Morgan Stanley

May 20, 2014

Stock Rating
Overweight

Industry View
In-Line

Ophthotech Corp

Fovista ex-US Deal With Novartis a Positive

What's Changed

Price Target	**$79.00 to $99.00**

OPHT licensed ex-US Fovista rights to NVS, with the nice deal terms positively impacting our PT.

OPHT announced an ex-US commercialization agreement with Novartis for Fovista. OPHT retains US rights to Fovista. **While we have always modeled that OPHT would partner ex-US rights, this deal is more favorable than we had anticipated with larger milestones and a higher royalty rate.**

Deal Terms: We now model OPHT receiving a few tranches of cash from NVS, including a) an upfront of $200mn, b) Ph 3 enrollment based milestones of up to $130mn, and c) ex-US approval based milestones of $300mn. There are also ~$400mn of sales milestones which we do not model. The royalty rate on ex-US Fovista monotherapy sales will be in the mid-30% (we assume 35%). **We view this as a solid deal**. OPHT remains financially responsible for the Ph 3 program, but Novartis 1) will pay for all other ex-US clinical development, 2) will provide Lucentis in the ongoing Ph 3 and other trials, and 3) is fully responsible for co-formulated product and prefilled syringe development. OPHT will have the option to market the combination product and pre-filled syringe in the US.

Novartis as Good Strategic Partner: Novartis has an established sales force marketing Lucentis ex-US. Additionally, Novartis may potentially develop 1) a prefilled Fovista syringe, and 2) a fixed combination of VEGF + Fovista. We see the fixed combo product as useful for the portion of physicians that would prefer a "closed" combination, but do not view this as critical to Fovista success. A closed product would have a lower royalty rate to OPHT but a higher selling price, implying a net to OPHT similar to the monotherapy royalty rate. Overall, we view NVS as a solid partner for Fovista.

US: OPHT retains US Fovista rights. With this deal, OPHT could opt-in to commercialize a VEGF + Fovista combo product and/or a pre-filled Fovista syringe.

Model Changes: We updated our model for the favorable upfront/milestones, mid-30% royalty, a more detailed salesforce build, and updated tax rate.

MORGAN STANLEY RESEARCH
NORTH AMERICA

Morgan Stanley & Co. LLC

David Friedman, M.D.
David.Friedman@morganstanley.com
+1 212 761 4217

Matthew Harrison
Matthew.Harrison@morganstanley.com

Brienne Kugler
Brienne.Kugler@morganstanley.com
+1 212 761 6209

Key Ratios and Statistics

Reuters: OPHT.O Bloomberg: OPHT US
Biotechnology / United States of America

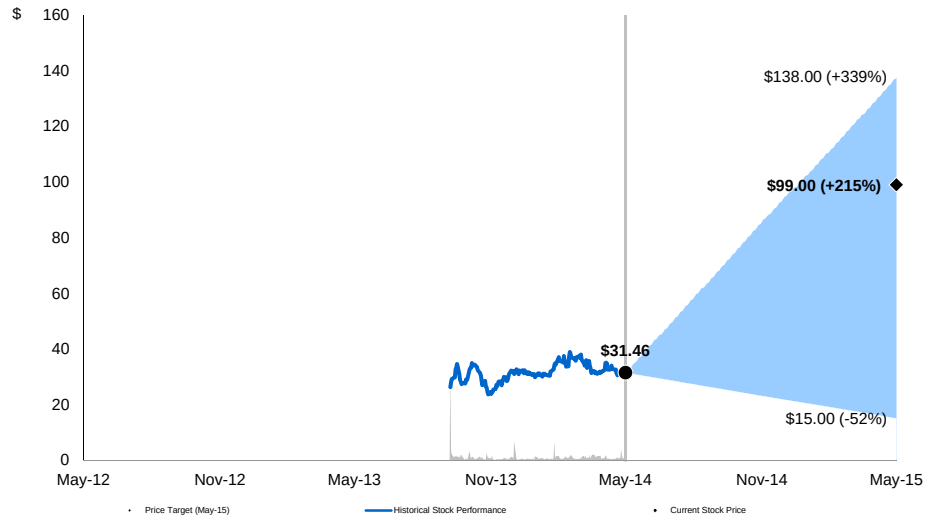
Price target	**$99.00**
Shr price, close (May 19, 2014)	$31.46
Mkt cap, curr (mm)	$951
52-Week Range	$42.54-22.61

Fiscal Year ending	**12/13**	**12/14e**	**12/15e**	**12/16e**
ModelWare EPS ($)	**(5.67)**	**(2.52)**	**(2.37)**	**(2.60)**
Prior ModelWare EPS ($)	**-**	**(2.83)**	**(3.26)**	**(0.19)**
P/E	**NM**	**NM**	**NM**	**NM**
Consensus EPS ($)§	**(5.39)**	**(2.98)**	**(3.64)**	**(2.30)**
Div yld (%)	0.0	0.0	0.0	0.0

Unless otherwise noted, all metrics are based on Morgan Stanley ModelWare framework (please see explanation later in this note).
§ = Consensus data is provided by Thomson Reuters Estimates.
e = Morgan Stanley Research estimates

Risk-Reward Snapshot: Ophthotech (OPHT, OW, PT $99)

Fovista's Success Drives Risk-Reward



Source: Morgan Stanley Research estimates, Thomson Reuters

Price Target $99		We derive our PT from a discounted cash flow analysis that uses a WACC of 12.5% and a 0% terminal growth rate. The revenue driver in our model is the WW launch of Fovista in wet AMD in 2H17 (US) and 2018 (EU/ROW).
Bull Case $138	**DCF**	**Fovista gains significant share in the wet AMD market. Limited competition from earlier stage anti-PDGF/VEGF combinations.** Our bull case assumes that Fovista gains ~45% share of the overall wet AMD market. This share is driven by Fovista use in ~55% of Lucentis treated eyes, ~30% of Eylea treated eyes and ~45% of Avastin treated eyes. This scenario assumes 1) Regeneron's anti-PDGF/Eylea combination makes it to market by ~2020, but does not take significant share from Fovista, and 2) Fovista is able to gain meaningful traction in combination with Avastin despite its likely high cost per injection. We model WW Fovista sales of ~$3bn with ~$1.7bn in sales in the US.
Base Case $99	**DCF**	**Fovista gains decent share in the wet AMD market, but loses some share to competition in 2020 and beyond.** Our base case scenario assumes Fovista approval and ~30% peak share of the overall wet AMD market. This share is made up of Fovista use in ~45% of Lucentis treated eyes, ~25% of Eylea treated eyes at peak and ~35% of Avastin treated eyes. This scenario assumes 1) Regeneron's anti-PDGF/Eylea combination launches in 2020 and rapidly takes share from Fovista, and 2) Fovista use in combination with Avastin is less than that with the other two anti-VEGF therapies as patients treated with Avastin are often those that are unable to afford Lucentis/Eylea, and these patients may also be unable to afford the addition of Fovista. We model peak WW Fovista sales of ~$2bn with ~$1.2bn sales in the US.
Bear Case $15	**Cash Based Value**	**Fovista fails.** Our bear case assumes Fovista fails in its Ph 3 wet AMD trials either due to insufficient efficacy or safety concerns. Given that Fovista is Ophthotech's only late stage asset, we would expect the stock to trade at or near cash in the case of Ph 3 failure. We view this scenario as unlikely given Fovista data to date.

Investment Thesis

- We are OW OPHT as we believe the company's lead asset Fovista has encouraging data in wet AMD to date and WW sales potential of ~$2bn.
- Fovista, a PDGF inhibitor, is in Ph 3 in combination with anti-VEGF therapy for the treatment of wet AMD. Ph 2b data suggest Fovista + anti-VEGF leads to greater vision improvement than anti-VEGF therapy alone.
- Fovista's Ph 3 program largely mimics its Ph 2b and we expect success in 2016, followed by a 2016 NDA filing and potential launch in 2017.
- While anti-VEGF therapies work well in many pts with wet- AMD, ~20% of pts initiating treatment with these drugs continue to lose vision over the course of a year and most pts have progressive vision loss over time.
- Physician feedback suggests that 1) all pts with wet AMD should be treated, 2) the goal of treatment is to provide the greatest letter benefit upfront, and 3) a gain of even 2-3 letters makes a difference. We model >$1bn peak sales in the US and ~$500mn+ ex-US.
- Ophthotech is considering exploratory trials for Fovista in add'l indications such as wet AMD VEGF failures, proliferative vitreoretinopathy, and von Hippel Lindau disease. These indications as well as any potential success from Ophthotech's earlier stage asset, ARC1905, are upside to our model.

Risks to our price target

1) Fovista could fail in Ph 3 either due to insufficient efficacy or a safety issue, 2) Fovista does not yet have data in combination with Eylea or Avastin and it is possible that 1) these combos show different results than the Lucentis + Fovista combination and/or 2) the FDA or EMEA could require add'l data.

Ophthotech Valuation

Exhibit 1
DCF Drives Valuation

	2013E	2014E	2015E	2016E	2017E	2018E	2019E	2020E	2021E	2022E	2023E	2024E	2025E	2026E	2027E	2028E	2029E
Free Cash Flow	($49)	$115	$32	($105)	$53	$457	$497	$412	$478	$554	$647	$675	$682	$683	$547	$437	$350
YoY Growth		*-336%*	*-72.6%*	*-433.9%*	*-151%*	*756.8%*	*8.9%*	*-17.1%*	*16.0%*	*15.8%*	*16.9%*	*4.2%*	*1.1%*	*0.3%*	*-20.0%*	*-20.0%*	*-20.0%*
Net Cash Proxy for Dilution	($4.38)	($1.79)	($2.3)	($3.0)	($3.9)	($4.2)	($4.3)	($5.3)	($6.6)	($8.2)	($10.2)	($10.2)	($10.2)	($10.2)	($10.2)	($10.2)	($10.2)
Free Cash Flow for DCF	($53.2)	$113.3	$29.2	($108.3)	$49.4	$452.5	$493.1	$406.8	$471.6	$545.7	$637.1	$664.4	$671.5	$673.3	$536.6	$427.3	$339.8
Present Value of Free Cash Flow		$113.3	$26.8	($88.2)	$35.7	$291.0	$281.8	$206.7	$213.0	$219.1	$227.3	$210.7	$189.3	$168.7	$119.5	$84.6	$59.8

Source: Company data, Morgan Stanley Research estimates

Exhibit 2
DCF Valuation Suggests Upside

Valuation Date	**2014.25**
Discount Rate	**12.5%**
Terminal Growth Rate	0%
Terminal Value Year	2029
Sum of Discounted FCF	$2,331
Discounted Terminal Value	$478
Net Cash	$491
Equity Value	**$3,300**
Equity Value/Sh	**$99**
Shares Outstanding (Basic)	33.3

Source: Company Data, Morgan Stanley Research estimates

$99 PT includes Fovista in wet AMD.
We derive our PT from a discounted cash flow (DCF) analysis that uses a WACC of 12.5% and a terminal growth rate of 0% post 2029. We incorporate the cash cost of stock options

Valuation Methodology: We use a DCF to value Ophthotech as well as most other companies under coverage. We believe a DCF best captures the long-term nature of drug development and commercialization. We do not feel that a multiples analysis accomplishes the same goal, as it only evaluates a company during a snapshot in time.
Discount Rate: We typically apply a discount rate of 12.5% to development stage companies that have good, company-sponsored proof of concept data.
Terminal Growth Rate: Our modeled cash flows extend to 2023. Beyond this point, we grow free cash flows from 2023-27 at 25% of the prior year's growth rate. In 2027-29 we decline cash flows by 20% per year to account for the potential presence of a generic Fovista after the 2026 patent expiry. Beyond 2029, we use a terminal growth rate of 0%.

Revenue: The revenue driver in our model is Fovista.

Economics: Ophthotech has US rights to Fovista. Ophthotech licensed ex-US rights to Novartis with mid-30s% royalty. Ophthotech also has several low single digit royalty obligations on Fovista sales. 1) For rights to anti-PDGF aptamers, Ophthotech owes OSI a royalty at a low single digit percentage of net sales – we estimate 2.5%. 2) For use of Nektar's technology, Ophthotech is obligated to pay Nektar tiered royalties at low to mid-single digit percentages of net sales – we estimate 2-4%. 3) In conjunction with a May 23rd, 2013 financing, Novo AS gained rights to a low to mid single digit percentage of net sales. This financing can be drawn in three separate tranches with additional royalty obligations, with each tranche – we assume Ophthotech uses 2/3 tranches and a corresponding 4% royalty obligation.

COGS: We assume a drug cost of ~5-7% of sales, which in addition to royalty obligations leads to total COGS of ~20%.

Operating Expenses:
R&D: We expect R&D to increase over the next few years as Ophthotech runs the Fovista Ph 3 program (1 yr data in 2016). Post 2016, we expect R&D to begin to decline.
SG&A: We expect SG&A to modestly increase through 2017. We expect a sig. increase in 2017+ as Ophthotech builds a US infrastructure to market Fovista.

Key Risks Include: 1) Fovista fails to demonstrate sufficient efficacy and safety for approval, 2) the FDA and EMEA deem one trial with Avastin and Eylea as insufficient for approval and require additional data, which could result in an approval delay for these combinations, 3) Ophthotech has difficulty finding an ex-US partner, which could result in additional

financing needs, 4) the commercial potential for Fovista is more limited than we expect if a) two injections are logistically difficult in the real-world, b) two injections are a bigger hurdle for patients and/or payors than we anticipate, or c) competition has a larger impact than we expect.

Exhibit 3

Ophthotech Upcoming Catalysts

Drug	Type	Event	Expected Timing
Fovista	Product Advancement	Begin trial in anti-VEGF resistant patients	2014
Fovista	Product Advancement	Begin trial in subretinal fibrosis wet AMD patients	2014
Fovista	Product Advancement	Begin trial in von Hippel Lindau disease	2014
Zimura (C5)	Product Advancement	Begin Ph 2/3 trial in geographic atrophy (severe form of dry AMD)	Late 2014/Early 2015
Fovista	Product Advancement	Begin trial in proliferative vitreoretinopathy	2015
Fovista	Clinical Data	Data from potential exploratory trials in other indications	2015
Zimura (C5)	Product Advancement	Begin trial in combo with Fovista in anti-VEGF resistant wet AMD pts with complement component	2015
Fovista	Clinical Data	Ph 3 trials with Lucentis, Eylea and Avastin	2016
Fovista	Regulatory	File NDA and MAA for Fovista in wet AMD	2H16
Fovista	Product Advancement	Begin small registrational trial in Japan	2017
Fovista	Regulatory	Fovista approval	2H17

Source: Company Data, Morgan Stanley Research

Exhibit 4

Ophthotech Changes to Model

	2012	2013	2014E	2015E	2016E	2017E	2018E	2019E	2020E	2021E	2022E	2023E
US Fovista												
Current	0	0	0	0	0	295	597	755	806	929	1,045	1,199
Prior	0	0	0	0	0	295	597	755	806	929	1,045	1,199
EU Fovista												
Current	0	0	0	0	0	0	229	458	571	557	605	639
Prior	0	0	0	0	0	0	229	458	571	557	605	639
Total Revenues ($mn)												
Current	0	0	11	28	28	324	741	1,024	1,135	1,251	1,388	1,558
Prior	0	0	0	0	100	295	651	865	957	1,076	1,204	1,368
COGS ($mn)												
Current	0	0	0	0	0	46	113	185	203	220	244	273
Prior	0	0	0	0	0	46	113	185	203	220	244	273
SG&A ($mn) - ex-ESOs												
Current	6	13	24	25	31	112	115	119	123	127	130	133
Prior	6	13	24	24	25	81	142	163	179	179	179	179
R&D ($mn) -ex-ESOs												
Current	7	31	64	74	74	78	78	71	64	57	51	46
Prior	7	31	64	74	74	78	78	71	64	57	51	46
Interest and Other Income, net												
Current	(1)	(1)	0	1	1	1	2	3	4	5	6	8
Prior	(1)	(1)	0	0	0	1	1	2	3	4	5	7
Net Income ($MM) - Non GAAP, excludes options												
Current	(14)	(48)	(77)	(70)	(76)	89	360	424	487	554	630	724
Prior	(14)	(48)	(88)	(98)	2	91	282	328	375	455	536	639
EPS Non-GAAP, Diluted, excludes options												
Current	($1.62)	($5.35)	($2.34)	($2.16)	($2.35)	$2.63	$10.61	$12.35	$14.04	$15.77	$17.71	$20.07
Prior	($1.62)	($5.35)	($2.65)	($3.04)	$0.04	$2.48	$7.62	$8.77	$9.96	$11.94	$13.90	$16.36
EPS - GAAP												
Current	($2.52)	($6.33)	($2.52)	($2.37)	($2.60)	$2.34	$10.32	$12.11	$13.78	$15.49	$17.42	$19.77
Prior	($2.52)	($6.33)	($2.83)	($3.26)	($0.19)	$2.20	$7.33	$8.52	$9.69	$11.65	$13.60	$16.04
Basic Shares Outstanding												
Current	9	9	33	32	32	32	33	33	33	33	33	33
Prior	9	9	33	32	34	35	36	36	36	36	36	36
Dilluted Shares Outstanding												
Current	9	9	33	32	32	34	34	34	35	35	36	36
Prior	9	9	33	32	35	37	37	37	38	38	39	39

Source: Company Data, Morgan Stanley Research

Exhibit 5
Ophthotech Quarterly Income Statement

($ in millions)	1Q14A	2Q14E	3Q14E	4Q14E	2014E
Other Revenue		2.1	4.2	4.2	10.5
Revenues	$0.0	$2.1	$4.2	$4.2	$10.5
Operating Expenses:					
Cost of Sales					
% total product sales	*NA*	*NA*	*NA*	*NA*	*NA*
R&D	13.4	15.0	17.0	19.0	64
% of revenue	*na*	*na*	*na*	*na*	*na*
SG&A	5.9	6.0	6.0	6.0	24
% of revenue	*na*	*na*	*na*	*na*	*na*
Total Operating Expenses	$19.3	$21.0	$23.0	$25.0	$88.3
Operating Income (Loss)	($19.3)	($18.9)	($18.8)	($20.8)	($77.8)
Operating Margin	*na*	*-900.0%*	*-447.6%*	*-495.2%*	*-741.2%*
Interest income	$0.0	$0.10	$0.10	$0.10	$0.34
Interest expense	$0.0	$0.00	$0.00	$0.00	$0.00
Fx gain (loss)	$0.0	$0.00	$0.00	$0.00	$0.00
Other loss	$0.0	$0.00	$0.00	$0.00	$0.00
Change in fair value related to inv. rights liabil					
Pretax Income (Loss)	($19.3)	($18.8)	($18.7)	($20.7)	($77.5)
Provision for Income Taxes	0	0	0	0	0
Effective tax rate					
Net Income (Loss)	($19.3)	($18.80)	($18.70)	($20.70)	($77.48)
EPS, basic	($0.60)	($0.56)	($0.56)	($0.62)	($2.34)
EPS, diluted	($0.60)	($0.56)	($0.56)	($0.62)	($2.34)
Options Expense	1.40	1.50	1.50	1.50	5.90
% of operating expense	*7.2%*	*7.1%*	*6.5%*	*6.0%*	*6.7%*
Tax benefit from options					
Net Income (inc. options expense)	($20.7)	($20.30)	($20.2)	($22.2)	($83.4)
EPS, diluted (inc. options expense)	($0.64)	($0.61)	($0.60)	($0.66)	($2.52)
Basic Shares Outstanding	32.28	33.33	33.43	33.53	33.14
Diluted Shares Outstanding	32.28	33.33	33.43	33.53	33.14
One times	$0.0	$0.00	$0.00	$0.00	$0.0
GAAP Net Income (incl. options)	($20.682)	($20.3)	($20.2)	($22.2)	($83.4)
GAAP EPS (dil, incl. options)	($0.64)	($0.61)	($0.60)	($0.66)	($2.5)

Source: Company Data, Morgan Stanley Research

Exhibit 6

Ophthotech Annual Income Statement

($ in millions)	2011A	2012A	2013A	2014E	2015E	2016E	2017E	2018E	2019E	2020E	2021E	2022E	2023E
US Fovista					**$0.0**	**$0.0**	**$295.1**	**$597.3**	**$755.1**	**$806.4**	**$928.6**	**$1,044.6**	**$1,199**
EU Fovista					$0.0	$0.0	$0.0	$229.2	$457.7	$571.4	$557.3	$604.8	$639.4
ROW Fovista					$0	$0	$0	$46	$114	$171	$167	$181	$192
Total WW Fovista Sales					**$0**	**$0**	**$295**	**$872**	**$1,327**	**$1,549**	**$1,653**	**$1,831**	**$2,030**
EU Fovista Royalties					$0.0	$0.0	$0.0	$80.2	$160.2	$200.0	$195.1	$211.7	$223.8
ROW Fovista Royalties					$0	$0	$0	$16	$40	$60	$59	$64	$67
Total Fovista Royalties					**$0**	**$0**	**$0**	**$96**	**$200**	**$260**	**$254**	**$275**	**$291**
Other Revenue				**11**	**28**	**28**	**28**	**47**	**69**	**69**	**69**	**69**	**69**
Total Revenue	$0	$0	$0	$11	$28	$28	$324	$741	$1,024	$1,135	$1,251	$1,388	$1,558
Operating Expenses:							0%	13%	20%	23%	20%	20%	19%
Cost of Sales	$0	$0	$0	$0	$0	$0	$46	$113	$185	$203	$220	$244	$273
% of US sales- Drug cost	*NA*	*NA*	*NA*	*NA*	*NA*	*7.0%*	*7.0%*	*6.5%*	*6.0%*	*5.0%*	*5.0%*	*5.0%*	*5.0%*
% of US sales - total COGS (incl. royalties)							*16%*	*19%*	*24%*	*25%*	*24%*	*23%*	*23%*
R&D	$14	$7	$31	$64	$74	$74	$78	$78	$71	$64	$57	$51	$46
YoY growth	*-6%*	*-51%*	*359%*	*107%*	*15%*	*0%*	*-5%*	*-5%*	*-10%*	*-10%*	*-10%*	*-10%*	*-10%*
% of revenue	*na*	*na*	*na*	*613%*	*260%*	*260%*	*24%*	*11%*	*7%*	*6%*	*5%*	*4%*	*3%*
SG&A	$5	$6	$13	$24	$25	$31	$112	$115	$119	$123	$127	$130	$133
YoY growth	*27%*	*14%*	*114%*	*79%*	*5%*	*25%*	*256%*	*3%*	*3%*	*3%*	*4%*	*2%*	*2%*
% of revenue	*na*	*na*	*na*	*228%*	*88%*	*110%*	*35%*	*16%*	*12%*	*11%*	*10%*	*9%*	*9%*
Total Operating Expenses	$19.39	$13.04	$45	$88	$99	$105	$236	$307	$374	$389	$404	$426	$453
Operating Income (Loss)	-$19	-$13	-$45	-$78	-$71	-$77	$88	$434	$650	$746	$846	$962	$1,106
Operating Margin	*na*	*na*	*na*	*na*	*na*	*na*	*27%*	*59%*	*63%*	*66%*	*68%*	*69%*	*71%*
Interest income	$0.002	$0.0	$0.0	$0.3	$1.1	$1.0	$0.9	$1.6	$2.8	$3.9	$5.1	$6.4	$7.9
Interest expense	$0.00	-$0.5	-$1.5	$0.0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Fx transaction gain (loss)	-$0.02	$0.0	$0.0	$0.0									
Non cash change in fair value (inv. rights liabil.)	$0.0	-$0.4	-$2.3	$0.0									
Pretax Income (Loss)	($19.41)	($13.9)	($48.3)	($77.5)	($69.6)	($76.0)	$88.63	$435.77	$652.66	$749.60	$851.55	$968.73	$1,113.56
Provision for Income Taxes	(1.03)	0.0	0.0	0.0	0.0	0.0	0.0	75.4	228.4	262.4	298.0	339.1	389.7
Effective Tax Rate		0%	0%	0%	0%	0%	0.0%	17%	35%	35%	35%	35%	35%
Net Income (Loss)	($18.38)	($13.9)	($48.3)	($77)	($70)	($76)	$89	$360	$424	$487	$554	$630	$724
EPS, basic	($2.23)	($1.62)	($5.35)	($2.34)	($2.16)	($2.35)	$2.73	$11.08	$13.00	$14.87	$16.82	$19.04	$21.76
EPS, diluted	($2.23)	($1.62)	($5.35)	($2.34)	($2.16)	($2.35)	$2.63	$10.61	$12.35	$14.04	$15.77	$17.71	$20.07
EPS, diluted (incl. ESOs)	($2.26)	($1.70)	($5.67)	($2.52)	($2.37)	($2.60)	$2.34	$10.32	$12.11	$13.78	$15.49	$17.42	$19.77
Basic Shares Outstanding	8.23	8.6	9.0	33.1	32.3	32.3	32.4	32.5	32.6	32.8	32.9	33.1	33.3
Diluted Shares Outstanding	8.23	8.6	9.0	33.1	32.3	32.3	33.7	34.0	34.3	34.7	35.1	35.6	36.1
One time items	($6.8)	($7.1)	($5.9)	$0.0									
GAAP Net Income	($25.47)	($21.6)	($57.0)	($83.4)	($76.6)	($84.0)	$78.6	$350.5	$415.8	$478.1	$543.8	$619.3	$712.8
GAAP EPS, diluted (includes ESOs)	($3.10)	($2.52)	($6.33)	($2.52)	($2.37)	($2.60)	$2.34	$10.32	$12.11	$13.78	$15.49	$17.42	$19.77

Source: Company Data, Morgan Stanley Research estimates

Exhibit 7

Ophthotech Balance Sheet

($mn)	2011A	2012A	2013A	2014E	2015E	2016E	2017E	2018E	2019E	2020E	2021E	2022E	2023E
Assets													
Cash and cash equivalents	$6.4	$4.3	$211	$423	$455	$351	$405	$863	$1,364	$1,781	$2,265	$2,826	$3,482
Marketable securities	$0.0	$0.2	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
Other receivables	$1.0	$0.0	$0.0	$1.2	$1.3	$1.3	$6.5	$7.4	$10.2	$11.4	$12.5	$13.9	$15.6
Prepaid expenses and other deposits	$0.1	$0.0	$7	$0	$0	$0	$3	$7	$10	$11	$13	$14	$16
Debt issuance costs	$0.0	$0.3	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Total current assets	**$7.50**	**$4.84**	**$217**	**$425**	**$457**	**$352**	**$414**	**$878**	**$1,385**	**$1,804**	**$2,290**	**$2,854**	**$3,513**
Property, plant and equipment, net	$0.07	$0.0	$0	$1	$2	$3	$5	$9	$13	$18	$22	$27	$32
Security deposits	$0.17	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Other long-term assets	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Total assets	**$7.7**	**$4.879**	**$217.7**	**$425.6**	**$458.6**	**$355.0**	**$420.0**	**$887.3**	**$1,398.3**	**$1,821.7**	**$2,312.5**	**$2,881.1**	**$3,545.7**
Liabilities and stockholders' equity													
Notes payable	$0.0	$11	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Accrued drug supply and trial cost	$1.5	$1	$2	$2	$2	$2	$2	$2	$2	$2	$2	$2	$1
Accounts payable	$0.9	$1	$4	$3	$3	$3	$7	$9	$11	$12	$12	$13	$14
Accrued compensation	$0.8	$1	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Deferred rent	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
Investor rights liability	$0.2	$1	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Deferred Revenue (current)	$0	$0	$0	$28	$28	$28	$47	$69	$69	$69	$69	$69	$69
Total current liabilities	**$3.3**	**$14.4**	**$6.3**	**$33.1**	**$33.7**	**$33.9**	**$56.7**	**$80.2**	**$82.0**	**$82.2**	**$82.5**	**$83.0**	**$83.6**
Deferred Revenue (Non-current)	$0	$0	$0	$161	$263	$234	$187	$268	$350	$281	$212	$144	$75
Other long-term liabilities	$0.0	$0	$42	$83	$83	$83	$83	$83	$83	$83	$83	$83	$83
Total liabilities	**$3.3**	**$14.4**	**$48**	**$277**	**$380**	**$351**	**$327**	**$432**	**$515**	**$446**	**$378**	**$310**	**$242**
Preferred Stock	$3.0	$3	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Common stock	$0.0	$0.01	$0.03	$0.03	$0.03	$0.03	$0.03	$0.03	$0.03	$0.03	$0.03	$0.03	$0.03
APIC	$0.0	$0	$353	$415	$422	$431	$441	$453	$465	$479	$495	$512	$532
Accumulated deficit	($105)	($126)	($183)	($266)	($343)	($427)	($348)	$2	$418	$896	$1,440	$2,059	$2,772
Accumulated other comprehensive income	$0.0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Total stockholders' equity	**$4**	**-$10**	**$170**	**$148**	**$79**	**$4**	**$93**	**$455**	**$883**	**$1,375**	**$1,934**	**$2,571**	**$3,304**
Total liabilities and stockholder's equity	**$7.74**	**$4.9**	**$218**	**$426**	**$459**	**$355**	**$420**	**$887**	**$1,398**	**$1,822**	**$2,313**	**$2,881**	**$3,546**

Source: Company Data, Morgan Stanley Research estimates

Exhibit 8

Ophthotech Cash Flow Statement

($mn)	2011A	2012A	2013A	2014E	2015E	2016E	2017E	2018E	2019E	2020E	2021E	2022E	2023E
Net loss	($18.6)	($14.562)	($51.145)	($83.4)	($76.6)	($84.0)	$78.6	$350.5	$415.8	$478.1	$543.8	$619.3	$712.8
Depreciation	$0.03	$0.03	$0.0	$0.1	$0.2	$0.3	$0.5	$0.8	$1.3	$1.7	$2.3	$2.9	$3.5
Amortization and accretion	$0.00	$0.1	$0.1	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
Unrealized gain on investments	$0.00	$0.0	$0.1	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
Non-cash charge in fair value (inv. rights libil.)	$0.01	$0.37	$1.18	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.0	$0.00
Loss on extinguishment of debt	$0.00	$0.00	$1.1	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.0	$0.00
Stock-based compensation	$0.25	$0.6	$2.9	$5.9	$7.0	$8.0	$10.0	$9.9	$8.5	$9.1	$9.8	$10.4	$11.1
Preferred stock issued for tech and licenses	$0.50	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
Changes in operating assets and liabilities:													
Prepaid expenses, other current deposits	$0.1	$0	($7)	$7	($0)	($0)	($3)	($4)	($3)	($1)	($1)	($1.4)	($2)
Other receiveables	($0.74)	$1.0	$0	($1)	($0)	($0)	($5)	($1)	($3)	($1)	($1)	($1.4)	($2)
Security deposits	($0.0)	($0)	($0)	$0	$0	$0	$0	$0	$0	$0	$0	$0.0	$0
Accrued drug supply and trial cost	($0.8)	($0.5)	$1	($1)	$0	$0	$0	$0	($0)	($0)	($0)	($0.2)	($0)
Accounts payable and accrued expenses	($0.05)	$0.0	$2	($1)	$0	$0	$4	$2	$2	$0	$0	$0.7	$1
Accrued bonuses	$0.22	($0.2)	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0.0	$0
Deferred rent	($0.02)	($0)	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0.0	$0
Deferred revenue	$0.00	$0	$0	$190	$102	($28)	($28)	$103	$81	($69)	($69)	($69)	($69)
Net cash used in operating activities	**($19.12)**	**($13.10)**	**($49)**	**$116**	**$33**	**($104)**	**$56**	**$461**	**$503**	**$418**	**$485**	**$562**	**$656**
Investing Activities:													
Purchases of property, plant and equipment	($0.00)	$0.0	($0.0)	($0.9)	($1.1)	($1.3)	($3.1)	($4.3)	($5.6)	($6.2)	($6.9)	($7.7)	($8.6)
Deposit on purchase of property, plant & equipment	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.0	$0.00
Purchases of marketable securities	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0.0	$0
Sales and maturities of marketable securities	$3.40	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0.0	$0
Net cash used in investing activities	**$3.4**	**$0.0**	**($0.0)**	**($0.9)**	**($1.1)**	**($1.3)**	**($3.1)**	**($4.3)**	**($5.6)**	**($6.2)**	**($6.9)**	**($7.7)**	**($8.6)**
Financing activities:													
Payment of debt issuance costs	$0.000	($0)	($0)	$0	$0	$0	$0	$0	$0	$0	$0	$0.0	$0
Proceeds from issuance of stock options	$0.0	$0	$0	$0	$0	$1	$1	$1	$1	$2	$2	$3	$3
Sale of royalty entitlement to Novo A/S	$0.000	$0	$42	$42	$0	$0	$0	$0	$0	$0	$0	$0	$0
Proceeds from issuance of notes payable, net	$0.000	$11.39	($12)	$0	$0	$0	$0	$0	$0	$0	$0	$0.0	$0
Proceeds from common stock and options	$0.0	$0	$176	$55	$0	$0	$0	$0	$0	$0	$0	$0	$0
Proceeds from issuance of preferred stock	$15.0	$0	$50	$0	$0	$0	$0	$0	$0	$0	$0	$0.0	$0
Tax Benefits related to employee stock options	$0	$0	$0	$0	$0	$0	$0	$1	$2	$3	$4	$4.4	$5
Net cash provided by financing activities	**$15.0**	**$11.012**	**$255.1**	**$97.5**	**$0.5**	**$0.6**	**$0.8**	**$1.9**	**$3.7**	**$4.6**	**$5.7**	**$7.1**	**$8.8**
Effect of exchange rate on changes in cash													
Increase in cash and cash equivalents	($1)	($2)	$206	$213	$32	($105)	$54	$459	$501	$417	$484	$561	$656
Cash and equivalents at beginning of year	$7	$6	$4	$211	$423	$455	$351	$405	$863	$1,364	$1,781	$2,265	$2,826
Cash and equivalents at end of year	**$6**	**$4**	**$211**	**$423**	**$455**	**$351**	**$405**	**$863**	**$1,364**	**$1,781**	**$2,265**	**$2,826**	**$3,482**

Source: Company Data, Morgan Stanley Research estimates

MORGAN STANLEY ModelWare	**Morgan Stanley ModelWare is a proprietary analytic framework that helps clients uncover value, adjusting for distortions and ambiguities created by local accounting regulations.** For example, ModelWare EPS adjusts for one-time events, capitalizes operating leases (where their use is significant), and converts inventory from LIFO costing to a FIFO basis. ModelWare also emphasizes the separation of operating performance of a company from its financing for a more complete view of how a company generates earnings.

Disclosure Section

The information and opinions in Morgan Stanley Research were prepared by Morgan Stanley & Co. LLC, and/or Morgan Stanley C.T.V.M. S.A., and/or Morgan Stanley Mexico, Casa de Bolsa, S.A. de C.V., and/or Morgan Stanley Canada Limited. As used in this disclosure section, "Morgan Stanley" includes Morgan Stanley & Co. LLC, Morgan Stanley C.T.V.M. S.A., Morgan Stanley Mexico, Casa de Bolsa, S.A. de C.V., Morgan Stanley Canada Limited and their affiliates as necessary.
For important disclosures, stock price charts and equity rating histories regarding companies that are the subject of this report, please see the Morgan Stanley Research Disclosure Website at www.morganstanley.com/researchdisclosures, or contact your investment representative or Morgan Stanley Research at 1585 Broadway, (Attention: Research Management), New York, NY, 10036 USA.
For valuation methodology and risks associated with any price targets referenced in this research report, please contact the Client Support Team as follows: US/Canada +1 800 303-2495; Hong Kong +852 2848-5999; Latin America +1 718 754-5444 (U.S.); London +44 (0)20-7425-8169; Singapore +65 6834-6860; Sydney +61 (0)2-9770-1505; Tokyo +81 (0)3-6836-9000. Alternatively you may contact your investment representative or Morgan Stanley Research at 1585 Broadway, (Attention: Research Management), New York, NY 10036 USA.

Analyst Certification

The following analysts hereby certify that their views about the companies and their securities discussed in this report are accurately expressed and that they have not received and will not receive direct or indirect compensation in exchange for expressing specific recommendations or views in this report: David Friedman.
Unless otherwise stated, the individuals listed on the cover page of this report are research analysts.

Global Research Conflict Management Policy

Morgan Stanley Research has been published in accordance with our conflict management policy, which is available at www.morganstanley.com/institutional/research/conflictpolicies.

Important US Regulatory Disclosures on Subject Companies

As of April 30, 2014, Morgan Stanley beneficially owned 1% or more of a class of common equity securities of the following companies covered in Morgan Stanley Research: Akebia Therapeutics Inc, AMAG Pharmaceuticals, Inc., Auxilium Pharmaceuticals, Cubist Pharmaceuticals Inc., GW Pharmaceuticals PLC, Ironwood Pharmaceuticals, Inc..
Within the last 12 months, Morgan Stanley managed or co-managed a public offering (or 144A offering) of securities of Akebia Therapeutics Inc, AMAG Pharmaceuticals, Inc., Celgene Corp, Chimerix Inc, Cubist Pharmaceuticals Inc., Gilead Sciences Inc., GW Pharmaceuticals PLC, Ironwood Pharmaceuticals, Inc., NPS Pharmaceuticals, **Ophthotech Corp**, Portola Pharmaceuticals Inc, Relypsa, Inc., Synageva Biopharma Corp, Ultragenyx Pharmaceutical Inc, Versartis, Inc..
Within the last 12 months, Morgan Stanley has received compensation for investment banking services from Akebia Therapeutics Inc, AMAG Pharmaceuticals, Inc., Amgen Inc., Auxilium Pharmaceuticals, Biogen Idec Inc., Celgene Corp, Chimerix Inc, Cubist Pharmaceuticals Inc., Gilead Sciences Inc., GW Pharmaceuticals PLC, Ironwood Pharmaceuticals, Inc., NPS Pharmaceuticals, **Ophthotech Corp**, Portola Pharmaceuticals Inc, Relypsa, Inc., Synageva Biopharma Corp, Theravance Inc, Ultragenyx Pharmaceutical Inc, Versartis, Inc..
In the next 3 months, Morgan Stanley expects to receive or intends to seek compensation for investment banking services from Akebia Therapeutics Inc, Alexion Pharmaceuticals, Alnylam Pharmaceuticals, AMAG Pharmaceuticals, Inc., Amgen Inc., Auxilium Pharmaceuticals, Biogen Idec Inc., Celgene Corp, Chimerix Inc, Cubist Pharmaceuticals Inc., Gilead Sciences Inc., GW Pharmaceuticals PLC, Incyte Corporation, InterMune, Ironwood Pharmaceuticals, Inc., Lexicon Pharmaceuticals, Inc., Neurocrine Biosciences Inc, NPS Pharmaceuticals, **Ophthotech Corp**, Pharmacyclics Inc., Portola Pharmaceuticals Inc, Regeneron Pharmaceuticals Inc., Relypsa, Inc., Synageva Biopharma Corp, Theravance Inc, Ultragenyx Pharmaceutical Inc, Versartis, Inc., Vertex Pharmaceuticals, XenoPort Inc.
Within the last 12 months, Morgan Stanley has received compensation for products and services other than investment banking services from Amgen Inc., Auxilium Pharmaceuticals, Biogen Idec Inc., Celgene Corp, Cubist Pharmaceuticals Inc., Vertex Pharmaceuticals.
Within the last 12 months, Morgan Stanley has provided or is providing investment banking services to, or has an investment banking client relationship with, the following company: Akebia Therapeutics Inc, Alexion Pharmaceuticals, Alnylam Pharmaceuticals, AMAG Pharmaceuticals, Inc., Amgen Inc., Auxilium Pharmaceuticals, Biogen Idec Inc., Celgene Corp, Chimerix Inc, Cubist Pharmaceuticals Inc., Gilead Sciences Inc., GW Pharmaceuticals PLC, Incyte Corporation, InterMune, Ironwood Pharmaceuticals, Inc., Lexicon Pharmaceuticals, Inc., Neurocrine Biosciences Inc, NPS Pharmaceuticals, **Ophthotech Corp**, Pharmacyclics Inc., Portola Pharmaceuticals Inc, Regeneron Pharmaceuticals Inc., Relypsa, Inc., Synageva Biopharma Corp, Theravance Inc, Ultragenyx Pharmaceutical Inc, Versartis, Inc., Vertex Pharmaceuticals, XenoPort Inc.
Within the last 12 months, Morgan Stanley has either provided or is providing non-investment banking, securities-related services to and/or in the past has entered into an agreement to provide services or has a client relationship with the following company: AMAG Pharmaceuticals, Inc., Amgen Inc., Auxilium Pharmaceuticals, Biogen Idec Inc., Celgene Corp, Cubist Pharmaceuticals Inc., Gilead Sciences Inc., InterMune, Portola Pharmaceuticals Inc, Regeneron Pharmaceuticals Inc., Vertex Pharmaceuticals.
Morgan Stanley & Co. LLC makes a market in the securities of Akebia Therapeutics Inc, Alexion Pharmaceuticals, Alnylam Pharmaceuticals, AMAG Pharmaceuticals, Inc., Amgen Inc., Auxilium Pharmaceuticals, Biogen Idec Inc., Celgene Corp, Chimerix Inc, Cubist Pharmaceuticals Inc., Gilead Sciences Inc., Idenix Pharmaceuticals, Inc., Incyte Corporation, InterMune, Ironwood Pharmaceuticals, Inc., Lexicon Pharmaceuticals, Inc., Neurocrine Biosciences Inc, NPS Pharmaceuticals, **Ophthotech Corp**, Pharmacyclics Inc., Portola Pharmaceuticals Inc, Regeneron Pharmaceuticals Inc., Relypsa, Inc., Synageva Biopharma Corp, Theravance Inc, Versartis, Inc., Vertex Pharmaceuticals, XenoPort Inc.
The equity research analysts or strategists principally responsible for the preparation of Morgan Stanley Research have received compensation based upon various factors, including quality of research, investor client feedback, stock picking, competitive factors, firm revenues and overall investment banking revenues.
Morgan Stanley and its affiliates do business that relates to companies/instruments covered in Morgan Stanley Research, including market making, providing liquidity and specialized trading, risk arbitrage and other proprietary trading, fund management, commercial banking, extension of credit, investment services and investment banking. Morgan Stanley sells to and buys from customers the securities/instruments of companies covered in Morgan Stanley Research on a principal basis. Morgan Stanley may have a position in the debt of the Company or instruments discussed in this report.
Certain disclosures listed above are also for compliance with applicable regulations in non-US jurisdictions.

STOCK RATINGS

Morgan Stanley uses a relative rating system using terms such as Overweight, Equal-weight, Not-Rated or Underweight (see definitions below). Morgan Stanley does not assign ratings of Buy, Hold or Sell to the stocks we cover. Overweight, Equal-weight, Not-Rated and Underweight are not the equivalent of buy, hold and sell. Investors should carefully read the definitions of all ratings used in Morgan Stanley Research. In addition, since Morgan Stanley Research contains more complete information concerning the analyst's views, investors should carefully read Morgan Stanley Research, in its entirety, and not infer the contents from the rating alone. In any case, ratings (or research) should not be used or relied upon as investment advice. An investor's decision to buy or sell a stock should depend on individual circumstances (such as the investor's existing holdings) and other considerations.

Global Stock Ratings Distribution

(as of April 30, 2014)

For disclosure purposes only (in accordance with NASD and NYSE requirements), we include the category headings of Buy, Hold, and Sell alongside our ratings of Overweight, Equal-weight, Not-Rated and Underweight. Morgan Stanley does not assign ratings of Buy, Hold or Sell to the stocks we cover. Overweight, Equal-weight, Not-Rated and Underweight are not the equivalent of buy, hold, and sell but represent recommended relative weightings (see definitions below). To satisfy regulatory requirements, we correspond Overweight, our most positive stock rating, with a buy recommendation; we correspond Equal-weight and Not-Rated to hold and Underweight to sell recommendations, respectively.

	Coverage Universe		Investment Banking Clients (IBC)		
Stock Rating Category	Count	% of Total	Count	% of Total IBC	% of Rating Category
Overweight/Buy	**1045**	**35%**	**355**	**38%**	**34%**
Equal-weight/Hold	**1301**	**43%**	**455**	**48%**	**35%**
Not-Rated/Hold	**110**	**4%**	**22**	**2%**	**20%**
Underweight/Sell	**543**	**18%**	**109**	**12%**	**20%**
Total	**2,999**		**941**		

Data include common stock and ADRs currently assigned ratings. Investment Banking Clients are companies from whom Morgan Stanley received investment banking compensation in the last 12 months.

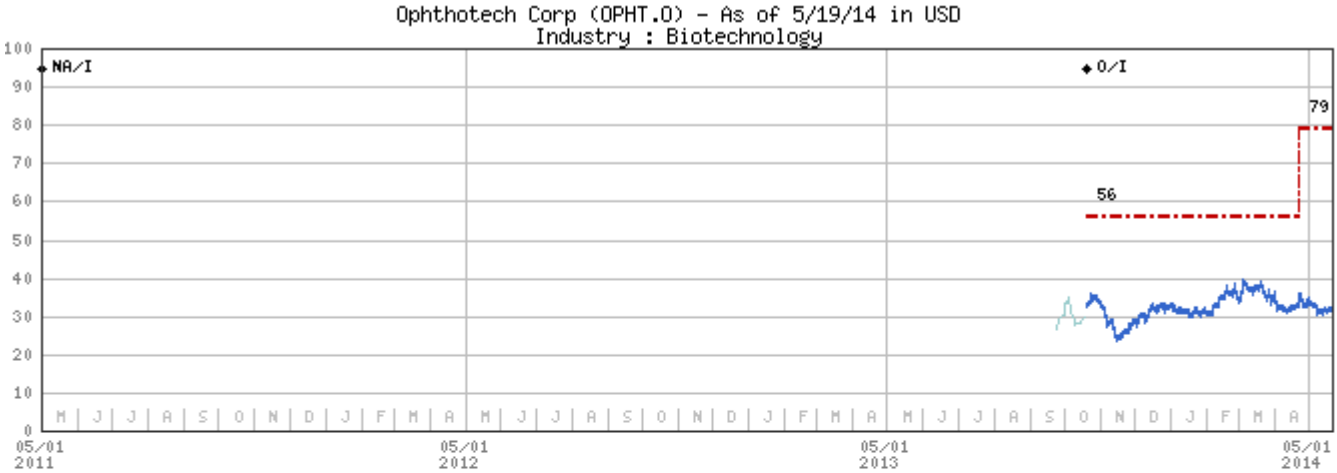
Analyst Stock Ratings

Overweight (O). The stock's total return is expected to exceed the average total return of the analyst's industry (or industry team's) coverage universe, on a risk-adjusted basis, over the next 12-18 months.
Equal-weight (E). The stock's total return is expected to be in line with the average total return of the analyst's industry (or industry team's) coverage universe, on a risk-adjusted basis, over the next 12-18 months.
Not-Rated (NR). Currently the analyst does not have adequate conviction about the stock's total return relative to the average total return of the analyst's industry (or industry team's) coverage universe, on a risk-adjusted basis, over the next 12-18 months.
Underweight (U). The stock's total return is expected to be below the average total return of the analyst's industry (or industry team's) coverage universe, on a risk-adjusted basis, over the next 12-18 months.
Unless otherwise specified, the time frame for price targets included in Morgan Stanley Research is 12 to 18 months.

Analyst Industry Views

Attractive (A): The analyst expects the performance of his or her industry coverage universe over the next 12-18 months to be attractive vs. the relevant broad market benchmark, as indicated below.
In-Line (I): The analyst expects the performance of his or her industry coverage universe over the next 12-18 months to be in line with the relevant broad market benchmark, as indicated below.
Cautious (C): The analyst views the performance of his or her industry coverage universe over the next 12-18 months with caution vs. the relevant broad market benchmark, as indicated below.
Benchmarks for each region are as follows: North America - S&P 500; Latin America - relevant MSCI country index or MSCI Latin America Index; Europe - MSCI Europe; Japan - TOPIX; Asia - relevant MSCI country index or MSCI sub-regional index or MSCI AC Asia Pacific ex Japan Index.
.

Stock Price, Price Target and Rating History (See Rating Definitions)



Stock Rating History: 5/1/11 : NA/I; 10/21/13 : O/I

Price Target History: 10/21/13 : 56; 4/22/14 : 79

Source: Morgan Stanley Research Date Format : MM/DD/YY Price Target No Price Target Assigned (NA)
Stock Price (Not Covered by Current Analyst) Stock Price (Covered by Current Analyst)
Stock and Industry Ratings (abbreviations below) appear as ◆ Stock Rating/Industry View
Stock Ratings: Overweight (O) Equal-weight (E) Underweight (U) Not-Rated (NR) No Rating Available (NA)
Industry View: Attractive (A) In-line (I) Cautious (C) No Rating (NR)

Effective January 13, 2014, the stocks covered by Morgan Stanley Asia Pacific will be rated relative to the analyst's industry (or industry team's) coverage.

Effective January 13, 2014, the industry view benchmarks for Morgan Stanley Asia Pacific are as follows: relevant MSCI country index or MSCI sub-regional index or MSCI AC Asia Pacific ex Japan Index.

Important Disclosures for Morgan Stanley Smith Barney LLC Customers

Important disclosures regarding the relationship between the companies that are the subject of Morgan Stanley Research and Morgan Stanley Smith Barney LLC or Morgan Stanley or any of their affiliates, are available on the Morgan Stanley Wealth Management disclosure website at www.morganstanley.com/online/researchdisclosures. For Morgan Stanley specific disclosures, you may refer to www.morganstanley.com/researchdisclosures.

Each Morgan Stanley Equity Research report is reviewed and approved on behalf of Morgan Stanley Smith Barney LLC. This review and approval is conducted by the same person who reviews the Equity Research report on behalf of Morgan Stanley. This could create a conflict of interest.

Other Important Disclosures

Morgan Stanley & Co. International PLC and its affiliates have a significant financial interest in the debt securities of Amgen Inc., Celgene Corp, Cubist Pharmaceuticals Inc., Gilead Sciences Inc..

Morgan Stanley is not acting as a municipal advisor and the opinions or views contained herein are not intended to be, and do not constitute, advice within the meaning of Section 975 of the Dodd-Frank Wall Street Reform and Consumer Protection Act.

Morgan Stanley produces an equity research product called a "Tactical Idea." Views contained in a "Tactical Idea" on a particular stock may be contrary to the recommendations or views expressed in research on the same stock. This may be the result of differing time horizons, methodologies, market events, or other factors. For all research available on a particular stock, please contact your sales representative or go to Matrix at http://www.morganstanley.com/matrix.

Morgan Stanley Research is provided to our clients through our proprietary research portal on Matrix and also distributed electronically by Morgan Stanley to clients. Certain, but not all, Morgan Stanley Research products are also made available to clients through third-party vendors or redistributed to clients through alternate electronic means as a convenience. For access to all available Morgan Stanley Research, please contact your sales representative or go to Matrix at http://www.morganstanley.com/matrix.

Any access and/or use of Morgan Stanley Research is subject to Morgan Stanley's Terms of Use (http://www.morganstanley.com/terms.html). By accessing and/or using Morgan Stanley Research, you are indicating that you have read and agree to be bound by our Terms of Use (http://www.morganstanley.com/terms.html). In addition you consent to Morgan Stanley processing your personal data and using cookies in accordance with our Privacy Policy and our Global Cookies Policy (http://www.morganstanley.com/privacy_pledge.html), including for the purposes of setting your preferences and to collect readership data so that we can deliver better and more personalized service and products to you. To find out more information about how Morgan Stanley processes personal data, how we use cookies and how to reject cookies see our Privacy Policy and our Global Cookies Policy (http://www.morganstanley.com/privacy_pledge.html).

If you do not agree to our Terms of Use and/or if you do not wish to provide your consent to Morgan Stanley processing your personal data or using cookies please do not access our research.

Morgan Stanley Research does not provide individually tailored investment advice. Morgan Stanley Research has been prepared without regard to the circumstances and objectives of those who receive it. Morgan Stanley recommends that investors independently evaluate particular investments and strategies, and encourages investors to seek the advice of a financial adviser. The appropriateness of an investment or strategy will depend on an investor's circumstances and objectives. The securities, instruments, or strategies discussed in Morgan Stanley Research may not be suitable for all investors, and certain investors may not be eligible to purchase or participate in some or all of them. Morgan Stanley Research is not an offer to buy or sell or the solicitation of an offer to buy or sell any security/instrument or to participate in any particular trading strategy. The value of and income from your investments may vary because of changes in interest rates, foreign exchange rates, default rates, prepayment rates, securities/instruments prices, market indexes, operational or financial conditions of companies or other factors. There may be time limitations on the exercise of options or other rights in securities/instruments transactions. Past performance is not necessarily a guide to future performance. Estimates

of future performance are based on assumptions that may not be realized. If provided, and unless otherwise stated, the closing price on the cover page is that of the primary exchange for the subject company's securities/instruments.

The fixed income research analysts, strategists or economists principally responsible for the preparation of Morgan Stanley Research have received compensation based upon various factors, including quality, accuracy and value of research, firm profitability or revenues (which include fixed income trading and capital markets profitability or revenues), client feedback and competitive factors. Fixed Income Research analysts', strategists' or economists' compensation is not linked to investment banking or capital markets transactions performed by Morgan Stanley or the profitability or revenues of particular trading desks.

The "Important US Regulatory Disclosures on Subject Companies" section in Morgan Stanley Research lists all companies mentioned where Morgan Stanley owns 1% or more of a class of common equity securities of the companies. For all other companies mentioned in Morgan Stanley Research, Morgan Stanley may have an investment of less than 1% in securities/instruments or derivatives of securities/instruments of companies and may trade them in ways different from those discussed in Morgan Stanley Research. Employees of Morgan Stanley not involved in the preparation of Morgan Stanley Research may have investments in securities/instruments or derivatives of securities/instruments of companies mentioned and may trade them in ways different from those discussed in Morgan Stanley Research. Derivatives may be issued by Morgan Stanley or associated persons.

With the exception of information regarding Morgan Stanley, Morgan Stanley Research is based on public information. Morgan Stanley makes every effort to use reliable, comprehensive information, but we make no representation that it is accurate or complete. We have no obligation to tell you when opinions or information in Morgan Stanley Research change apart from when we intend to discontinue equity research coverage of a subject company. Facts and views presented in Morgan Stanley Research have not been reviewed by, and may not reflect information known to, professionals in other Morgan Stanley business areas, including investment banking personnel.

Morgan Stanley Research personnel may participate in company events such as site visits and are generally prohibited from accepting payment by the company of associated expenses unless pre-approved by authorized members of Research management.

Morgan Stanley may make investment decisions or take proprietary positions that are inconsistent with the recommendations or views in this report.

To our readers in Taiwan: Information on securities/instruments that trade in Taiwan is distributed by Morgan Stanley Taiwan Limited ("MSTL"). Such information is for your reference only. The reader should independently evaluate the investment risks and is solely responsible for their investment decisions. Morgan Stanley Research may not be distributed to the public media or quoted or used by the public media without the express written consent of Morgan Stanley. Information on securities/instruments that do not trade in Taiwan is for informational purposes only and is not to be construed as a recommendation or a solicitation to trade in such securities/instruments. MSTL may not execute transactions for clients in these securities/instruments. To our readers in Hong Kong: Information is distributed in Hong Kong by and on behalf of, and is attributable to, Morgan Stanley Asia Limited as part of its regulated activities in Hong Kong. If you have any queries concerning Morgan Stanley Research, please contact our Hong Kong sales representatives.

Morgan Stanley is not incorporated under PRC law and the research in relation to this report is conducted outside the PRC. Morgan Stanley Research does not constitute an offer to sell or the solicitation of an offer to buy any securities in the PRC. PRC investors shall have the relevant qualifications to invest in such securities and shall be responsible for obtaining all relevant approvals, licenses, verifications and/or registrations from the relevant governmental authorities themselves.

Morgan Stanley Research is disseminated in Brazil by Morgan Stanley C.T.V.M. S.A.; in Japan by Morgan Stanley MUFG Securities Co., Ltd. and, for Commodities related research reports only, Morgan Stanley Capital Group Japan Co., Ltd; in Hong Kong by Morgan Stanley Asia Limited (which accepts responsibility for its contents); in Singapore by Morgan Stanley Asia (Singapore) Pte. (Registration number 199206298Z) and/or Morgan Stanley Asia (Singapore) Securities Pte Ltd (Registration number 200008434H), regulated by the Monetary Authority of Singapore (which accepts legal responsibility for its contents and should be contacted with respect to any matters arising from, or in connection with, Morgan Stanley Research); in Australia to "wholesale clients" within the meaning of the Australian Corporations Act by Morgan Stanley Australia Limited A.B.N. 67 003 734 576, holder of Australian financial services license No. 233742, which accepts responsibility for its contents; in Australia to "wholesale clients" and "retail clients" within the meaning of the Australian Corporations Act by Morgan Stanley Wealth Management Australia Pty Ltd (A.B.N. 19 009 145 555, holder of Australian financial services license No. 240813, which accepts responsibility for its contents; in Korea by Morgan Stanley & Co International plc, Seoul Branch; in India by Morgan Stanley India Company Private Limited; in Indonesia by PT Morgan Stanley Asia Indonesia; in Canada by Morgan Stanley Canada Limited, which has approved of and takes responsibility for its contents in Canada; in Germany by Morgan Stanley Bank AG, Frankfurt am Main and Morgan Stanley Private Wealth Management Limited, Niederlassung Deutschland, regulated by Bundesanstalt fuer Finanzdienstleistungsaufsicht (BaFin); in Spain by Morgan Stanley, S.V., S.A., a Morgan Stanley group company, which is supervised by the Spanish Securities Markets Commission (CNMV) and states that Morgan Stanley Research has been written and distributed in accordance with the rules of conduct applicable to financial research as established under Spanish regulations; in the US by Morgan Stanley & Co. LLC, which accepts responsibility for its contents. Morgan Stanley & Co. International plc, authorized by the Prudential Regulatory Authority and regulated by the Financial Conduct Authority and the Prudential Regulatory Authority, disseminates in the UK research that it has prepared, and approves solely for the purposes of section 21 of the Financial Services and Markets Act 2000, research which has been prepared by any of its affiliates. Morgan Stanley Private Wealth Management Limited, authorized and regulated by the Financial Conduct Authority, also disseminates Morgan Stanley Research in the UK. Private UK investors should obtain the advice of their Morgan Stanley & Co. International plc or Morgan Stanley Private Wealth Management representative about the investments concerned. RMB Morgan Stanley (Proprietary) Limited is a member of the JSE Limited and regulated by the Financial Services Board in South Africa. RMB Morgan Stanley (Proprietary) Limited is a joint venture owned equally by Morgan Stanley International Holdings Inc. and RMB Investment Advisory (Proprietary) Limited, which is wholly owned by FirstRand Limited.

The information in Morgan Stanley Research is being communicated by Morgan Stanley & Co. International plc (DIFC Branch), regulated by the Dubai Financial Services Authority (the DFSA), and is directed at Professional Clients only, as defined by the DFSA. The financial products or financial services to which this research relates will only be made available to a customer who we are satisfied meets the regulatory criteria to be a Professional Client.

The information in Morgan Stanley Research is being communicated by Morgan Stanley & Co. International plc (QFC Branch), regulated by the Qatar Financial Centre Regulatory Authority (the QFCRA), and is directed at business customers and market counterparties only and is not intended for Retail Customers as defined by the QFCRA.

As required by the Capital Markets Board of Turkey, investment information, comments and recommendations stated here, are not within the scope of investment advisory activity. Investment advisory service is provided in accordance with a contract of engagement on investment advisory concluded between brokerage houses, portfolio management companies, non-deposit banks and clients. Comments and recommendations stated here rely on the individual opinions of the ones providing these comments and recommendations. These opinions may not fit to your financial status, risk and return preferences. For this reason, to make an investment decision by relying solely to this information stated here may not bring about outcomes that fit your expectations.

The Americas
1585 Broadway
New York, NY 10036-8293
United States
Tel: +1 (1) 212 761 4000

Europe
20 Bank Street, Canary Wharf
London E14 4AD
United Kingdom
Tel: +44 (0) 20 7 425 8000

Japan
1-9-7 Otemachi, Chiyoda-ku
Tokyo 100-8104
Japan
Tel: +81 (0) 3 6836 5000

Asia/Pacific
1 Austin Road West
Kowloon
Hong Kong
Tel: +852 2848 5200

Stock Ratings are subject to change. Please see latest research for each company.
* Historical prices are not split adjusted.

Industry Coverage:Biotechnology

Company (Ticker)	Rating (as of)	Price* (05/19/2014)
David Friedman, M.D.		
AMAG Pharmaceuticals, Inc. (AMAG.O)	E (11/21/2011)	$18.02
Akebia Therapeutics Inc (AKBA.O)	O (04/14/2014)	$21.14
Alexion Pharmaceuticals (ALXN.O)	O (09/07/2010)	$158.42
Alnylam Pharmaceuticals (ALNY.O)	E (01/14/2014)	$58.26
Auxilium Pharmaceuticals (AUXL.O)	U (03/06/2014)	$19.79
Chimerix Inc (CMRX.O)	O (05/06/2013)	$16.82
Cubist Pharmaceuticals Inc. (CBST.O)	O (11/13/2013)	$66.7
GW Pharmaceuticals PLC (GWPH.O)	O (04/22/2014)	$69.94
Idenix Pharmaceuticals, Inc. (IDIX.O)	E (03/18/2011)	$6.04
Incyte Corporation (INCY.O)	U (01/23/2013)	$49.9
InterMune (ITMN.O)	E (09/07/2010)	$38.92
Ironwood Pharmaceuticals, Inc. (IRWD.O)	E (04/24/2013)	$13.75
Lexicon Pharmaceuticals, Inc. (LXRX.O)	U (06/11/2013)	$1.42
NPS Pharmaceuticals (NPSP.O)	O (10/03/2012)	$27.43
Neurocrine Biosciences Inc (NBIX.O)	E (01/08/2014)	$13.35
Ophthotech Corp (OPHT.O)	O- (10/21/2013)	$31.46
Portola Pharmaceuticals Inc (PTLA.O)	O (06/17/2013)	$20.62
Relypsa, Inc. (RLYP.O)	O (12/10/2013)	$21.55
Synageva Biopharma Corp (GEVA.O)	O (04/20/2012)	$84.84
Theravance Inc (THRX.O)	U (07/22/2013)	$27.59
Ultragenyx Pharmaceutical Inc (RARE.O)	O (02/25/2014)	$33.8
Versartis, Inc. (VSAR.O)	O (04/15/2014)	$27.4
Vertex Pharmaceuticals (VRTX.O)	E (05/08/2012)	$67.22
XenoPort Inc (XNPT.O)	U (06/11/2013)	$3.72
Matthew Harrison		
Amgen Inc. (AMGN.O)	O (03/26/2014)	$112.08
Biogen Idec Inc. (BIIB.O)	O (03/26/2014)	$290.75
Celgene Corp (CELG.O)	E (03/26/2014)	$147.38
Gilead Sciences Inc. (GILD.O)	E (03/26/2014)	$82.05
Pharmacyclics Inc. (PCYC.O)	E (03/26/2014)	$99.38
Regeneron Pharmaceuticals Inc. (REGN.O)	E (03/26/2014)	$302.14