,499	1,820,500	1,808,600	1,805,300	1,810,300	1,823,300	1,843,900
Intangible asset & GW	8,226,293	9,060,380	9,208,309	8,815,000	8,518,800	8,265,100	8,054,200	7,853,000	7,661,300
Other fixed asset, net	775,283	808,185	744,309	646,811	549,111	451,511	353,811	256,111	158,511
<b>Total liability</b>	<b>7,494,495</b>	<b>7,603,078</b>	<b>7,480,340</b>	<b>6,895,911</b>	<b>6,851,711</b>	<b>6,674,011</b>	<b>6,425,511</b>	<b>6,221,311</b>	<b>5,955,111</b>
Current liability	2,145,730	2,481,940	2,282,168	2,286,500	2,292,300	2,304,600	2,316,100	2,331,900	2,345,700
Account payable	516,297	649,233	483,666	488,000	493,800	506,100	517,600	533,400	547,200
Short term debt	203,993	339,600	370,292	370,300	370,300	370,300	370,300	370,300	370,300
Other current liability, net	1,425,440	1,493,107	1,428,210	1,428,200	1,428,200	1,428,200	1,428,200	1,428,200	1,428,200
Fixed liability	5,348,764	5,121,138	5,198,172	4,609,411	4,559,411	4,369,411	4,109,411	3,889,411	3,609,411
Long term debt	4,141,418	4,042,741	4,293,872	3,705,111	3,655,111	3,465,111	3,205,111	2,985,111	2,705,111
Other fixed liability, net	1,207,346	1,078,397	904,300	904,300	904,300	904,300	904,300	904,300	904,300
<b>Net asset</b>	<b>5,683,523</b>	<b>6,354,672</b>	<b>6,742,607</b>	<b>6,612,800</b>	<b>6,527,600</b>	<b>6,497,200</b>	<b>6,478,600</b>	<b>6,472,900</b>	<b>6,512,000</b>
Shareholders' equity	5,683,019	6,354,123	6,741,934	6,612,100	6,526,900	6,496,500	6,477,900	6,472,200	6,511,300
Contributed capital	3,385,136	3,405,175	3,406,681	3,406,700	3,406,700	3,406,700	3,406,700	3,406,700	3,406,700
Retained earnings	1,479,716	1,541,146	1,396,838	1,267,000	1,181,800	1,151,400	1,132,800	1,127,100	1,166,200
Reserves, adjustments	818,167	1,407,802	1,938,415	1,938,400	1,938,400	1,938,400	1,938,400	1,938,400	1,938,400
Minorities' equity	504	549	673	700	700	700	700	700	700
Interest bearing debt	4,345,411	4,382,341	4,664,164	4,075,411	4,025,411	3,835,411	3,575,411	3,355,411	3,075,411
Net debt	3,470,411	3,813,402	4,327,447	3,936,511	3,625,811	3,330,211	3,059,411	2,809,511	2,537,011
Net debt/EBITDA	2.77	3.04	3.35	3.37	3.08	2.76	2.61	2.38	2.05

Source: Company. Estimates by BofA Global Research. \*Capital expenditure in CFS includes expenditure for PP&amp;E, intangibles and M&amp;A spending.

BofA GLOBAL RESEARCH

**Exhibit 5: Sales breakdown (1/2)**

Growth &amp; Launch products partially offset the impact of Vyvanse patent expiry

JPY in millions Fiscal year end	IFRS FY3/22	IFRS FY3/23	IFRS FY3/24e	IFRS FY3/25e	IFRS FY3/26e	IFRS FY3/27e	IFRS FY3/28e	IFRS FY3/29e	IFRS FY3/30e	IFRS CoE
<b>Total sales</b>	<b>3,569,000</b>	<b>4,027,400</b>	<b>4,213,200</b>	<b>4,124,300</b>	<b>4,154,900</b>	<b>4,242,800</b>	<b>4,253,800</b>	<b>4,325,400</b>	<b>4,443,600</b>	<b>3,840,000</b>
GI	875,685	1,094,500	1,234,100	1,293,700	1,336,800	1,373,300	1,413,700	1,459,600	1,505,100	HSD growth
Rare Hematology	283,689	304,700	304,400	289,700	274,500	260,800	248,200	234,100	223,100	HSD decrease
Rare hereditary disease and others	326,182	418,700	470,800	487,300	498,000	510,800	526,200	537,700	552,400	MSD growth
PDT Immunology	506,951	678,400	818,400	894,100	968,400	1,045,500	1,127,200	1,212,300	1,290,500	+10%/+20%
Oncology	468,730	438,800	471,300	494,200	509,600	542,800	476,400	444,600	436,100	LSD growth
Neuroscience	482,294	637,700	585,600	371,000	292,400	249,900	214,200	201,800	211,000	high-20%
Others	624,100	454,600	328,600	294,300	275,200	259,700	247,900	235,300	225,400	decrease
										-> 30% decrease
<b>GI</b>	<b>875,685</b>	<b>1,094,500</b>	<b>1,234,100</b>	<b>1,293,700</b>	<b>1,336,800</b>	<b>1,373,300</b>	<b>1,413,700</b>	<b>1,459,600</b>	<b>1,505,100</b>	<b>HSD growth</b>
Entyvio (IBD)	521,778	702,800	822,000	897,100	961,200	1,015,500	1,046,700	1,071,400	1,095,600	788,000
Dexlant (peptic ulcer)	50,800	69,400	48,400	37,700	29,700	23,800	19,400	16,000	13,500	36,000
pantoprazole (peptic ulcer)	<u>40,300</u>	<u>45,500</u>	<u>46,700</u>	<u>44,400</u>	<u>40,500</u>	<u>37,000</u>	<u>33,900</u>	<u>31,000</u>	<u>28,400</u>	43,000
Takecab (peptic ulcer)	102,400	108,700	120,300	124,300	124,300	122,600	117,200	112,900	104,300	132,000
Gattex, Revestive (Short Bowel Syndrome)	75,800	93,100	110,200	98,800	89,800	81,900	75,200	69,700	65,000	106,000
Pentasa/Lialda/Mezavant (IBD)	46,700	32,200	28,900	26,100	20,200	15,700	12,200	9,400	7,400	26,000
Amitiza (constipation)	<u>6,500</u>									
Alofisel (perianal fistulas)	13,000	18,100	20,600	21,800	22,900	24,000	25,200	26,500	27,800	19,000
Motegrity (chronic idiopathic constipation)	1,800	2,600	3,400	4,100	4,700	5,100	5,600	6,200	6,700	4,000
Others	23,107	30,500	33,550	33,600	31,900	30,300	28,800	27,400	26,000	-25%/-20%
Pipeline products							28,600	66,100	105,100	
<b>Rare Metabolic</b>	<b>326,182</b>	<b>418,700</b>	<b>470,800</b>	<b>487,300</b>	<b>498,000</b>	<b>510,800</b>	<b>526,200</b>	<b>537,700</b>	<b>552,400</b>	<b>MSD growth</b>
Elaprase/12S (Hunter Syndrome)	73,100	85,300	90,400	88,600	86,600	83,800	84,700	81,100	81,000	84,000
Replagal (Fabry's disease)	51,700	66,800	73,500	69,800	66,300	63,000	59,900	56,900	54,100	76,000
VPRIV (Gaucher disease)	42,400	48,400	50,700	50,000	48,800	47,900	46,400	45,200	43,900	51,000
Natpara (hypoparathyroidism)	5,400									
Pipeline products			3,800	7,300	13,200	20,100	27,100	33,200	37,700	
<b>Rare Hematology</b>	<b>283,689</b>	<b>304,700</b>	<b>304,400</b>	<b>289,700</b>	<b>274,500</b>	<b>260,800</b>	<b>248,200</b>	<b>234,100</b>	<b>223,100</b>	<b>HSD decrease</b>
Advate	118,500	118,200	122,100	114,800	107,200	100,300	93,900	87,700	82,100	100,000
Adynovate	60,700	66,600	67,700	65,300	63,100	61,000	59,100	54,700	52,400	72,000
FEHba	39,200	41,300	37,100	34,300	31,600	29,200	27,000	25,000	23,100	37,000
Hemofil etc.	17,700	19,500	20,000	17,400	15,300	13,400	11,900	10,500	9,500	17,000
Others	47,589	59,100	57,500	57,900	57,300	56,900	56,300	56,200	56,000	n.a.
<b>Hereditary Angioedema (HAE)</b>	<b>326,182</b>	<b>418,700</b>	<b>470,800</b>	<b>487,300</b>	<b>498,000</b>	<b>510,800</b>	<b>526,200</b>	<b>537,700</b>	<b>552,400</b>	<b>MSD growth</b>
HAE drugs total (ex-Takhzyro)	50,400	43,100	40,200	35,000	30,700	27,400	25,000	23,300	22,400	36,000
Takhzyro	103,200	151,800	181,200	196,300	209,900	223,700	235,600	247,800	260,100	158,000
<b>PDT Immunology</b>	<b>507,000</b>	<b>678,400</b>	<b>818,400</b>	<b>894,100</b>	<b>968,400</b>	<b>1,045,500</b>	<b>1,127,200</b>	<b>1,212,300</b>	<b>1,290,500</b>	<b>+10%/+20%</b>
Immunoglobulin	385,900	522,200	650,400	708,200	764,500	824,400	888,300	953,900	1,013,500	+10%/+20%
Others	31,100	34,800	41,400	47,500	54,000	61,300	69,700	79,200	90,100	+5%/+15%

Source: Company. Estimates by BofA Global Research. IBD: Inflammatory Bowel Disease. Underlined product are off-patented.

**Exhibit 6: Sales breakdown (2/2)**

Growth &amp; Launch products partially offset the impact of Vyvanse patent expiry

JPY in millions	IFRS	IFRS	IFRS	IFRS	IFRS	IFRS	IFRS	IFRS	IFRS	
Fiscal year end	FY3/22	FY3/23	FY3/24e	FY3/25e	FY3/26e	FY3/27e	FY3/28e	FY3/29e	FY3/30e	CoE
<b>Oncology</b>	<b>468,700</b>	<b>438,800</b>	<b>471,300</b>	<b>494,200</b>	<b>509,600</b>	<b>542,800</b>	<b>476,400</b>	<b>444,600</b>	<b>436,100</b>	<b>LSD growth</b>
Velcade (MM)	110,000	27,700	5,100	3,600	2,600	1,300	700	400	100	6,000
leuprolerin (prostate cancer)	106,500	111,300	110,400	103,900	97,900	91,100	84,900	79,200	73,900	109,000
Ninlaro (MM)	91,200	92,700	88,200	87,400	86,100	84,900	83,600	82,400	65,800	91,000
Adcetris (blood cancer)	69,200	84,100	112,400	125,200	139,700	156,100	119,000	77,400	58,200	94,000
Iclusig (leukemia)	34,900	47,300	54,800	60,400	66,100	72,300	28,100	15,300	11,700	48,000
Alunbrig (lung cancer)	13,600	20,600	28,000	30,900	33,200	34,900	36,800	38,800	40,900	29,000
Vectibix (colon cancer)	24,700	25,800	27,100	28,500	23,900	23,800	23,700	23,600	23,500	26,000
Others	3,300	4,900	10,300	13,400	17,400	22,600	29,400	38,200	49,700	+>30%
Pipeline products					600	7,200	16,200	31,200	50,400	
<b>Neuroscience</b>	<b>482,294</b>	<b>637,700</b>	<b>585,600</b>	<b>371,000</b>	<b>292,400</b>	<b>249,900</b>	<b>214,200</b>	<b>201,800</b>	<b>211,000</b>	<b>high-20% decrease</b>
Vyvanse (ADHD)	327,100	459,300	368,800	160,900	103,300	85,300	78,000	73,600	62,000	283,000
Trintellix (depression)	82,300	100,100	111,200	116,300	115,900	101,000	66,500	32,200	15,200	108,000
Adderall family (ADHD)	20,900	28,500	44,400	33,900	24,400	17,500	12,800	9,400	6,600	17,000
Rozerem (insomnia)	11,700	8,600								8,000
Reminil (dementia)										
Intuniv (ADHD)	18,900	16,300	34,500	34,500	22,200	16,400	12,200	9,300	7,200	34,000
Others	21,400	24,800	26,700	25,400	24,100	22,900	21,800	20,700	19,700	>30% decrease
Pipeline products					2,500	6,800	22,900	56,600	100,300	
<b>Others</b>	<b>624,100</b>	<b>454,600</b>	<b>328,600</b>	<b>294,300</b>	<b>275,200</b>	<b>259,700</b>	<b>247,900</b>	<b>235,300</b>	<b>225,400</b>	<b>-&gt; 30% decrease</b>

Source: Company. Estimates by BofA Global Research. IBD: Inflammatory Bowel Disease. Underlined product are off-patented.

BofA GLOBAL RESEARCH

**Exhibit 7: Entyvio sales forecast model**

We assume no biosimilars until FY3/31

JPY in millions		IFRS	IFRS	IFRS	IFRS	IFRS	IFRS	IFRS	IFRS	IFRS	IFRS
Fiscal year end		FY3/22	FY3/23	FY3/24e	FY3/25e	FY3/26e	FY3/27e	FY3/28e	FY3/29e	FY3/30e	CoE
<b>US assumptions</b>											
Patients	UC	707,000	714,100	721,200	728,400	735,700	743,100	750,500	758,000	765,600	
	CD	707,000	714,100	721,200	728,400	735,700	743,100	750,500	758,000	765,600	
Biology penetration	UC	29%	32%	34%	36%	38%	40%	40%	40%	40%	
	CD	60%	60%	60%	60%	60%	60%	60%	60%	60%	
<b>Entyvio share</b>	<b>UC</b>	<b>39%</b>	<b>39%</b>	<b>40%</b>	<b>42%</b>	<b>43%</b>	<b>43%</b>	<b>44%</b>	<b>44%</b>	<b>44%</b>	
	<b>CD</b>	<b>19%</b>	<b>20%</b>	<b>21%</b>	<b>22%</b>	<b>23%</b>	<b>24%</b>	<b>25%</b>	<b>25%</b>	<b>25%</b>	
Entyvio patients	UC	78,600	88,700	99,600	109,600	119,600	127,900	130,700	132,900	135,200	
	CD	80,600	85,700	90,900	97,000	102,400	107,000	110,300	112,800	115,300	
Annual price (USD)		21,000	21,000	21,000	21,000	21,000	21,000	21,000	21,000	21,000	
<b>Sales (mnUSD)</b>		<b>3,334</b>	<b>3,644</b>	<b>3,971</b>	<b>4,299</b>	<b>4,610</b>	<b>4,868</b>	<b>4,982</b>	<b>5,068</b>	<b>5,154</b>	
	UC	1,650	1,862	2,091	2,302	2,512	2,687	2,745	2,791	2,838	
	CD	1,684	1,782	1,880	1,997	2,098	2,181	2,238	2,276	2,315	
<b>Sales (mnJPY)</b>		<b>556,559</b>	<b>702,800</b>	<b>822,000</b>	<b>897,100</b>	<b>961,200</b>	<b>1,015,500</b>	<b>1,046,700</b>	<b>1,071,400</b>	<b>1,095,600</b>	<b>788,000</b>
YoY		30%	26%	17%	9%	7%	6%	3%	2%	2%	12%
US		373,400	491,900	569,900	623,400	668,500	705,900	722,500	734,800	747,200	
Europe		141,300	162,500	192,000	207,700	222,000	235,000	245,700	254,700	263,900	
Japan		12,700	13,500	15,400	17,700	20,000	22,400	24,700	26,500	27,400	
Emerging market		25,000	34,900	44,700	48,300	50,700	52,200	53,800	55,400	57,100	

Source: Company. Estimates by BofA Global Research. UC: Ulcerative Colitis, CD: Crohn's Disease).

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**Exhibit 8: Pipeline products (1/2)**

Key focus projects include TAK-861 for narcolepsy and TAK-279 for psoriasis

JPY in millions

Code		FY3/23	FY3/24e	FY3/25e	FY3/26e	FY3/27e	FY3/28e	FY3/29e	FY3/30e	FY3/31e
<b>GI/ Inflammatory</b>										
TAK-999 (AATD liver disease)										
Un-risk adjusted sales	P3							15,000	30,000	45,000
Risk-adjusted sales	50%							7,500	15,000	22,500
TAK-951 (Vomiting)										
Un-risk adjusted sales	P2						3,000	6,000	12,000	15,600
Risk-adjusted sales	20%						600	1,200	2,400	3,100
TAK-227 (Celiac disease)										
Un-risk adjusted sales	P2b						6,000	12,000	18,000	19,800
Risk-adjusted sales	20%						1,200	2,400	3,600	4,000
TAK-101 (Celiac disease)										
Un-risk adjusted sales	P2a						5,000	10,000	15,000	16,600
Risk-adjusted sales	20%						1,000	2,000	3,000	3,300
TAK-062 (Celiac disease)										
Un-risk adjusted sales	P1							5,000	10,000	15,000
Risk-adjusted sales	5%							300	500	800
TAK-279 (Psoriasis)										
Un-risk adjusted sales	P2						51,600	135,800	222,500	311,500
Risk-adjusted sales	50%						25,800	52,700	80,600	109,500
<b>Rare hereditary disease and others</b>										
TAK-755 (TTP)										
Un-risk adjusted sales	Approval		3,750	7,500	13,500	20,300	26,400	31,700	34,900	38,400
Risk-adjusted sales	100%		3,800	7,300	13,200	19,800	25,700	30,900	34,000	37,400
mezagitamab (Myasthenia gravis etc.)										
Un-risk adjusted sales	P2						13,000	26,000	52,000	78,000
Risk-adjusted sales	5%						700	1,300	2,600	3,900

Source: Company. Estimates by BofA Global Research. AATD: Alpha-1 antitrypsin deficiency, TTP: Thrombotic Thrombocytopenic purpura

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**Exhibit 9: Pipeline products (2/2)**

Key focus projects include TAK-861 for narcolepsy and TAK-279 for psoriasis

JPY in millions

Code		FY3/23	FY3/24e	FY3/25e	FY3/26e	FY3/27e	FY3/28e	FY3/29e	FY3/30e	FY3/31e
<b>Oncology</b>										
TAK-007 (blood cancer)										
Un-risk adjusted sales	P2					18,000	36,000	72,000	138,000	259,800
Risk-adjusted sales	10%					1,800	3,600	7,200	13,800	26,000
TAK-981/subasumstat (solid tumor)										
Un-risk adjusted sales	P2					6,000	12,000	24,000	36,000	39,600
Risk-adjusted sales	10%					600	1,200	2,400	3,600	4,000
TAK-573/madakafusp alfa (multiple myeloma)										
Un-risk adjusted sales	P2					18,000	45,000	90,000	145,000	193,600
Risk-adjusted sales	20%					3,600	9,000	18,000	29,000	38,700
<b>Neuroscience</b>										
soticlestat/TAK-935 (DS, LGS)										
Un-risk adjusted sales	P3				3,500	7,000	14,000	25,000	41,900	44,000
Risk-adjusted sales	70%				2,500	4,900	9,800	17,500	29,300	30,800
TAK-141 (Hunter syndrome)										
Un-risk adjusted sales	P3					600	1,200	2,400	3,600	5,400
Risk-adjusted sales	50%					300	700	1,000	1,100	1,400
TAK-071 (Parkinson's disease)										
Un-risk adjusted sales	P2					8,000	16,000	32,000	48,000	52,800
Risk-adjusted sales	5%					400	800	1,600	2,400	2,600
TAK-861 (narcolepsy)										
Un-risk adjusted sales	P1/2						19,600	68,500	129,700	212,600
Risk-adjusted sales	50%						9,800	34,300	64,900	106,300
<b>Others</b>										
TAK-003 (dengu vaccine)										
Un-risk adjusted sales	Approved	100	10,700	21,400	34,200	44,500	55,400	61,800	68,600	75,900
Risk-adjusted sales	100%	100	10,700	21,400	34,200	44,500	55,000	61,200	67,800	75,000
TAK-426 (Zika vaccine)										
Un-risk adjusted sales	P1					14,000	28,000	56,000	84,000	92,400
Risk-adjusted sales	5%					700	1,400	2,800	4,200	4,600

Source: Company. Estimates by BofA Global Research.

BofA GLOBAL RESEARCH

## Price objective basis & risk

### Takeda Pharm. (4502 / TKPHF / TAK)

We base our JPY5,000 PO (ADR: \$17.20) on our 12-year DCF model and also taking into account valuations such as P/E and P/B. Our DCF assumptions are risk-free rate 1.0%, equity risk premium 5.5%, terminal growth 1.0% and tax rate 40%. Individual company FCF risk is reflected in the stock beta, which takes into account quantitative risk based on new drug development scenario analysis and qualitative risk based on factors such as management strategies, and is set at a tiered level within the sector. We use the Bloomberg two-year adjusted beta of 0.69, and base our price objective for the company on a stock beta of 0.76, and WACC of 4.0%. Our PO equates to a P/E of 12x our FY3/25 Core EPS forecast. Upside risks are favorable new drug pipeline data and better-than-expected progress in cost reductions. Downside risks are a cancellation or postponement of new product development or changes in product evaluation, inaccuracy in our DCF assumptions and higher-than-expected impairment losses on intangible assets.

## Analyst Certification

I, Koichi Mamegano, hereby certify that the views expressed in this research report accurately reflect my personal views about the subject securities and issuers. I also certify that no part of my compensation was, is, or will be, directly or indirectly, related to the specific recommendations or view expressed in this research report.

### APR - Healthcare Coverage Cluster

Investment rating	Company	BofA Ticker	Bloomberg symbol	Analyst
<b>BUY</b>				
	Adicon Holdings	ADCNF	9860 HK	David Li
	Aier Eye Hospital	XAEOF	300015 CH	David Li
	Amvis Holdings	XEPSF	7071 JP	Ritsuo Watanabe
	Angelalign Technology Inc	AGLFF	6699 HK	David Li
	Apollo Hospital	XWQAF	APHS IN	Neha Manpuria
	Asahi Intecc	AHICF	7747 JP	Ritsuo Watanabe
	Aurobindo	XLZFF	ARBP IN	Neha Manpuria
	Autobio Diagnostics Co Ltd	XQDXF	603658 CH	Sandra Sun
	AVITA	AVHHL	AVH AU	Lyanne Harrison
	AVITA	RCEL	RCEL US	Lyanne Harrison
	Baiyunshan	GZPHF	874 HK	Sandra Sun
	Bangkok Chain Hospital	BKKFF	BCH TB	Charti Phrawphraikul
	Bangkok Dusit Medical Services	BDUFF	BDMS TB	Charti Phrawphraikul
	Beijing Tongrentang Co., Limited	BJTGF	600085 CH	David Li
	Biocon	XLOFF	BIOS IN	Neha Manpuria
	Bumrungrad Hospital	BUHHF	BH TB	Charti Phrawphraikul
	Cansino Bio	CASBF	6185 HK	David Li
	Chugai Pharm.	CHGCF	4519 JP	Koichi Mamegano
	Chularat Hospital Group	XOCOF	CHG TB	Charti Phrawphraikul
	CSL Limited	CMXHF	CSL AU	Lyanne Harrison
	Daiichi Sankyo	DSKYF	4568 JP	Koichi Mamegano
	Daiichi Sankyo	DSNKY	DSNKY US	Koichi Mamegano
	Dr. Reddy's	DRYBF	DRRD IN	Neha Manpuria
	Dr. Reddy's	RDY	RDY US	Neha Manpuria
	Eisai	ESALF	4523 JP	Koichi Mamegano
	Everest Medicine	XMLKF	1952 HK	David Li
	Fisher & Paykel Healthcare	XPAXF	FPH AU	Lyanne Harrison
	Fisher & Paykel Healthcare	FSPKF	FPH NZ	Lyanne Harrison
	Fortis Health	XFFTf	FORH IN	Neha Manpuria
	Frontage	FGHQF	1521 HK	David Li
	Gland Pharma	XGLPF	GLAND IN	Neha Manpuria
	Glenmark Life Sciences	XWDPF	GLS IN	Neha Manpuria
	Gushengtang	GSHTF	2273 HK	David Li
	Huadong Medicine	XCPDF	000963 CH	Ethan Cui
	Hualan Biological	XCBEF	002007 CH	Ethan Cui
	Hygeia Healthcare	HYHHF	6078 HK	Ethan Cui

## APR - Healthcare Coverage Cluster

Investment rating	Company	BofA Ticker	Bloomberg symbol	Analyst
	IHH Healthcare Berhad	IHHHF	IHH MK	Paul Dewberry
	IHH Healthcare Bhd	XFAHF	IHH SP	Paul Dewberry
	Imeik	ZMITF	300896 CH	Ethan Cui
	Innovent	IVBXF	1801 HK	David Li
	Integral Diagnostics	ITGDF	IDX AU	Lianne Harrison
	Jinxin Fertility	JXFGF	1951 HK	Ethan Cui
	Jinyu Bio-Tech	XMTDF	600201 CH	David Li
	Kangji Medical	KMHLF	9997 HK	David Li
	Medley	XEQNF	4480 JP	Ritsuo Watanabe
	MicroPort	MCRPF	853 HK	Sandra Sun
	Mindray	XDVVF	300760 CH	Sandra Sun
	Nanosonics Limited	NNCSF	NAN AU	Lianne Harrison
	Olympus Corp.	OCPNF	7733 JP	Ritsuo Watanabe
	Ovctek	XOCKF	300595 CH	David Li
	Pharmaron	PHBBF	3759 HK	David Li
	Polynovo	CALZF	PNV AU	Lianne Harrison
	Praram 9 Hospital	XPNHF	PR9 TB	Charti Phrawphraikul
	ResMed Inc	RSMDF	RMD AU	Lianne Harrison
	ResMed Inc.	RMD	RMD US	Lianne Harrison
	Sawai Group Holdings	SWGHE	4887 JP	Ritsuo Watanabe
	Shanghai Pharmaceuticals	SHPMF	2607 HK	David Li
	Shanghai United Imaging	XCAOF	688271 CH	Sandra Sun
	Shionogi	SGIOF	4507 JP	Koichi Mamegano
	Shionogi	SGIOY	SGIOY US	Koichi Mamegano
	Sino Biopharm	SBMFF	1177 HK	David Li
	Sinopharm	SHTDF	1099 HK	David Li
	SMS	SMSZF	2175 JP	Ritsuo Watanabe
	Sonic Healthcare Limited	SKHCF	SHL AU	Lianne Harrison
	Sosei	SOLTF	4565 JP	Koichi Mamegano
	Takeda Pharm.	TKPHF	4502 JP	Koichi Mamegano
	Takeda Pharm.	TAK	TAK US	Koichi Mamegano
	Terumo	TRUMF	4543 JP	Ritsuo Watanabe
	TigerMed	HTMDF	3347 HK	David Li
	TRYT	XHXTF	9164 JP	Ritsuo Watanabe
	Wuxi Apptec	WUXIF	2359 HK	David Li
	Wuxi Apptec	XLUHF	603259 CH	David Li
	Yifeng Pharmacy	XYHCF	603939 CH	Ethan Cui
	Yunnan Baiyao	YBAIF	000538 CH	Sandra Sun
	Zai Lab	ZLAB	ZLAB US	David Li
	Zai Lab	XCDZF	9688 HK	David Li
	Zhifei	XCHOF	300122 CH	David Li
<b>NEUTRAL</b>				
	Ansell Limited	ANSLF	ANN AU	Lianne Harrison
	Astellas Pharma	ALPMF	4503 JP	Koichi Mamegano
	Astellas Pharma	ALPMY	ALPMY US	Koichi Mamegano
	Australian Clinical Labs	XAUKF	ACL AU	Lianne Harrison
	Beigene	XBETF	6160 HK	David Li
	Beigene	BGNE	BGNE US	David Li
	EBOS Group Limited	EBOSF	EBO NZ	Lianne Harrison
	EBOS Group Limited	XEBOF	EBO AU	Lianne Harrison
	Healius Limited	PHCRF	HLS AU	Lianne Harrison
	JMDC	JMDCF	4483 JP	Ritsuo Watanabe
	Joinn Lab	XQTSF	6127 HK	David Li
	Kyowa Kirin	KYKOF	4151 JP	Koichi Mamegano
	Max Healthcare	XMHLF	MAXHEALT IN	Neha Manpuria
	Pien Tze Huang	XUVHF	600436 CH	Sandra Sun
	Ramsay Health Care Limited	RMSYF	RHC AU	Lianne Harrison
	Sigma Healthcare Limited	SIGGF	SIG AU	Lianne Harrison
	Sun Pharma	XPUCF	SUNP IN	Neha Manpuria
	Sysmex	SSMXF	6869 JP	Ritsuo Watanabe
	Topchoice Medical	XZDXF	600763 CH	Ethan Cui
	Torrent Pharma	TOPHF	TRP IN	Neha Manpuria
	WuXi Biologics	WXIBF	2269 HK	David Li
	Zydu Lifesciences	XMQLF	ZYDUSLIF IN	Neha Manpuria



## APR - Healthcare Coverage Cluster

Investment rating	Company	BofA Ticker	Bloomberg symbol	Analyst
<b>UNDERPERFORM</b>	Ain Holdings	AINPF	9627 JP	Ritsuo Watanabe
	Alkem	XAMLF	ALKEM IN	Neha Manpuria
	Asymchem Laboratories	XALPF	002821 CH	David Li
	Baiyunshan	XOUFF	600332 CH	Sandra Sun
	Beijing Wantai Biological Pharmacy	XBHIF	603392 CH	David Li
	Cipla	XCLAF	CIPLA IN	Neha Manpuria
	Cochlear Limited	CHEOF	COH AU	Lyanne Harrison
	CSPC Pharmaceutical	CHJTF	1093 HK	Ethan Cui
	Divis Laboratories	XXQPF	DIVI IN	Neha Manpuria
	Hansoh	HNSPF	3692 HK	David Li
	Hengrui Medicine	XMOKF	600276 CH	David Li
	Joinn Lab	JOLCF	603127 CH	David Li
	Lupin	XEFSF	LPC IN	Neha Manpuria
	M3	MTHRF	2413 JP	Ritsuo Watanabe
	Mankind Pharma	XDZCF	MANKIND IN	Neha Manpuria
	Medipal Holdings	MEPDF	7459 JP	Ritsuo Watanabe
	Ono Pharm.	OPHLF	4528 JP	Koichi Mamegano
	Otsuka HD	OTSKF	4578 JP	Koichi Mamegano
	Otsuka HD	OTSKY	OTSKY US	Koichi Mamegano
	Pharmaron	XLYGF	300759 CH	David Li
	PHC Holdings	PHCCF	6523 JP	Ritsuo Watanabe
	Shanghai Pharmaceuticals	XKCRF	601607 CH	David Li
	TigerMed	XHTHF	300347 CH	David Li
<b>RSTR</b>	APM Human Services	APMHF	APM AU	Lyanne Harrison

**iQmethod<sup>SM</sup> Measures Definitions****Business Performance**

Return On Capital Employed

Return On Equity  
Operating Margin  
Earnings Growth  
Free Cash Flow

**Quality of Earnings**

Cash Realization Ratio  
Asset Replacement Ratio  
Tax Rate  
Net Debt-To-Equity Ratio  
Interest Cover

**Valuation Toolkit**

Price / Earnings Ratio  
Price / Book Value  
Dividend Yield  
Free Cash Flow Yield  
Enterprise Value / Sales

EV / EBITDA

**Numerator**

NOPAT = (EBIT + Interest Income) × (1 – Tax Rate) + Goodwill Amortization  
  
Net Income  
Operating Profit  
Expected 5 Year CAGR From Latest Actual  
Cash Flow From Operations – Total Capex

**Numerator**

Cash Flow From Operations  
Capex  
Tax Charge  
Net Debt = Total Debt – Cash & Equivalents  
EBIT

**Numerator**

Current Share Price  
Current Share Price  
Annualised Declared Cash Dividend  
Cash Flow From Operations – Total Capex  
EV = Current Share Price × Current Shares + Minority Equity + Net Debt + Other LT Liabilities  
Enterprise Value

**Denominator**

Total Assets – Current Liabilities + ST Debt + Accumulated Goodwill  
Amortization  
Shareholders' Equity  
Sales  
N/A  
N/A

**Denominator**

Net Income  
Depreciation  
Pre-Tax Income  
Total Equity  
Interest Expense

**Denominator**

Diluted Earnings Per Share (Basis As Specified)  
Shareholders' Equity / Current Basic Shares  
Current Share Price  
Market Cap = Current Share Price × Current Basic Shares  
Sales  
  
Basic EBIT + Depreciation + Amortization

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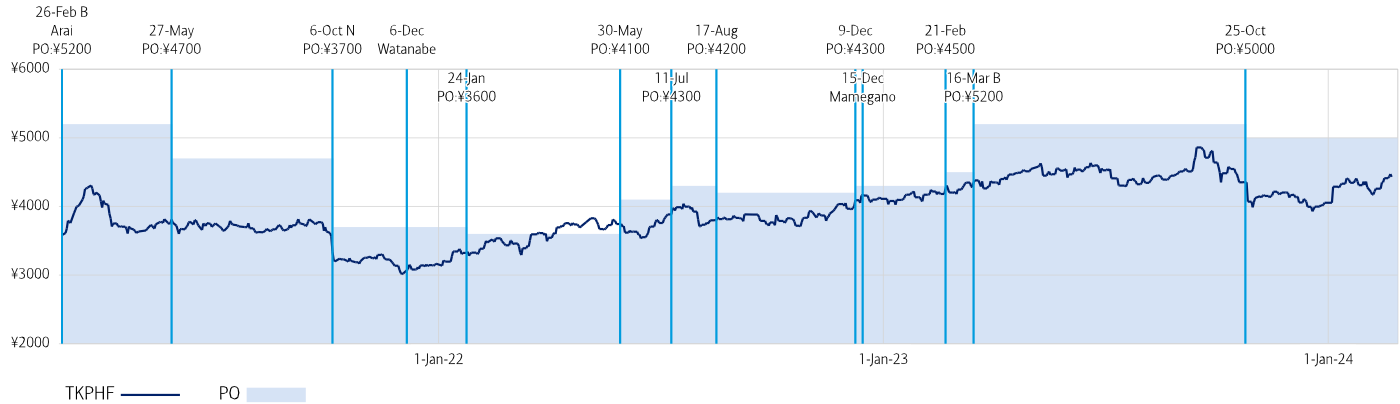
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## Important Disclosures

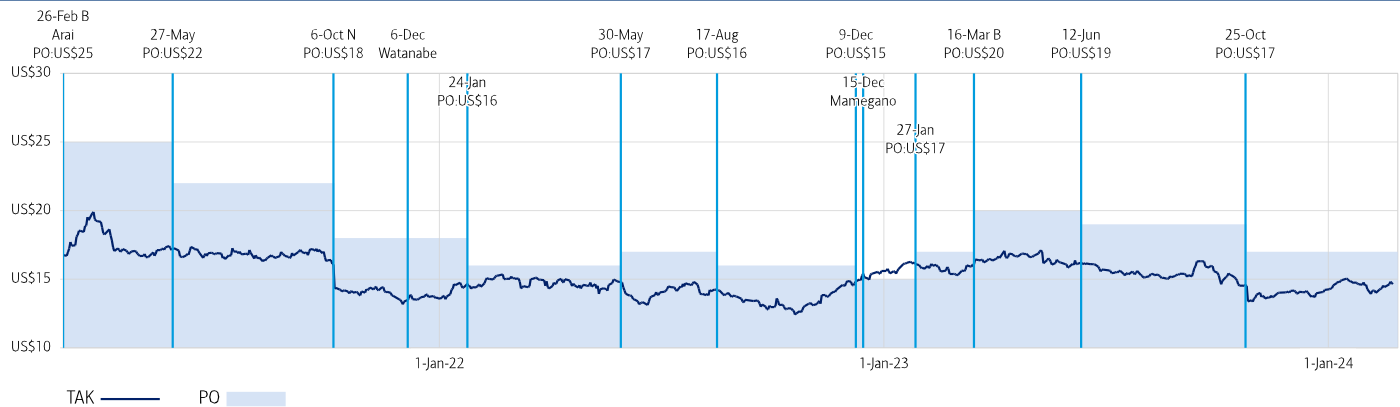
### Takeda Pharm. (TKPHF) Price Chart



B: Buy, N: Neutral, U: Underperform, PO: Price Objective, NA: No longer valid, NR: No Rating

The Investment Opinion System is contained at the end of the report under the heading "Fundamental Equity Opinion Key". Dark grey shading indicates the security is restricted with the opinion suspended. Medium grey shading indicates the security is under review with the opinion withdrawn. Light grey shading indicates the security is not covered. Chart is current as of a date no more than one trading day prior to the date of the report.

### Takeda Pharm. (TAK) Price Chart



B: Buy, N: Neutral, U: Underperform, PO: Price Objective, NA: No longer valid, NR: No Rating

The Investment Opinion System is contained at the end of the report under the heading "Fundamental Equity Opinion Key". Dark grey shading indicates the security is restricted with the opinion suspended. Medium grey shading indicates the security is under review with the opinion withdrawn. Light grey shading indicates the security is not covered. Chart is current as of a date no more than one trading day prior to the date of the report.

### Equity Investment Rating Distribution: Health Care Group (as of 31 Dec 2023)

Coverage Universe	Count	Percent	Inv. Banking Relationships <sup>R1</sup>	Count	Percent
Buy	234	60.94%	Buy	115	49.15%
Hold	80	20.83%	Hold	36	45.00%
Sell	70	18.23%	Sell	29	41.43%

### Equity Investment Rating Distribution: Global Group (as of 31 Dec 2023)

Coverage Universe	Count	Percent	Inv. Banking Relationships <sup>R1</sup>	Count	Percent
Buy	1895	53.62%	Buy	1083	57.15%
Hold	832	23.54%	Hold	454	54.57%
Sell	807	22.84%	Sell	383	47.46%

<sup>R1</sup> Issuers that were investment banking clients of BofA Securities or one of its affiliates within the past 12 months. For purposes of this Investment Rating Distribution, the coverage universe includes only stocks. A stock rated Neutral is included as a Hold, and a stock rated Underperform is included as a Sell.

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Investment rating	Total return expectation (within 12-month period of date of initial rating)	Ratings dispersion guidelines for coverage cluster <sup>R2</sup>
Buy	≥ 10%	≤ 70%
Neutral	≥ 0%	≤ 30%
Underperform	N/A	≥ 20%

<sup>R2</sup>Ratings dispersions may vary from time to time where BofA Global Research believes it better reflects the investment prospects of stocks in a Coverage Cluster.

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