J.P.Morgan

North America Equity Research
02 June 2014

Merck & Co., Inc.

Pushing Ahead Aggressively in PD-1 Development

Overweight

MRK, MRK US

Price: $57.93

Price Target: $64.00

Pharmaceuticals — Major & Specialty

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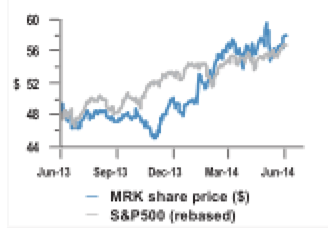
Price Performance



	YTD	1m	3m	12m
Abs	15.7%	-0.5%	1.6%	19.6%
Rel	11.6%	-2.8%	-1.9%	2.3%

We attended Merck's ASCO analyst meeting today where the company reviewed new data and development plans for its PD-1 (pembrolizumab). Overall, we increasingly see Merck playing a leadership role in the immuno-oncology space given its aggressive clinical development approach to pembro with compelling data seen thus far in melanoma (Yervoy-naïve and refractory), NSCLC (1st-line and pre-treated), and head and neck cancer. Further, we expect pembro to be the first PD-1 to launch (post-Yervoy melanoma, admittedly small indication) with a PDUFA in October.

- **Merck confirms PD-1 efficacy in 1L PD-L1+ NSCLC with 47% irRC ORR.** First data from Merck's phase 1b study of pembrolizumab in 1L NSCLC showed a 47% (21/45) ORR by irRC (26% based on RECIST) across all three doses, and we note that 80% of patients had at least some tumor shrinkage, suggesting a clear place for PD-1 in this patient population. Merck is initiating a phase III for pembro in front-line PD-L1+ NSCLC in September. We note that Bristol initiated a phase III study of nivo in PD-L1+ 1L lung earlier this year.
- **Pembro head & neck data supports move into phase III.** Merck highlighted its head and neck data, which was highly encouraging in our view. The study, which enrolled PD-L1+ recurrent and metastatic head and neck cancer patients, showed an ORR of 20% (11/56) and 51% of patients exhibiting at least some tumor shrinkage. There was preliminary evidence that even within this population, the highest PD-L1+ expressers showed a much higher response rate (45% RR (5/11) above cut-point and 11% RR (5/44) below cut-point). We note that even the response rate in lower PD-L1 expressers is in line with Erbitux, the only targeted therapy approved for head and neck.
- **Pembro shows 69% 1-year survival in advanced melanoma, nivo/combo comparisons remain difficult.** Today Merck presented data from KEYNOTE-001, a very large phase Ib study in which pembro showed a 69% 1-year survival rate and an estimated 62% 18-month survival rate. One-year survival was 74% in patients without prior Yervoy treatment and 65% in Yerboy-experienced patients. This data appears at least as strong as and potentially stronger than nivo's monotherapy data, although we see a promising role for PD-1/CTLA-4 combo therapy in melanoma.
- **Several catalysts ahead for pembro.** These include FDA action for the product on October 28, additional proof of concept data in further tumor types (i.e., bladder, triple negative breast, and gastric) later this year or in 2015 as well as a potential filing in NSCLC in 2015 (based on phase II/III study in 2/3L PD-L1+ patients).

Merck & Co., Inc. (MRK;MRK US)

FYE Dec	2013A	2014E	2015E	2016E	2017E
EPS - Recurring ($)					
Q1 (Mar)	0.85	0.88A	-	-	-
Q2 (Jun)	0.84	0.81	-	-	-
Q3 (Sep)	0.92	0.87	-	-	-
Q4 (Dec)	0.88	0.88	-	-	-
FY	3.49	3.44	3.67	4.19	4.41
Bloomberg EPS FY ($)	3.50	3.47	3.64	3.99	-

Source: Company data, Bloomberg, [redacted]. Morgan estimates. 'Bloomberg' above denotes Bloomberg consensus estimates.

Company Data	
Price ($)	57.93
Date Of Price	02 Jun 14
52-week Range ($)	59.84-44.62
Market Cap ($ mn)	171,786.00
Fiscal Year End	Dec
Shares O/S (mn)	2,965
Price Target ($)	64.00
Price Target End Date	31-Dec-14

See page 4 for analyst certification and important disclosures.

[redacted]

Investment Thesis, Valuation and Risks

Merck & Co., Inc. *(Overweight; Price Target: $64.00)*

Investment Thesis

Maintain Overweight rating. Ultimately, we believe Merck has fundamentally changed its approach to its business over the past year, and we see this increased focus translating into better performance for the company and the stock. We see MRK shares as well positioned for multiple expansion with the company offering healthy earnings growth (7% CAGR through 2020E), one of the lowest valuations (16x our 2014E EPS), and with several low-expectation pipeline updates over the next 12-18 months.

Valuation

Merck trades at 16x our 2014 EPS estimate of $3.44. This is a 10% discount to its US major pharma peers. Recall that the US major pharma group currently trades at a 12% premium to the [redacted] 500 on 2014E P/E.

Maintain Dec 2014 price target of $64. Our price target is based on a DCF methodology as we believe this best captures the overall value of these businesses. For our Merck DCF, we take the present value of cash flows within our forecast window and thereafter wind down the existing products business while including risk-adjusted contributions from pipeline assets. We use a 0% sector terminal growth rate and a WACC of 9.0% (above recent norms based on a higher equity risk premium given the litany of issues facing the sector over the next few years). This translates to a DCF value of $64.

Risks to Rating and Price Target

Risks to our Overweight rating and price target include 1) another leg down in cholesterol sales, 2) failure to effectively manage the core Januvia/vaccines portfolio, and 3) setbacks to key pipeline assets.

Merck & Co., Inc.: Summary of Financials

Income Statement - Annual	FY13A	FY14E	FY15E	FY16E
Revenues	44,031	42,800	43,363	44,812
Cost of products sold	(11,332)	(11,008)	(11,058)	(11,203)
Gross profit	32,699	31,792	32,306	33,609
SG&A	(11,673)	(11,172)	(11,060)	(11,060)
[redacted]	(7,124)	(6,739)	(6,571)	(6,439)
Operating income	13,902	13,881	14,675	16,110
Net interest (income) / expense	(533)	(554)	(480)	(434)
Other income / (expense)	116	283	(5)	20
Pretax income	13,485	13,609	14,190	15,695
Income taxes	(2,927)	(3,373)	(3,477)	(3,767)
Net income - recurring	10,446	10,177	10,714	11,928
Diluted shares outstanding	2,996	2,963	2,919	2,846
EPS - excluding non-recurring	3.49	3.44	3.67	4.19
EPS - recurring	3.49	3.44	3.67	4.19

Income Statement - Quarterly	1Q14A	2Q14E	3Q14E	4Q14E
Revenues	10,264A	10,711	10,669	11,154
Cost of products sold	(2,658)A	(2,785)	(2,721)	(2,844)
Gross profit	7,606A	7,926	7,949	8,310
SG&A	(2,692)A	(2,857)	(2,697)	(2,926)
[redacted]	(1,523)A	(1,705)	(1,701)	(1,811)
Operating income	3,391A	3,365	3,551	3,573
Net interest (income) / expense	(127)A	(137)	(137)	(153)
Other income / (expense)	290A	10	(17)	(1)
Pretax income	3,554A	3,239	3,398	3,419
Income taxes	(927)A	(793)	(832)	(820)
Net income - recurring	2,601A	2,412	2,565	2,598
Diluted shares outstanding	2,971A	2,965	2,960	2,954
EPS - excluding non-recurring	0.88A	0.81	0.87	0.88
EPS - recurring	0.88A	0.81	0.87	0.88

Balance Sheet and Cash Flow Data	FY13A	FY14E	FY15E	FY16E
Cash and cash equivalents	15,621	15,786	17,237	19,680
Short Term Investment	1,865	1,865	1,865	1,865
Accounts receivable	7,184	6,817	6,625	6,846
Inventories	6,226	6,005	5,836	5,913
Other current assets	4,789	4,016	3,903	4,033
Current assets	35,685	34,488	35,466	38,337
PP&E	14,973	14,893	14,841	14,852
Total assets	105,645	104,118	104,794	107,427
Total debt	25,060	25,060	25,060	24,060
Total liabilities	55,880	54,456	53,651	52,466
Shareholders' equity	49,765	49,662	51,142	54,961
Net income (including charges)	4,517	10,177	10,714	11,928
[redacted]	6,988	2,041	2,037	2,031
Change in working capital	(794)	438	168	(114)
Other	(221)	(200)	(200)	(200)
Cash flow from operations	11,654	10,957	12,719	13,645
Capex	(1,548)	(1,712)	(1,735)	(1,792)
Free cash flow	10,323	10,188	11,347	12,183
Cash flow from investing activities	(3,148)	(1,185)	(1,735)	(1,792)
Cash flow from financing activities	(5,990)	(9,607)	(9,533)	(9,410)

Ratio Analysis	FY13A	FY14E	FY15E	FY16E
Sales growth	(6.8%)	(2.8%)	1.3%	3.3%
EBIT growth	(10.6%)	(0.2%)	5.7%	9.8%
EPS growth - recurring	(8.7%)	(1.5%)	6.8%	14.2%
Gross margin	74.3%	74.3%	74.5%	75.0%
EBIT margin	31.6%	32.4%	33.8%	35.9%
Tax rate	21.7%	24.8%	24.5%	24.0%
Net margin	23.7%	23.8%	24.7%	26.6%
Return on assets (ROA)	9.9%	9.8%	10.2%	11.1%
Return on equity (ROE)	21.0%	20.5%	20.9%	21.7%
Free cash flow yield	5.9%	5.9%	6.7%	7.4%

Source: Company reports and [redacted]. Morgan estimates.
Note: $ in millions (except per-share data).Fiscal year ends Dec

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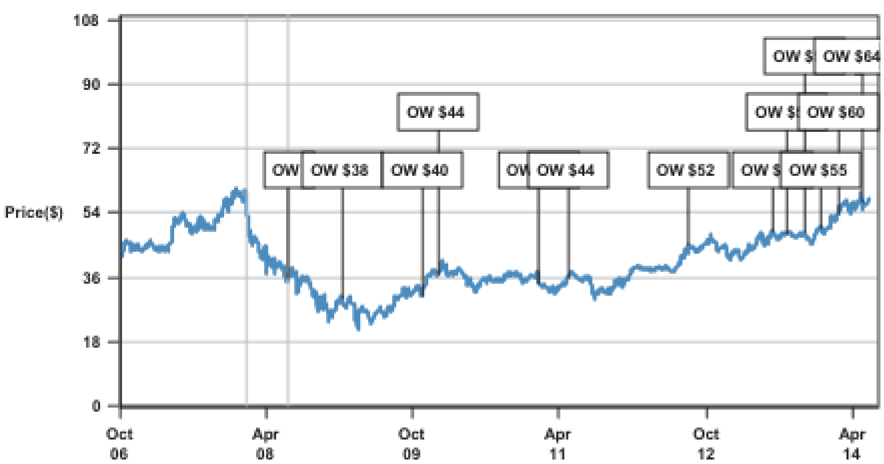
Merck & Co., Inc. (MRK, MRK US) Price Chart



Source: Bloomberg and [redacted]. Morgan; price data adjusted for stock splits and dividends.
Break in coverage Jun 24, 2008 - Jan 06, 2009.

Date	Rating	Share Price ($)	Price Target ($)
24-Jun-08	OW	35.83	--
06-Jan-09	OW	29.97	38.00
04-Nov-09	OW	30.67	40.00
05-Jan-10	OW	37.16	44.00
13-Jan-11	OW	34.23	42.00
02-May-11	OW	35.95	44.00
30-Jul-12	OW	45.10	52.00
03-Jun-13	OW	48.45	54.00
30-Jul-13	OW	48.34	52.00
01-Oct-13	OW	48.37	53.00
02-Dec-13	OW	49.83	55.00
05-Feb-14	OW	53.53	60.00
06-May-14	OW	57.11	64.00

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*Percentage of investment banking clients in each rating category.
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