

Bayer

Germany/Pharmaceuticals

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UBS Research

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Copanlisib another PI3K but safer?

Bayer released top-line pII data for cancer agent copanlisib in relapsed refractory non-Hodgkins Lymphoma (NHL) late Friday. The CHRONOS-I pII study (single arm) showed an overall response rate (ORR) of 59% (complete response rate 12%) in patients that had received at least two prior lines of therapy in indolent NHL. The median duration of response was 98 weeks (we are not sure how mature this data point is as median duration of therapy seems to be 22 weeks). The details on safety are limited but the press release calls out hyperglycaemia and hypertension yet is mute on adverse events we have observed with other products of the same class (Gilead's Zydelig in particular: liver toxicity, fatal pneumonitis, fatal diarrhoea/colitis, serious infections). So presumably those are not of concern in this setting. Bayer is in discussions with the FDA for accelerated approval. Where the market was disappointed with Infinity Pharma's duvelisib pIII trial (DYNAMO) last year (ORR 46%) the market may pay more attention to copanlisib as the adverse event burden may be a differentiator in this progressed disease setting where Gilead's Zydelig is approved (54% ORR, 8% CR). The full CHRONOS-I data will be presented on 4 April and we look forward to the additional detail. Copanlisib is currently in two pIII trials (CHRONOS-3/4) in combination with Rituxan and chemotherapy in relapsed indolent NHL and if the side-effect profile indeed is differentiated the product may get around the issues Gilead faced in 2016 with Zydelig in combination therapy (trials terminated). As an alternative to Zydelig in the third line setting copanlisib may not move the needle that significantly (Zydelig generated \$168m in 2016 revenues, we currently include €250m in our sales estimates for copanlisib) but the 2nd line setting in combination with Rituxan or R-CHOP could be more significant (data 2020/21) helping the product achieve management aspirations of >€500m. Following the bid for Monsanto the market appears to have taken the view that Bayer is pursuing this acquisition because the pipeline isn't strong enough to deal with the Xarelto patent expiries (2022 EU and 2025 US). We don't believe that is the rationale of the Monsanto acquisition but we do require clinical data that would allow us to assess Bayer's pipeline aspirations. The CHRONOS-I details may be helpful in this regard.

12-month rating	Buy
12-month price target	€115.00
Price	€107.95

Contributing authors: Geoff Haire

Trading data and key metrics

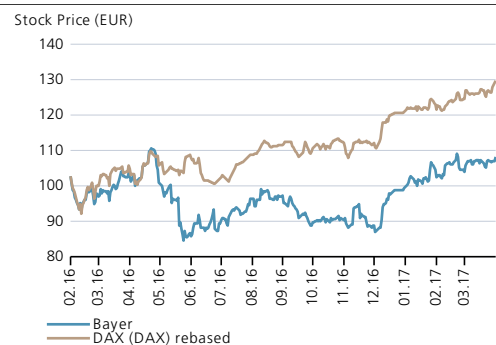
52-wk range	€110.57-85.32
Market cap.	€89.3bn/US\$95.3bn
Shares o/s	827m (ORD)
Free float	100%
Avg. daily volume ('000)	8
Avg. daily value (m)	€0.9
Common s/h equity (12/17E)	€33.0bn
P/BV (12/17E)	2.9x
Net debt / EBITDA (12/17E)	1.0x
RIC	BAYG.F
BBG	BAYN GY

Sources: UBS, Bloomberg

EPS (UBS, diluted) (€)

	UBS	Cons.
12/17E	8.08	7.76
12/18E	8.46	8.32
12/19E	9.01	8.57

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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Bayer

Company Profile: Bayer

Bayer is a diversified German life sciences company. Pharma key franchises are women's health, cardiovascular and specialty pharmaceuticals with growth products like Xarelto and Eylea. Consumer Health is one of the top OTC businesses globally with leading dermatology and GI franchises. Crop Science is mainly crop protection chemicals, with smaller seeds and bio-ag businesses. In Sept-16, Bayer agreed a US\$66bn deal to acquire US seeds company Monsanto. Animal Health produces veterinary medicines and animal grooming products. Bayer's plastics business, Covestro, was spun off in 2015 but Bayer retains a 64% stake.

Statement of Risk

Risks to Bayer include - in Pharma: Xarelto growth being impacted by increasing competition from Eliquis as well as Lixiana; price pressure and market share loss for Kogenate (hemophilia) – including Roche's ACE910; failure of the phase II pipeline, particularly cardiovascular asset finerenone and avetumab. In Crop-Science: continuing weakness in global crop prices leading to a prolonged down-cycle; renewed competition in seeds, or chemicals; greater regulatory oversight leading to increased R&D requirements or litigation. We value the stock on a DCF basis (WACC 6%, 2% terminal growth, ROIC fading back to WACC medium term).

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Highlights (€m)	12/14	12/15	12/16	12/17E	12/18E	12/19E	12/20E	12/21E
Revenues	41,339	46,324	46,769	48,894	50,850	52,387	54,025	55,554
EBIT (UBS)	7,442	8,850	9,829	11,327	11,720	12,141	12,349	12,626
Net earnings (UBS)	4,979	5,746	6,435	7,040	7,371	7,854	8,228	8,498
EPS (UBS, diluted) (€)	6.02	6.95	7.73	8.08	8.46	9.01	9.44	9.75
DPS (€)	2.25	2.50	2.70	2.90	3.10	3.25	3.40	3.60
Net (debt) / cash	(20,007)	(18,075)	(17,682)	(14,649)	(11,495)	(8,027)	(4,320)	(680)
Profitability/valuation	12/14	12/15	12/16	12/17E	12/18E	12/19E	12/20E	12/21E
EBIT margin %	18.0	19.1	21.0	23.2	23.0	23.2	22.9	22.7
ROIC (EBIT) %	17.5	17.0	17.6	19.3	20.0	20.7	21.1	21.5
EV/EBITDA (core) x	10.6	11.2	8.3	8.1	7.7	7.3	6.9	6.6
P/E (UBS, diluted) x	17.2	18.2	12.4	13.4	12.8	12.0	11.4	11.1
Equity FCF (UBS) yield %	4.2	4.4	8.4	6.2	6.6	7.1	7.5	7.6
Net dividend yield %	2.2	2.0	2.8	2.7	2.9	3.0	3.1	3.3

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 €107.95 on 31 Mar 2017 21:32 BST

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UBS 12-Month Rating	Rating Category	Coverage ¹	IB Services ²
Buy	Buy	45%	28%
Neutral	Hold/Neutral	39%	25%
Sell	Sell	15%	17%

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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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
Bayer	BAYN GR	Buy	€107.95	31 Mar 2017
Monsanto	MON US	Buy	US\$113.20	31 Mar 2017
Gilead Sciences	GILD US	Neutral	US\$67.92	31 Mar 2017

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

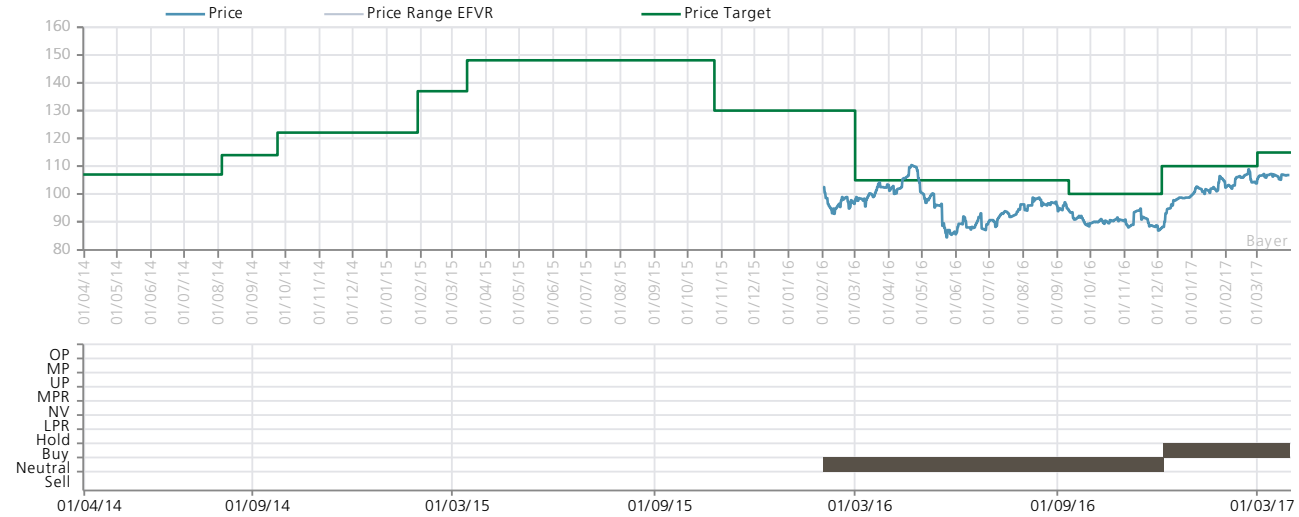
Ratings in this table are the most current published ratings prior to this report. They may be more recent than the stock pricing date

Disclosures (3 April 2017)

Bayer 1, 2, Gilead Sciences 3, 4, 5, Monsanto Co. 2, 3, 6, 7;

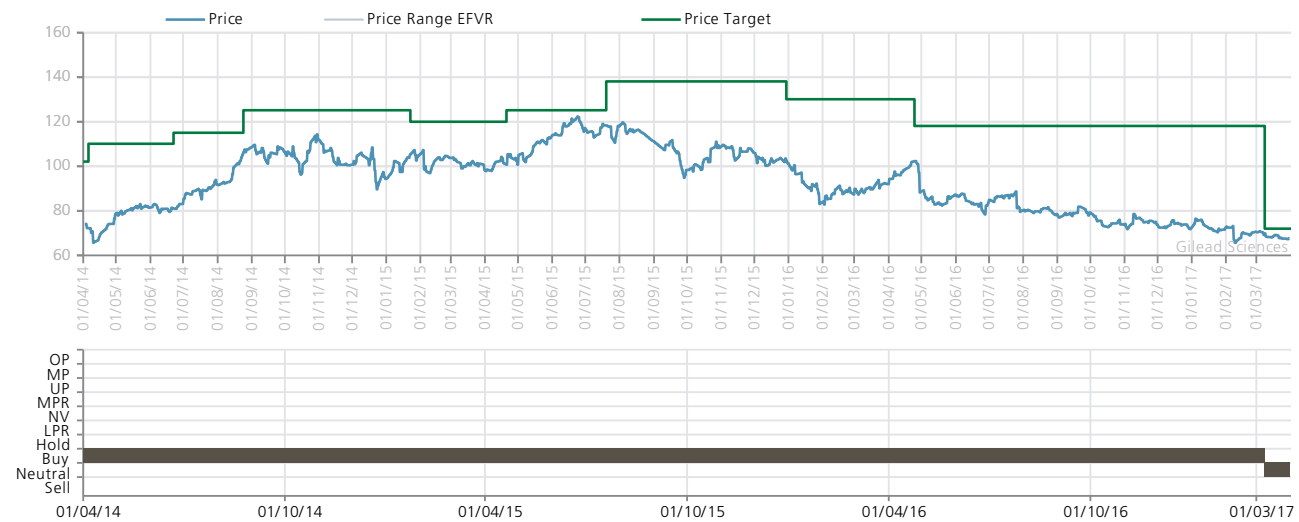
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Global rating history -- Bayer, BAYN GY



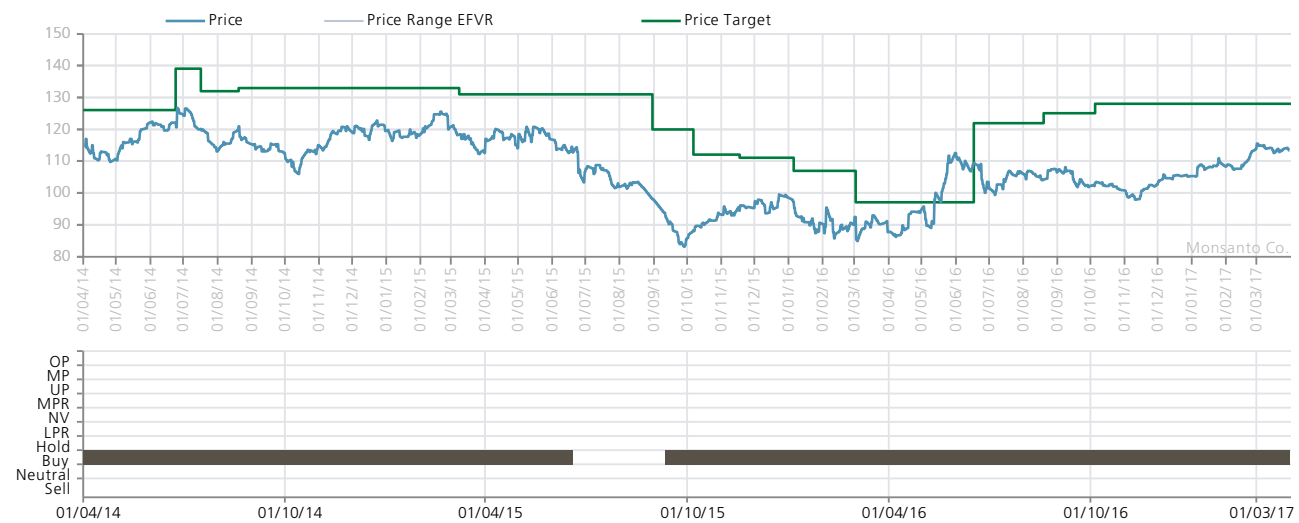
Source: UBS CIO as of 3 April 2017

Global rating history -- Gilead Sciences, GILD US



Source: UBS CIO as of 3 April 2017

Global rating history -- Monsanto Co., MON US



Source: UBS CIO as of 3 April 2017

Terms and Abbreviations

Term / Abbreviation	Description / Definition	Term / Abbreviation	Description / Definition
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Bayer

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 depositary 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 expected i.e. 2011E	DPS	Dividend per share
E		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
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

Bayer

Term / Abbreviation	Description / Definition	Term / Abbreviation	Description / Definition
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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