

Biogen Idec Inc.

United States of America/Pharmaceuticals
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UBS Research
 Carter Gould, IB Analyst
 Jeffrey Hung, IB Analyst

Our Take on 1Q Results and Call

- Strong Spinraza Launch Dominates the Narrative...For Now.
- MS Does Enough; Modestly Raising Spinraza Numbers
- Key Metrics and Model Updates
- Valuation: Increasing PT to \$262 (from \$260), based on NPV sum-of-the-parts

Biogen delivered a robust 1Q beat, highlighted by a compelling Spinraza print (\$47M vs. \$16M). While the Spinraza launch is tracking a bit ahead of our expectations, our Sell thesis is unchanged. Indeed, we note that impending near-term clarity on timelines from AveXis risks shifting the narrative from the state of the Spinraza launch (which we think will be fine) to the tangible impact of gene therapies on Spinraza's commercial potential. Coupled with increasing competition in MS from Ocrevus (which should materialize over 2Q-3Q), we think the set up remains challenging over 2017. Reiterate Sell with \$262 PT (up from \$260).

MS Does Enough; Modestly Raising Spinraza Numbers

Biogen cobbled together an adequate quarter on the MS front, grinding out an in-line number, despite a lot of moving parts. U.S. Tysabri growth (+6%), a one-timer from Italian pricing negotiations (+\$45M), and OUS Tecfidera growth (+2%), offset a Tecfidera miss and continued erosion of the Interferons (-6%). On Spinraza, we model ~\$40M in end-user demand in 1Q, and have raised our FY17 number by ~10% (+\$30M) to \$345M; we now forecast a ramp of \$68M, \$100M, and \$130M over 2Q, 3Q, and 4Q, respectively. We still view updates on AveXis' manufacturing plans (early June) and takeaways from the end of phase 1 meeting (mid-2017) as important negative catalysts for Spinraza.

Key Metrics and Model Updates

Revenues – BEAT by \$75M (\$2.811B / \$2.736B); Non-GAAP EPS – BEAT by \$0.20 (\$5.20 / \$5.00); Tecfidera sales – MISS by \$29M; Spinraza – BEAT by \$31M. Given these results, we are increasing our 2017 Spinraza sales forecast by \$30M (to \$345M). We also raised our Ocrevus royalty rate assumption based on disclosures in the 10K. Separately, we are raising our R&D costs for 2017 by ~\$300M to account for the in-licensing of BMS-986168. The net-impact is that our 2017 EPS estimate is lowered from \$20.70 to \$19.62; we expect Biogen to update guidance on the 2Q call.

Valuation: Increasing PT to \$262 (from \$260), based on NPV sum-of-the-parts

Our PT is based on our NPV analysis, which implies a 13.4x P/E based on our 2017 EPS estimate (\$19.62 vs. cons: \$20.91 and guidance of \$20.45-\$21.25).

12-month rating	Sell
12-month price target	\$262.00
Prior Price	US\$260.00
	\$286.89

Trading data and key metrics

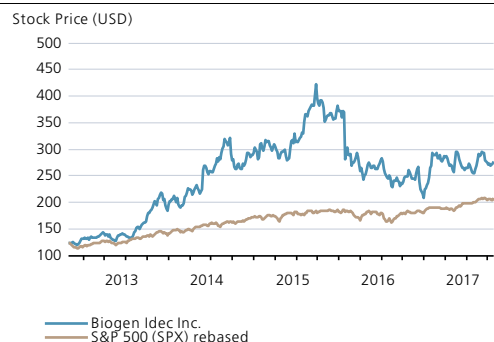
52-wk range	US\$330.11-224.60
Market cap.	US\$61.9bn
Shares o/s	216m (COM)
Free float	100%
Avg. daily volume ('000)	1,666
Avg. daily value (m)	US\$464.3
Common s/h equity (12/17E)	US\$15.9bn
P/BV (12/17E)	3.9x
Net debt / EBITDA (12/17E)	NM
RIC	BIIB.O
BBG	BIIB US

Sources: UBS, Bloomberg

EPS (UBS, diluted) (US\$)

	12/17E			Cons.
	From	To	% ch	
Q1	4.96	5.20	5	4.98
Q2E	5.13	3.94	-23	5.22
Q3E	5.28	5.23	-1	5.33
Q4E	5.33	5.26	-1	5.43
12/17E	20.70	19.62	-5	20.96
12/18E	22.25	22.26	0	22.38
12/19E	23.65	23.24	-2	24.01

Performance



Sources: Bloomberg, UBS

Definitions of terms and abbreviations are available in the appendix section of this report, and more extensively on internet at www.ubs.com/glossary

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Biogen Idec Inc.

Company Profile: Biogen Idec Inc.

Biogen is a global pharmaceutical company driven historically by its multiple sclerosis (MS), and more recently complemented with emerging assets addressing other neurological conditions and rare genetic disorders. The MS franchise accounted for ~80% of its revenue as of 3Q16. More recently, the company's Spinraza was approved by the FDA for SMA (spinal muscular atrophy), a rare muscular disorder. The company also has a later-stage asset, aducanumab, in multiple phase 3 trials for Alzheimer's disease.

Statement of Risk

Our valuation is based on an NPV sum-of-the-parts analysis. Risks to our Sell thesis include (1) resurgent Tecfidera growth, (2) delays in the approval of Ocrevus and/or ozanimod for MS, (3) better than expected Spinraza launch, (4) delays in gene therapies for SMA moving into pivotal studies, (5) incremental datapoints further de-risking aducanumab

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Highlights (US\$m)	12/14	12/15	12/16	12/17E	12/18E	12/19E	12/20E	12/21E
Revenues	9,703	10,764	11,449	11,217	12,219	12,763	13,436	15,159
EBIT (UBS)	4,437	5,380	6,095	5,766	6,527	6,744	7,080	8,118
Net earnings (UBS)	3,281	3,932	4,423	4,222	4,745	4,908	5,160	5,939
EPS (UBS, diluted) (US\$)	13.84	17.01	20.22	19.62	22.26	23.24	24.67	28.67
DPS (US\$)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Net (debt) / cash	1,263	(3,093)	(1,622)	2,542	5,399	9,698	14,799	20,677
Profitability/valuation	12/14	12/15	12/16	12/17E	12/18E	12/19E	12/20E	12/21E
EBIT margin %	45.7	50.0	53.2	51.4	53.4	52.8	52.7	53.6
ROIC (EBIT) %	57.4	60.5	59.1	54.2	60.9	60.9	64.6	75.7
EV/EBITDA (core) x	14.2	13.1	9.0	9.2	7.7	7.0	6.0	4.7
P/E (UBS, diluted) x	23.0	20.7	13.9	14.6	12.9	12.3	11.6	10.0
Equity FCF (UBS) yield %	3.6	3.7	6.4	8.0	8.3	8.7	9.0	10.3
Net dividend yield %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Source: Company accounts, Thomson Reuters, UBS estimates. Metrics marked as (UBS) have had analyst adjustments applied.

Valuations: based on an average share price that year, (E): based on a share price of US\$286.89 on 25 Apr 2017 18:43 EDT

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Biogen Idec Inc.

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UBS 12-Month Rating	Rating Category	Coverage ¹	IB Services ²
Buy	Buy	45%	29%
Neutral	Hold/Neutral	39%	27%
Sell	Sell	15%	16%

1:Percentage of companies under coverage globally within the 12-month rating category.

2:Percentage of companies within the 12-month rating category for which investment banking (IB) services were provided within the past 12 months.

Source: UBS. Rating allocations are as of 31 December 2016.

UBS 12-Month Rating	Definition
Buy	FSR is > 6% above the MRA.
Neutral	FSR is between -6% and 6% of the MRA.
Sell	FSR is > 6% below the MRA.

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Global Equity 12-Month Rating Definitions

Buy: FSR is > 6% above the MRA. **Neutral:** FSR is between -6% and 6% of the MRA. **Sell:** FSR is > 6% below the MRA.

Key Definitions

Forecast Stock Return (FSR) is defined as expected percentage price appreciation plus gross dividend yield over the next 12 months.

Market Return Assumption (MRA) is defined as the one-year local market interest rate plus 5% (a proxy for, and not a forecast of, the equity risk premium).

Under Review (UR) Stocks may be flagged as UR by the analyst, indicating that the stock's price target and/or rating are subject to possible change in the near term, usually in response to an event that may affect the investment case or valuation.

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Company Disclosures

Company Name	Reuters	12-mo rating	Price	Price date
Biogen Inc	BIIB US	Sell	US\$286.89	25 Apr 2017

Source: UBS. All prices as of local market close.

Ratings in this table are the most current published ratings prior to this report. They may be more recent than the stock pricing date

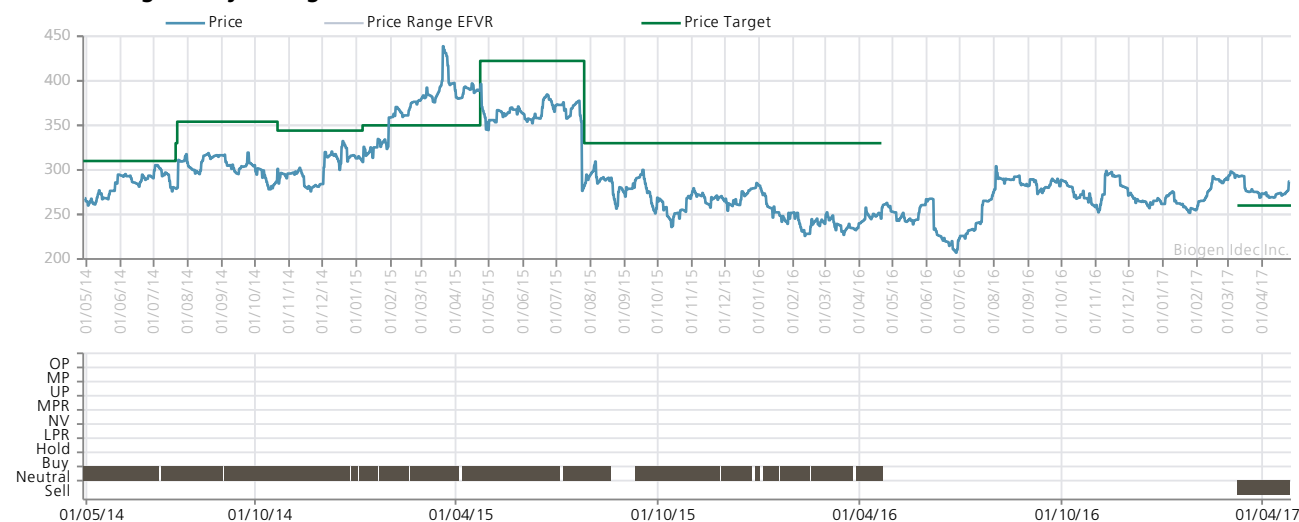
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2. A U.S.-based global equity strategist, a member of his team, or one of their household members has a long common stock position in Biogen Idec Inc.

Biogen Idec Inc.

Global rating history -- Biogen Idec Inc., BIIB US



Source: UBS CIO as of 26 April 2017

Terms and Abbreviations

Term / Abbreviation	Description / Definition	Term / Abbreviation	Description / Definition
1H, 2H, etc. or 1H11, 2H11, etc.	First half, second half, etc. or first half 2011, second half 2011, etc.	1Q, 2Q, etc. or 1Q11, 2Q11, etc.	First quarter, second quarter, etc. or first quarter 2011, second quarter 2011, etc.
2011E, 2012E, etc.	2011 estimate, 2012 estimate, etc.	A	actual i.e. 2010A
ADR	American depository receipt	ARPU	Average Revenue Per User
AUM	Assets under management = total value of own and third-party assets managed	Avg.	average
bn	Billion	bp or bps	Basis point or basis points (100 bps = 1 percentage point)
BVPS	Book value per share = shareholders' equity divided by the number of shares	CAGR	Compound annual growth rate
Cant Inc/Capita	Cantonal income per capita (Switzerland only)	Capex	Capital expenditures
CF	Cash flow	CFO	1) Cash flow from operations, 2) Chief financial officer
COGS	Cost of goods sold	COM	Common shares
Cons.	Consensus	Core Tier 1 Ratio	Tier 1 capital minus tier 1 hybrid securities
Cost/Inc Ratio (%)	Costs as a percentage of income	CPI	Consumer price index
CR	Combined ratio = ratio of claims and expenses as a percentage of premiums (for insurance companies)	CY	Calendar year
DCF	Discounted cash flow	DDM	Dividend discount model
Dividend Yield (%)	Dividend per share divided by price per share	DPS	Dividend per share
E	expected i.e. 2011E	EBIT	Earnings before interest and taxes
EBIT Margin (%)	EBIT divided by revenues	EBITDA	Earnings before interest, taxes, depreciation and amortization
EBITDA Margin (%)	EBITDA divided by revenues	EBITDA/Net Interest	EBITDA divided by net interest expense
EBITDAR	Earnings before interest, taxes, depreciation, amortization and rental expense	EFVR	Estimated fair value range
EmV	Embedded value = net asset value + present value of forecasted future profits (for life insurers)	EPS	Earnings per share
Equity Ratio (%)	Shareholders' equity divided by total assets	EV	Enterprise value = market value of equity, preferred equity, outstanding net debt and minorities
FCF	Free cash flow = cash a company generates above outlays required to maintain/expand its asset base	FCF Yield (%)	Free cash flow divided by market capitalization
FFO	Funds from operations	FY	Fiscal year / financial year
GDP	Gross domestic product	Gross Margin (%)	Gross profit divided by revenues
H	half year	h/h	Half-year over half-year; half on half
hist av.	Historical average	Interbank Ratio	Interbank deposits due from banks divided by interbank deposits due to banks
Interest Coverage	Ratio that expresses the number of times interest expenses are covered by earnings	Interest exp	Interest expense
ISIN	International securities identification number	K	One thousand
LLP/Net Int Inc (%)	Loan loss provisions divided by net interest income	LLR/Gross Loans (%)	Loan loss reserves divided by gross loans

Biogen Idec Inc.

Term / Abbreviation	Description / Definition	Term / Abbreviation	Description / Definition
LPR	Least Preferred: The stock is expected to both underperform the relevant benchmark and depreciate in absolute terms.	Market cap	Number of all shares of a company (at the end of the quarter) times closing price
m/m	Month-over-month; month on month	mn or m	Million
M and A	Merger and Acquisition	MP	Marketperform: The stocks expected performance is in line with the sector benchmark
MPR	Most Preferred: The stock is expected to both outperform the relevant benchmark and appreciate in absolute terms.	n.a.	Not available or not applicable
NAV	Net asset value	Net Debt	Short- and long-term interest-bearing debt minus cash and cash equivalents
Net DPS	Net dividends per share	NIM or Net Int Margin (%)	Net interest income divided by average interest-bearing assets
Net Margin (%)	Net income dividend by revenues	NV	Neutral View: The stock is expected to neither outperform nor underperform the relevant benchmark nor significantly appreciate or depreciate in absolute terms.
n.m. or NM	Not meaningful	NPL	Non-performing loans
OP	Outperform: The stocks is expected to outperform the sector benchmark	Op Margin (%)	Operating income divided by revenues
p.a.	Per annum (per year)	P/BV	Price to book value
P/E or PE	Price to earnings / Price Earnings Ratio	P/E Relative	P/E relative to the market
P/EmV	Price to embedded value	PEG Ratio	P/E ratio divided by earnings growth
PPI	Producer price index	Prim Bal/Cur Rev (%)	Primary balance divided by current revenue (total revenue minus capital revenue)
Profit Margin (%)	Net income divided by revenues	q/q or QQQ	Quarter-over-quarter; quarter on quarter
R and D	Research and development	ROA (%)	Return on assets
ROAE (%)	Return on average equity	ROCE (%)	Return on capital employed = EBIT divided by difference between total assets & current liabilities
ROE (%)	Return on equity	ROIC (%) or ROI	Return on invested capital
Shares o/s	Shares outstanding	Solvency Ratio (%)	Ratio of shareholders' equity to net premiums written (for insurance companies)
sotp or SOTP	Sum of the parts	Tax Burden Index	Swiss tax index; 100 = average tax burden of all cantons
tgt	Target	Tier 1 Ratio (%)	Tier 1 capital divided by risk-weighted assets; describes a bank's capital adequacy
tn	Trillion	UP	Underperform: The stock is expected to underperform the sector benchmark
Valor	Swiss company identifier	WACC	Weighted average cost of capital
CIO	UBS WM Chief Investment Office	x	multiple / multiplier
y/y or YOY	Year-over-year; year on year	yr	Year
YTD	Year-to-date		

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