

Investing into innovators of today and tomorrow

The Healthcare industry is broad, diverse, and never short of investment opportunities. Overall, the industry has a track record of solid performance over the long term, however, biotech firms (even large ones) tend to be much more risky (but also potentially more rewarding) than other healthcare companies (i.e. med tech). Our current landscape features a broad range of players starting with large conglomerates going all the way down to small cap biotechs. With this report, we are initiating coverage on 9 German and Swiss Healthcare companies. Our top pick is BB Biotech (Buy, TP: CHF 83) and Biotest is our least preferred stock (Hold, TP: EUR 23.4)

Highlights

The global healthcare market is very large and still likely to post 4%+ CAGR over the next few years, according to Deloitte. The major macro trends are likely to continue to support increasing demand for healthcare products. At the same time greater financial strains are put on the society, with high costs being a frequently discussed topic. We believe the focus on value-based outcomes will continue to dictate policy, which could actually be a positive for pharma & biotech industry, in particular, as therapeutics can save costs all through the system (i.e. shorter hospital stays, less time of work, etc.).

US is the most important healthcare market, representing close to 50% of global spend. In addition to having the commercial size, there are established regulatory pathways, as well as ample capital. It's no wonder that US remains the most important market for not only global Healthcare companies but also for small cap German biotechs, who often choose to seek regulatory approval there before pursuing one in Europe.

Innovation is likely to continue to be one of the key differentiators, whether its gene therapy, companion diagnostics, etc. Those players who create the most efficacious and/or safest products will be rewarded at the expense of inferior ones. In our universe, there are a number of innovators, large and small, and even an investment firm which offers an exposure to 20-30 of them all at once.

For reference on page 5, we show several groups of relevant sub markets within Healthcare together with important metrics.

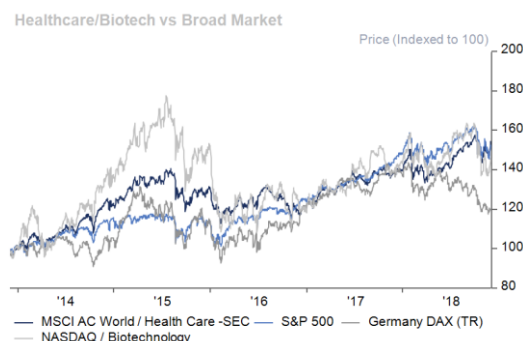
Top Pick

Our preferred name is BB Biotech (Buy, TP: CHF 83). With a 5% dividend (uncommon in biotech), we believe the fund gives investors exposure who wish to participate in the potentially significant upside associated with medical progress, but lack the extensive resources or expertise required to determine the likely winners. Since its inception 25 years ago, BB Biotech delivered on its 15% p.a. target total return rate.

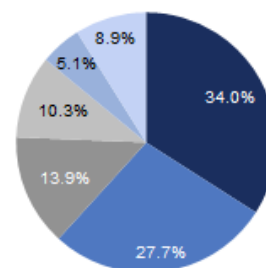
The least preferred stock in our coverage universe is Biotest (Hold, TP: EUR 23.40), due to valuation, smaller size relative to leaders and uncertainty with strategic decisions of the company.

Sector

German Healthcare



US Healthcare Expenditures



Analysts

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Exhibit 1: Coverage Overview 1

Name	Recommendation	Target Price	Last Price	Up/Downside	Market Cap (EURm)	Analyst
Pharma& Biotech						
Bayer	Buy	83,00	65,33	27%	64.308	Dennis Berzhanin, CFA
BB Biotech	Buy	83,00	66,45	25%	3.615	Dennis Berzhanin, CFA
Biotest	Hold	23,40	23,15	1%	926	Dennis Berzhanin, CFA
Epigenomics AG	Buy	3,90	2,00	95%	70	Dennis Berzhanin, CFA
Heidelberg Pharma	Buy	3,70	2,86	29%	81	Dennis Berzhanin, CFA
Merck	Hold	99,00	98,94	0%	42.445	Dennis Berzhanin, CFA
Siegfried Holding AG	Hold	378,00	364,50	4%	1.468	Dennis Berzhanin, CFA
MedTech						
Gerresheimer AG	Hold	69,00	62,50	10%	1.963	Zafer Rüzgar
Siemens Healthineers AG	Hold	39,00	38,49	1%	38.485	Zafer Rüzgar

Source: Pareto Securities Research

Exhibit 2: Coverage Overview 2

Name	PE (adj) 2018e	PE (adj) 2019e	Div. Yield 2018e	Div. Yield 2019e	P/BV 2018e	P/BV 2019e
Pharma& Biotech						
Bayer	11,8	10,2	4,3%	3,9%	0,99	1,03
BB Biotech	NA	NA	NA	NA	NA	NA
Biotest	-	-	0,2%	0,2%	2,03	2,03
Epigenomics AG	-	-	0,0%	0,0%	2,78	4,13
Heidelberg Pharma	-	-	0,0%	0,0%	3,26	7,17
Merck	19,3	17,4	1,3%	1,4%	2,44	2,32
Siegfried Holding AG	22,9	17,5	0,8%	0,8%	2,04	1,85
MedTech						
Gerresheimer AG	12,1	16,0	2,1%	1,6%	2,34	2,24
Siemens Healthineers AG	25,1	22,8	1,8%	2,3%	4,38	4,06

Source: Pareto Securities Research

The Healthcare market is large and growing

The global healthcare market is a major component of the world economy. In 2016, the annual global healthcare expenditures were approximately \$7.0tr. The market is expected to grow to about \$8.7tr in 2020 translating into a CAGR of 4.3%. On average, 10.4% of global GDP in 2016 was spent on healthcare. The figure is expected to remain stable at 10.5% till at least until 2020. The expected steady growth rate of the global healthcare market is supported by structural changes such as aging and increasing population, developing market expansion as well as advances in medical treatments. Most notably there is a continued increase of chronic diseases (such as: heart disease, cancer and diabetes) fuelled by rapid urbanization, changing diets, sedentary lifestyles and rising obesity levels. This trend is particularly accelerating in developing markets. For example, China and India have the largest number of diabetes sufferers, 114m and 69m, respectively. While global life expectancy has been growing, we note however, that much of this is due to falling infant mortality.

On the regional basis the GDP expenditure on healthcare varies substantially, with North America spending over 17%, followed by Western Europe (~11%) and Latin America (~7%). In China, healthcare represents only ~6% of GDP (2012: at ~4% of GDP). With the greatest commercial opportunity and highly developed regulatory pathways, US remains the most important market for not only global Healthcare companies but also small cap German biotechs.

Developments in US, especially political, dominate headlines

The biggest spender, United States, drives the healthcare market. The country alone represents nearly 50% (or \$3.2tr.) of total global healthcare expenditures. The healthcare costs are permanently in the spotlight, and often used in political rhetoric by both parties. In US, hospital care together with physician and clinical service represent over half of healthcare expenditures. We believe a bulk of potential savings could come from this area. In fact, we are already witnessing accelerating shifts out of inpatient into outpatient services in US hospitals, with the former falling roughly 10% since 2004, according to Deloitte. In addition, there is a significant potential to decrease unnecessary services, excessive administrative costs, fraud and other problems, which according to the Institute of Medicine wasted roughly \$765 billion in 2009. Clearly, there is a lot of room for improvement.

Despite the high political and media attention, prescription drugs account for just less than 10% of the healthcare spend. While the political rhetoric is likely to continue, we do not anticipate significant changes in the short to medium term. In an interview responding to potential reference price system proposed by President Trump, Ken Frazier, CEO Merck & Co (US), said "That (it) would undoubtedly be a danger to our industry. The US market is the only big market ever still on free pricing and negotiations between private actors. For medicines on to pass a system with which you can price controls imported from other markets, would be ours. Severely impair innovation."

The fact is that innovative therapeutics such as gene therapy would be expensive relative to other drugs. However, one should not forget that a bulk of savings would come from reduced hospital care and other costs to the system. Therefore, by simply comparing sticker prices of drugs, one may not see the total picture. With a continued focus on value-based healthcare, we believe innovation will continue and the biotech industry should continue to flourish, in our opinion.

Macro trends are creating ever more demand for healthcare products

Developing countries are suffering from diseases once thought to only affect developed nations

US by far the most important market in Healthcare

There is an opportunity to reduce costs throughout the system

Drugs are a only a minority of Healthcare expenditures

One must be careful to not just simply compare drug sticker prices

Innovation will be the key differentiator

Partly driven by rising costs and partly by improved outcomes, innovation in the Healthcare industry will separate winners from losers, in our opinion. The scope of R&D is broad and ever changing, but some of the potentially revolutionary areas include immuno-oncology, gene therapy, gene editing and companion diagnostics.

Immuno-oncology is an area of research that seeks to help the body's own immune system fight cancer. This presents a more advantageous treatment for some patients compared to the toxic chemotherapy option. Furthermore, with immune therapy, immune system learns to go after cancer cells if they ever come back. There are already approved therapeutics, most notably Keytruda and Opdivo, but others are ramping up as well. Merck KGaA's, Bavencio is one of the more late entrants in the space. While there have been mixed results so far, the drug is already approved in several indications. Bavencio will likely not be another Keytruda, yet with a number of Phase 3 trials in the process, it should be the most important pipeline opportunity for the company in the short to medium term.

A nascent innovation, gene therapy, has been in the focus of many global biotech companies. Gene therapy is designed to introduce genetic material into cells to compensate for abnormal genes or to make a beneficial protein. One of most known procedures, called CAR-T involves immune cells taken from a patient being genetically engineered to target and destroy cancer cells and then re-infused to the patient. This has proven to be highly effective, but costs and side-effects are still an issue with this procedure. Further along the spectrum, gene editing is regularly in the news. Roughly 2 weeks ago, Chinese scientist claimed to use CRISPR (a gene editing technology) to make first genetically edited babies. Looking again in our coverage, Bayer has announced \$300 million investment into Casebia with CRISPR Therapeutics over 5-6 years, also associated with \$70 million equity of Bayer into CRISPR Therapeutics. This is consistent with general big pharma strategy of looking for growth by investing in innovation whether internal or external.

Companion diagnostics is also a novel technology in the ever growing area of personalized medicine. The goal is to determine the optimal method of treatment avoiding costly and risky trial and error prescribing by using an in vitro diagnostic or imaging tool. It hasn't been easy for innovators to gain commercial success, as not only an FDA approval but also achieving broad reimbursement is often key milestones. One example is Epigenomics, which has a unique blood-based test to detect colorectal cancer. As often the case with early innovators, there are often major hurdles to overcome, especially when the treatment paradigm could change dramatically. However, we believe those with truly game changing innovations would generate significant value and outsized returns.

In our opinion, innovation will help to drive shareholder value

Immuno-oncology is new paradigm to treat cancer

Gene-therapies and gene-editing attract a lot of investment, which should only accelerate

Personalized medicine will only become more important, in our view

Peer Summary

Selected German/Swiss Pareto Coverage	Market Cap (EUR m)	EV/Sales 2019	EV/EBITDA 2019	PE 2019	ROIC 5Y hist.	3Y EPS CAGR	3Y EBIT CAGR	EBIT adj. (%)
Bayer AG	60.924	2,23x	8,3x	9,0x	18,5%	7,5%	15,0%	19,7%
Merck KGaA	43.017	3,34x	12,5x	17,4x	17,8%	0,1%	-0,4%	25,1%
Siemens Healthineers AG	38.560	2,92x	13,8x	22,3x	30,1%	7,8%	5,0%	18,0%
Gerresheimer AG	1.978	2,10x	10,2x	16,1x	14,5%	2,6%	-4,6%	13,4%
Sieglfried Holding AG	1.349	2,11x	11,2x	18,0x	8,3%	33,6%	28,3%	8,0%
Biotech AG Pref	916	2,86x	22,3x	207,1x	8,6%	-179,1%	nm	14,7%

EU Pharma	Market Cap (EUR m)	EV/Sales 2019	EV/EBITDA 2019	PE 2019	ROIC 5Y hist.	3Y EPS CAGR	3Y EBIT CAGR	EBIT adj. (%)
Roche Holding Ltd Genusssch.	195.298	3,96x	10,1x	14,5x	47,5%	6,0%	2,2%	36,2%
Novartis AG	182.658	4,21x	13,7x	16,7x	15,5%	9,4%	9,1%	27,1%
Sanofi	98.862	3,25x	10,4x	13,7x	13,4%	3,8%	2,0%	27,7%
AstraZeneca PLC	88.222	5,05x	14,9x	21,2x	21,4%	6,2%	6,4%	29,4%
GlaxoSmithKline plc	83.267	3,21x	9,8x	13,2x	39,3%	2,9%	2,0%	26,7%
UCB S.A.	14.290	2,93x	10,1x	16,0x	9,5%	2,2%	2,9%	19,7%
Grifols, S.A. Class A	10.611	3,26x	11,1x	21,7x	14,1%	10,3%	7,4%	24,4%
Ipsen SA	9.755	3,81x	11,4x	17,0x	25,8%	23,3%	22,2%	23,9%
H. Lundbeck A/S	7.152	2,78x	8,0x	14,0x	19,3%	8,7%	4,8%	19,3%
Hikma Pharmaceuticals Plc	4.857	2,61x	9,9x	16,9x	24,4%	15,9%	13,5%	23,9%
Median	48.779	3,25x	10,3x	16,4x	20,3%	7,4%	5,6%	25,5%

Global Biotech	Market Cap (EUR m)	EV/Sales 2019	EV/EBITDA 2019	PE 2019	ROIC 5Y hist.	3Y EPS CAGR	3Y EBIT CAGR	EBIT adj. (%)
Amgen Inc.	111.013	5,52x	9,8x	13,6x	17,4%	6,9%	-0,2%	49,6%
Gilead Sciences, Inc.	79.259	4,28x	7,5x	10,3x	51,9%	-7,2%	-10,4%	66,8%
Biogen Inc.	57.283	4,51x	8,0x	11,5x	35,4%	9,6%	4,7%	54,3%
CSL Limited	53.354	7,20x	20,5x	29,0x	34,3%	15,6%	14,6%	29,2%
Celgene Corporation	44.641	3,37x	6,0x	7,0x	32,7%	18,5%	12,7%	56,5%
Vertex Pharmaceuticals Incorporated	40.058	12,65x	30,6x	42,2x	-2,8%	48,2%	55,1%	7,4%
Regeneron Pharmaceuticals, Inc.	35.546	4,73x	11,0x	16,6x	45,6%	14,5%	10,5%	42,4%
Alexion Pharmaceuticals, Inc.	24.036	5,70x	9,8x	14,0x	21,9%	20,5%	22,0%	44,6%
Incyte Corporation	12.283	6,17x	32,8x	54,4x	7,7%	46,6%	74,6%	9,1%
Swedish Orphan Biovitrum AB	5.222	4,37x	9,5x	15,6x	9,5%	47,0%	51,1%	16,9%
Median	42.350	5,13x	9,8x	14,8x	27,3%	17,1%	13,7%	43,5%

Global Life Sciences	Market Cap (EUR m)	EV/Sales 2019	EV/EBITDA 2019	PE 2019	ROIC 5Y hist.	3Y EPS CAGR	3Y EBIT CAGR	EBIT adj. (%)
Thermo Fisher Scientific Inc.	86.495	4,48x	17,0x	19,9x	11,1%	13,0%	nm	22,8%
Danaher Corporation	65.635	3,92x	16,0x	22,0x	11,6%	9,1%	8,1%	21,6%
Illumina, Inc.	43.280	12,38x	36,7x	52,4x	20,6%	16,3%	24,0%	27,2%
Agilent Technologies, Inc.	20.474	4,24x	16,6x	23,6x	14,2%	10,3%	nm	21,8%
Waters Corporation	13.042	6,48x	18,3x	21,3x	17,8%	nm	nm	29,7%
Novozymes A/S Class B	12.035	6,04x	16,9x	26,2x	28,3%	6,8%	4,1%	27,8%
Sartorius AG Pref	8.070	5,32x	20,5x	44,0x	22,2%	14,5%	13,5%	19,0%
bioMerieux SA	7.572	2,97x	13,7x	27,8x	15,5%	9,9%	10,6%	13,3%
QIAGEN NV	7.205	5,31x	15,4x	24,2x	8,8%	9,5%	10,0%	24,9%
Bio-Rad Laboratories, Inc. Class A	7.032	3,17x	18,4x	39,1x	nm	nm	nm	nm
Bio-Techne Corporation	5.336	8,30x	22,5x	33,0x	21,5%	nm	9,2%	38,7%
Bruker Corporation	4.543	2,53x	13,2x	21,3x	20,5%	nm	10,1%	14,5%
STRATEC SE	675	3,19x	16,7x	26,2x	21,2%	4,5%	3,9%	17,6%
Median	8.070	4,48x	16,9x	26,2x	19,2%	9,9%	10,0%	22,3%

Global Consumer Health	Market Cap (EUR m)	EV/Sales 2019	EV/EBITDA 2019	PE 2019	ROIC 5Y hist.	3Y EPS CAGR	3Y EBIT CAGR	EBIT adj. (%)
GlaxoSmithKline plc	83.267	3,21x	9,8x	13,2x	39,3%	2,9%	2,0%	26,7%
Reckitt Benckiser Group plc	52.479	4,25x	14,4x	18,7x	30,8%	5,4%	5,9%	27,7%
Bausch Health Companies Inc.	7.540	3,69x	9,2x	6,5x	13,9%	1,0%	-0,6%	39,5%
Perrigo Co. Plc	7.521	2,28x	10,7x	13,5x	10,8%	56,8%	-5,3%	22,0%
Prestige Consumer Healthcare Inc	1.678	nm	nm	12,2x	11,6%	nm	0,4%	31,8%
Median	7.540	3,45x	10,2x	13,2x	13,9%	4,1%	0,4%	27,7%

Global MedTech	Market Cap (EUR m)	EV/Sales 2019	EV/EBITDA 2019	PE 2019	ROIC 5Y hist.	3Y EPS CAGR	3Y EBIT CAGR	EBIT adj. (%)
Medtronic plc	114.162	4,55x	14,3x	17,9x	12,6%	7,0%	6,1%	27,8%
Abbott Laboratories	110.626	4,24x	16,6x	22,3x	11,9%	13,0%	10,6%	20,7%
Becton, Dickinson and Company	57.879	4,69x	13,6x	19,6x	16,3%	12,5%	19,5%	22,0%
Intuitive Surgical, Inc.	52.195	12,96x	29,1x	41,0x	24,1%	17,4%	15,4%	41,4%
Siemens Healthineers AG	38.560	2,92x	13,8x	22,3x	30,1%	7,8%	5,0%	18,0%
Baxter International Inc.	31.530	3,17x	12,5x	20,6x	14,8%	14,3%	13,8%	12,1%
Royal Philips NV	30.638	1,79x	10,2x	18,6x	12,9%	24,7%	15,6%	11,1%
Edwards Lifesciences Corporation	28.978	7,69x	23,0x	30,4x	24,4%	nm	11,0%	28,0%
Fresenius SE & Co. KGaA	28.144	1,47x	8,0x	13,9x	16,7%	5,2%	2,8%	14,4%
Fresenius Medical Care AG & Co. KGaA	22.499	1,64x	8,8x	16,0x	14,0%	8,1%	4,3%	14,2%
Zimmer Biomet Holdings, Inc.	20.124	3,70x	10,6x	14,3x	14,6%	1,5%	-1,5%	32,2%
Coloplast A/S Class B	17.694	7,29x	20,8x	30,2x	78,6%	8,5%	8,2%	32,7%
Cardinal Health, Inc.	14.454	0,15x	7,5x	10,7x	22,8%	2,6%	-2,0%	2,3%
Smith & Nephew plc	14.293	3,36x	11,7x	18,5x	16,9%	7,6%	8,7%	18,8%
ResMed Inc.	14.076	5,98x	19,3x	29,0x	20,6%	7,4%	15,3%	24,4%
ABIOMED, Inc.	12.982	15,03x	45,8x	68,3x	17,0%	nm	nm	20,2%
Cooper Companies, Inc.	11.900	5,54x	16,2x	22,3x	12,4%	nm	nm	24,5%
Hologic, Inc.	11.185	4,30x	13,0x	17,9x	15,3%	-11,9%	nm	32,7%
Teleflex Incorporated	10.782	5,22x	16,4x	23,8x	14,1%	19,8%	13,1%	23,6%
Varian Medical Systems, Inc.	9.746	3,20x	15,9x	25,2x	27,8%	nm	nm	19,4%
Sonova Holding AG	9.324	3,78x	15,2x	20,2x	20,8%	14,8%	9,4%	18,7%
PerkinElmer, Inc.	8.492	3,83x	17,5x	21,4x	12,4%	-4,8%	14,9%	19,0%
Gerresheimer AG	1.978	2,10x	10,2x	16,1x	14,5%	2,6%	-4,6%	13,4%
Median	17.694	3,83x	14,3x	20,6x	16,3%	7,8%	9,4%	20,2%

Source: Factset, Pareto

Value in a beaten-down stock

Bayer not only offers diverse exposure to the Healthcare, but also a premier opportunity to invest in Crop Sciences. The tremendously negative sentiment related to the litigation issues with glyphosate, has brought down the share price to lows not seen since 2012. While we acknowledge the new risks inherited from Monsanto acquisition, we believe much of the current and potential negative impacts have been well-priced. We see the stock trading at single digit forward P/E, potentially offering a steal to investors willing to endure some short term volatility and headline risk. We rate Bayer a Buy with a target price of EUR 83.

Investment Case

Bayer has not performed well, especially since closing its acquisition with Monsanto. The bulk of shareholder pain started early August, when a San Francisco jury found Monsanto liable for causing lymphoma that developed after years of applying the company's Roundup weed killer, whose main active ingredient is glyphosate. Further related developments have driven the stock lower. At these levels, we believe the stock reflects the investor speculation and fears of additional regulation on GM crops, which we believe is still very unlikely.

We regard the recent announcement to exit the non-core AH, its 60% interest in Currenta and several CH brands supportive of reaching 30% target adj. EBITDA margin by 2022. During its CMD on Dec 5th, Bayer announced mid-term targets of 4% sales growth (in our opinion, ambitious) and 9%, adj. EBITDA growth (much more likely), while noting disappointments with several negative pipeline drug candidates. On the other hand, digital farming tools, which we were excluded from the guidance, represent a major mid- to long term positive surprise, in our view. In addition, considering that Bayer is now in the best position in CS, we view the company benefiting to a greater extent relative to peers should the market turn more positively.

EURm	2016	2017	2018e	2019e	2020e
Revenues	34.943	35.015	39.131	46.646	48.173
EBITDA	10.406	8.061	10.369	10.402	11.965
EBIT	28.313	29.069	7.380	5.570	6.587
EPS	31,28	29,40	5,13	3,11	3,92
EPS adj	6,67	6,74	5,55	6,44	6,96
DPS	2,55	2,71	2,81	2,58	3,13
EV/EBITDA	9,5	11,0	9,1	9,1	7,7
EV/EBIT	3,5	3,0	12,8	17,0	14,1
P/E adj	14,6	15,2	11,8	10,1	9,4
P/B	2,55	2,42	0,98	1,02	1,01
ROE (%)	90,8	74,6	9,7	4,9	6,1
Div yield (%)	2,6	2,6	4,3	3,9	4,8
Net debt	15.783	(744)	32.754	30.515	28.403

Source: Pareto



Target price (EUR)	83
Share price (EUR)	65

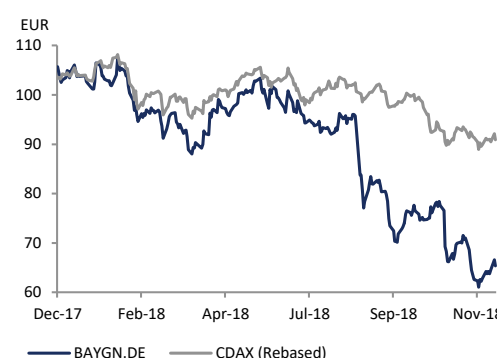
Forecast changes

%	2018e	2019e	2020e
Revenues	NM	NM	NM
EBITDA	NM	NM	NM
EBIT adj	NM	NM	NM
EPS reported	NM	NM	NM
EPS adj	NM	NM	NM

Source: Pareto

Ticker	BAYGN.DE, BAYN GR
Sector	Healthcare
Shares fully diluted (m)	980,2
Market cap (EURm)	64.033
Net debt (EURm)	32.754
Minority interests (EURm)	172
Enterprise value 18e (EURm)	94.389
Free float (%)	100

Performance



Source: Factset

Analysts

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*German conglomerate,
specializing in
Pharmaceuticals, Crop
Science, Consumer Health and
Animal Health*

Company profile

Headquartered in Leverkusen, Germany, Bayer is a global enterprise with core competencies in the life science fields of health care and agriculture.

Within Pharmaceuticals (~37% of total '19e sales, ~48% of adj. EBITDA), the company focuses on prescription products, especially for cardiology and women's health care, and on specialty therapeutics in the areas of oncology, hematology and ophthalmology. Most important products include Xarelto with €3.3bn of sales in FY 2017, as well as in wAMD with Eylea with €1.9bn sales. This division is the most profitable with sustainable adj. EBITDA margins 33%+.

Boosted by Monsanto acquisition, Bayer offers a broad portfolio of high-value seeds and pest management solutions, in the Crop Sciences segment (~44% of total '19e sales, ~41% of adj. EBITDA). Within Consumer Health (~12% of total '19e sales, ~10% of adj. EBITDA), the company markets non-prescription (OTC) medicines, medical products and cosmetics in the dermatology, nutritional supplement, analgesic, digestive health, allergy, cold, foot care and sun protection categories. The segment includes brands such as: Claritin, Aspirin, Aleve, Bepanthen, Canesten, etc. This division posts the lowest margins, from which we should see divestitures, at least Coppertone and Dr. Scholl's product lines.

The company intends to exit the Animal Health business (~3% of total '19e sales, ~3% of adj. EBITDA). Earlier this year, Bayer concluded process to sell Covestro, generating more than €9bn of proceeds in total.

Upcoming Triggers and Drivers

Most expected upcoming triggers are related to progress in the clinical development of drug candidates:

1. Positive developments regarding glyphosate litigation
2. Strong uptake of Xarelto in new indications. Pipeline execution.
3. Realization of synergies from the Monsanto acquisition

Next scheduled reporting: February 27th, 2019

Risk to the investment case

Risks to our thesis include, but are not limited to: continuous litigation issues with glyphosate and dicamba and consequent regulatory action. There is also a risk of unsuccessful integration with Monsanto and/or lower expected synergies realized. There is significant pipeline risk as well as Xarelto's sales not accelerating as expected. Finally, there are operational risks in other segments, especially in Consumer Health, which has underperformed as of late.

Valuation and recommendation

Our valuation is a result of base and bear case scenarios in our DCF model as well as the Sum-of-the-Parts Analysis (SOP). According to our base DCF, Bayer should be worth €100 per share, bear DCF yields a €44 per share. In our DCF, we use a fundamental Beta of 1.2 and a WACC of 7.7%. SOP yields a middle of the road value of €75 per share. As most of the Monsanto synergies and restructuring benefits should come in after 2019, one could view this value, as conservative figure, reflecting the possibility of these initiatives not delivering.

We assign a 10% probability to the bear case scenario and split the remaining 90% proportion evenly between the other two valuation methods. We arrive at our target price of €83 per share. We assign Bayer a Buy recommendation.

Target price of EUR 83

Sum-of-the-Parts Analysis

Sector	Adj. EBITDA 2019e	Fair multiple 2019e	EV	Peers	
Pharmaceuticals	5.938	10,4	10,4x	61.733	Big EU Pharma (AZN, GSK, Novartis, Roche, Sanofi)
Consumer Health	1.160	10,2	10,2x	11.886	Biggest OTC Players (GSK, BHS, Prestige, Reckitt, Perrigo)
Animal Health	387	11,9	11,9x	4.586	Top Global AH Companies (Zoetis, Virbac, IDEXX, Patterson, Philbro)
Crop Science	4.943	8,6	8,6x	42.455	Global Ag Chemical Co. (FMC, DowDuPont, BASF, KWS Saat, etc)
Other	-175	9,8	9,8x	-1.728	
Group	12.252		118.931		
- Net debt (cash)			37.401		
- Pension provisions			7.970		
Equity Value			73.560		
# of shares year end			980		
Fair value per share			75		

Source: Factset, Pareto

DCF – Base Case

EUR m	Phase I										Phase II
	2018e	2019e	2020e	2021e	2022e	2023e	2024e	2025e	2026e	2027e	
Revenues	39.131	46.646	48.173	49.390	50.764	51.632	52.557	51.730	52.122	52.817	
growth rate		19,2%	3,3%	2,5%	2,8%	1,7%	1,8%	-1,6%	0,8%	1,3%	
EBIT	7.380	5.570	6.587	7.590	10.507	11.514	11.886	12.685	13.349	14.269	
EBIT margin	18,9%	11,9%	13,7%	15,4%	20,7%	22,3%	22,6%	24,5%	25,6%	27,0%	
Tax	-1.550	-1.281	-1.515	-1.746	-2.417	-2.648	-2.734	-2.917	-3.070	-3.282	
Tax rate	21%	23%	23%	23%	23%	23%	23%	23%	23%	23%	
Depr. & Amort. (Incl. Special It	5.014	5.182	5.078	5.233	5.343	5.375	5.409	4.632	4.215	3.616	
% of sales	12,8%	11,1%	10,5%	10,6%	10,5%	10,4%	10,3%	9,0%	8,1%	6,8%	
Capex	-2.850	-3.397	-3.484	-3.548	-3.621	-3.657	-3.696	-3.612	-3.614	-3.636	
% of sales	7,3%	7,3%	7,2%	7,2%	7,1%	7,1%	7,0%	7,0%	6,9%	6,9%	
Change in WC & P	-274	-554	-544	-482	-530	-416	-438	0	-308	-391	
% of sales	0,7%	1,2%	1,1%	1,0%	1,0%	0,8%	0,8%	0,0%	0,6%	0,7%	
Free Cash Flow	7.720	5.519	6.122	7.046	9.282	10.167	10.427	10.787	10.572	10.577	172.186
growth rate		-28,5%	10,9%	15,1%	31,7%	9,5%	2,6%	3,4%	-2,0%	0,0%	1,5%
Present Value FCF	1.920	5.097	5.248	5.607	6.856	6.971	6.636	6.372	5.798	5.384	87.651
PV Phase I		55.889									
PV Phase II		87.651									
Enterprise value		143.540									
- Net Debt		37.401									
- Pension Provisions		7.970									
Equity value		98.169									
Number of shares		980,2									
Value per share - DCF (€)		100									

Risk free rate	3,5%	Target equity ratio	75%
Premium Equity	5,0%	Beta	1,2
Premium Debt	0,5%	WACC	7,7%

Sensitivity	Growth in phase II				
	0,5%	1,0%	1,5%	2,0%	2,5%
7,34%	95,0	102,1	110,3	120,0	131,7
7,54%	90,9	97,4	105,0	114,0	124,8
7,73%	87,0	93,1	100,2	108,4	118,3
7,92%	83,3	89,0	95,6	103,2	112,3
8,12%	79,8	85,1	91,2	98,3	106,7

Source: Factset, Pareto

PROFIT & LOSS (fiscal year) (EURm)	2013	2014	2015	2016	2017	2018e	2019e	2020e
Revenues	40.157	41.339	46.085	34.943	35.015	39.131	46.646	48.173
EBITDA	7.562	8.247	9.437	10.406	8.061	10.369	10.402	11.965
Depreciation & amortisation	2.896	2.920	3.333	2.958	3.245	5.014	5.182	5.078
EBIT	25.645	26.700	29.825	28.313	29.069	7.380	5.570	6.587
Net interest	(711)	(968)	(996)	(959)	(1.346)	(1.250)	(1.530)	(1.490)
Other financial items	-	-	-	-	-	-	-	-
Profit before taxes	24.934	25.732	28.829	27.354	27.723	6.130	4.040	5.097
Taxes	(1.021)	(1.071)	(1.223)	(1.017)	(1.329)	(1.287)	(970)	(1.223)
Minority interest	3	(17)	12	(295)	(758)	(20)	(20)	(20)
Net profit	23.916	24.744	27.698	26.042	25.636	4.823	3.050	3.854
EPS reported	28,92	29,92	33,49	31,28	29,40	5,13	3,11	3,92
EPS adjusted	5,61	5,89	6,82	6,67	6,74	5,55	6,44	6,96
DPS	1,90	2,10	2,26	2,55	2,71	2,81	2,58	3,13
BALANCE SHEET (EURm)	2013	2014	2015	2016	2017	2018e	2019e	2020e
Tangible non current assets	10.015	11.428	12.375	13.114	7.633	15.766	16.481	17.066
Other non-current assets	22.274	36.579	37.721	38.677	37.381	83.466	80.543	78.439
Other current assets	17.366	20.374	21.962	28.548	22.492	27.709	30.096	31.299
Cash & equivalents	1.662	1.853	1.859	1.899	7.581	8.453	9.326	9.326
Total assets	51.317	70.234	73.917	82.238	75.087	135.394	136.446	136.130
Total equity	20.890	20.330	26.625	33.461	36.921	62.717	62.971	63.968
Interest-bearing non-current debt	5.590	18.484	16.513	16.180	12.483	40.000	39.000	38.000
Interest-bearing current debt	3.441	3.376	3.421	3.401	1.935	3.400	2.763	1.390
Other Debt	12.051	14.215	14.745	16.282	14.362	21.450	23.315	24.053
Total liabilities & equity	51.317	70.234	73.917	82.238	75.087	135.394	136.446	136.130
CASH FLOW (EURm)	2013	2014	2015	2016	2017	2018e	2019e	2020e
Cash earnings	6.802	8.042	7.843	6.911	4.034	10.893	10.332	10.745
Change in working capital	(970)	(1.335)	(850)	(153)	(46)	(80)	(1.124)	(867)
Cash flow from investments	(2.581)	(15.539)	(2.762)	(8.729)	(432)	(35.466)	(3.397)	(3.484)
Cash flow from financing	(2.535)	9.736	(3.974)	(350)	(1.881)	25.525	(5.810)	(6.394)
Net cash flow	716	904	257	(2.321)	1.675	872	-	-
CAPITALIZATION & VALUATION (EURm)	2013	2014	2015	2016	2017	2018e	2019e	2020e
Share price (EUR end)	100,3	111,2	114,0	97,6	102,3	65,3	65,3	65,3
Number of shares end period	827	827	827	833	872	941	982	982
Net interest bearing debt	5.707	18.154	16.216	15.783	(744)	32.754	30.515	28.403
Enterprise value	88.759	110.225	111.633	98.560	88.573	94.389	94.841	92.729
EV/Sales	2,2	2,7	2,4	2,8	2,5	2,4	2,0	1,9
EV/EBITDA	11,7	13,4	11,8	9,5	11,0	9,1	9,1	7,7
EV/EBIT	3,5	4,1	3,7	3,5	3,0	12,8	17,0	14,1
P/E reported	3,5	3,7	3,4	3,1	3,5	12,7	21,0	16,6
P/E adjusted	17,9	18,9	16,7	14,6	15,2	11,8	10,1	9,4
P/B	4,0	4,5	3,7	2,5	2,4	1,0	1,0	1,0
FINANCIAL ANALYSIS & CREDIT METRICS	2013	2014	2015	2016	2017	2018e	2019e	2020e
ROE adjusted (%)	23,5	23,6	24,0	18,5	16,7	10,5	10,1	10,8
Dividend yield (%)	1,9	1,9	2,0	2,6	2,6	4,3	3,9	4,8
EBITDA margin (%)	18,8	19,9	20,5	29,8	23,0	26,5	22,3	24,8
EBIT margin (%)	63,9	64,6	64,7	81,0	83,0	18,9	11,9	13,7
NIBD/EBITDA	0,75	2,20	1,72	1,52	(0,09)	3,16	2,93	2,37
EBITDA/Net interest	11,82	8,97	10,30	9,72	6,90	7,42	8,01	9,12

Blue-chip biotech fund

With AUM of roughly CHF 3bn, BB Biotech is a biotechnology investment company focused on selecting innovation leaders in the field of new drug development, consisting of overwhelming majority of publicly listed companies. The shares are thus suited to investors who wish to participate in the potentially significant upside associated with medical progress, but lack the extensive resources or expertise required to determine the likely winners. The portfolio managers invest along the "S-curve" of growth with a goal of mid- to long-term of 15% total return per year, which includes a generous 5% dividend. We rate BB Biotech a Buy with a target price of CHF 83, derived from consensus target prices of BB Biotech's portfolio holdings.

Investment Case

We believe BB Biotech is a great vehicle for investors seeking to hold exposure to the sophisticated biotech space.

Although not exclusive, the main focus is on US small & mid-cap companies that address unmet medical needs, especially in oncology and infectious diseases. We believe the BB Biotech has done well with selecting innovation leaders, particularly in mRNA and antisense technology. Despite underperforming as of late (primarily due to several negative binary events), the fund has so far met its 15% total return per year aspiration over the long-term, reflecting evidence of its winning strategy.

Earlier this year, BB Biotech was added to major Swiss indices. - SMIM and SPI Index. SPI is Switzerland's most closely followed performance index. SMIM is included in the SMI Expanded Index which together with the blue-chip SMI index covers more than 90% of the Swiss stock market's entire capitalization. We believe the additional investor base should continue grow BB Biotech's exposure, attracting increasingly more investors and fund inflows.



Target price (CHF)	83
Share price (CHF)	66

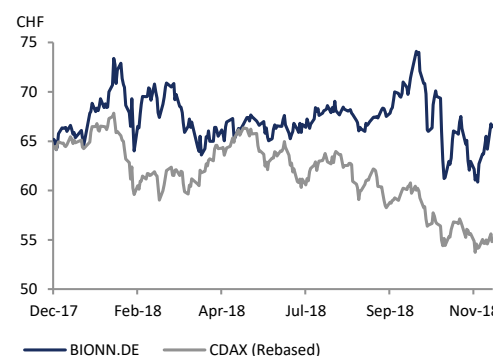
Forecast changes

%	2018e	2019e	2020e
Revenues	NM	NM	NM
EBITDA	NM	NM	NM
EBIT adj	NM	NM	NM
EPS reported	NM	NM	NM
EPS adj	NM	NM	NM

Source: Pareto

Ticker	BION.S, BION SW
Sector	Investment Companies
Shares fully diluted (m)	55,4
Market cap (CHFm)	3.681
Minority interests (CHFm)	0
Free float (%)	100

Performance



Source: Factset

Pareto Securities AS has been paid by the issuer to produce this research report. This material is considered by Pareto Securities to qualify as an acceptable minor non-monetary benefit according to the EU MIFID 2 directive.

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Swiss Biotech fund focused on US small & mid-cap drug developers, especially in oncology and infectious diseases

Company profile

BB Biotech is part of Bellevue Asset Management, and has generated a ~2,000% return for its investors since its inception in November 1993. In the current structure, a team of six portfolio managers identify suitable investments. Each individual specializes in a number of therapeutic areas and has primary responsibility for the analytical process with respect to the portfolio companies and candidates within that space. Each PM subsequently proposes investment ideas to the team, which provides further analytical support and eventually votes on each proposal. Following a positive vote by the portfolio management team, the investment idea is taken to the Supervisory Board, chaired by former Roche CFO, Dr. Erich Hunziker, which has the ultimate responsibility for investment decisions.

A key characteristic of BB Biotech is the significant concentration resulting from 5 to 8 core holdings that may account for up to 2/3 of the portfolio. The total portfolio typically consists between 20 and 35 investments that are held 4 to 5 years on average. The investment company may invest no more than 10% of its assets in private equity; the remainder of the portfolio is primarily comprised of listed mid-sized and smaller companies. The fund comprises of an investment team that conducts rigorous and extensive due diligence process, while engaging in regular dialogue with the management of portfolio companies, experts in medical community and insurance companies to generate insight.

In recent years, the fund has been leveraged by up to 15% to take full advantage of the available investment opportunities. The company is usually fully invested; occasionally ca. 5% of the assets have been held in cash. We note however, that BB Biotech would not rule out a 25% cash position in the event that the team considered many biotechnology stocks to be overvalued or unsuitable for investment. As of June 30th, the expense ratio stood at 1.29%.

Upcoming Triggers and Drivers

We see two broad types of triggers for BB Biotech shares:

4. Triggers that alter the NAV (i.e. the valuation of the portfolio companies). These include clinical data and other newsflow, such as earnings releases and announcement of partnerships. Share price movements of portfolio companies occur for other reasons, e.g. general market movements or sector rotations.
5. Triggers that affect the shares' premium or discount to the NAV. While, there is no theory that fully explains the existence of a discount or a premium we believe investor sentiment is a major component. There is also a component of benefit vs cost of holding BB Biotech shares, with the former becoming more apparent in 2018 (current premium ~10%).

Next scheduled reporting: February 15th, 2019

Risk to the investment case

Key risks to our price target include upside and downside risk to our target NAV as a function of share price movements of portfolio companies, a potential re-emergence of a steep discount to NAV and currency volatility. The USD is the listing currency of most of BB Biotech's holdings.

Valuation and recommendation

BB Biotech's share price is determined by NAV of the company's portfolio, as well as the premium or discount to NAV which the market is prepared to pay. Our calculation of the NAV per share is based on portfolio holdings as of September 30th. We assume 0% premium/discount in our target price of CHF 83. We assign BB Biotech a Buy recommendation.

Target price of CHF 83

BB Biotech Holdings - September 30th, 2018

CHFm except where otherwise noted	Currency	Holding (<m of shares)*	Curent price (LLC)	Market cap (in LLC)	Investment (in CHF)**	BBB holding in the company	% of BBB's equity	Consensus TP	Valuation using consensus TP
Ionis Pharmaceuticals	USD	8,7	56,0	7.704,0	483,9	6,30%	14,8%	56,4	487,0
Neurocrine Biosciences	USD	3,2	86,2	7.820,4	271,6	3,48%	8,3%	130,3	410,2
Celgene	USD	3,0	72,5	50.674,8	215,7	0,43%	6,0%	108,9	324,1
Incyte	USD	3,8	65,5	13.943,2	248,8	1,79%	7,6%	84,4	320,6
Vertex Pharmaceuticals	USD	1,4	177,9	45.471,4	243,1	0,54%	7,5%	199,9	273,1
Alexion Pharmaceuticals	USD	1,3	122,3	27.284,8	160,3	0,59%	4,9%	165,1	216,3
Esperion Therapeutics	USD	3,3	53,5	1.434,7	175,2	12,24%	5,4%	80,1	262,2
Agios Pharmaceuticals	USD	2,2	54,1	3.144,6	118,5	3,78%	3,6%	95,9	210,2
Halozyme Therapeutics	USD	8,2	15,4	2.226,2	126,7	5,71%	3,9%	20,2	166,1
Gilead	USD	2,0	69,6	89.971,3	135,6	0,15%	4,2%	86,1	167,7
Sage Therapeutics	USD	1,1	108,5	5.085,8	115,9	2,29%	3,6%	203,5	217,4
Radius Health	USD	6,6	16,1	732,3	105,7	14,47%	3,2%	37,7	247,8
Tesaro	USD	2,9	73,7	4.057,9	215,4	5,32%	6,6%	70,9	207,2
Alnlyam Pharmaceuticals	USD	1,4	78,4	7.915,7	107,1	1,36%	3,3%	120,5	164,7
Regeneron Pharmaceuticals	USD	0,2	372,8	39.637,2	74,3	0,19%	2,3%	411,1	82,0
Myovant Sciences	USD	3,6	18,4	1.261,6	65,5	5,21%	2,0%	30,3	107,7
Moderna Therapeutics	USD	7,0	10,1	n.m.	69,8	n.m.	2,1%	10,1	69,8
Wave Life Sciences	USD	1,4	46,8	1.379,8	64,7	4,70%	2,0%	61,1	84,4
Novo Nordisk	DKK	1,4	304,2	581.802,0	65,5	0,07%	2,0%	325,2	70,1
Argenx SE	USD	0,7	105,7	3.890,5	77,4	2,00%	2,4%	138,8	101,7
Macrogenics	USD	3,0	15,7	662,2	46,7	7,08%	1,4%	31,5	93,9
Akcea Therapeutics	USD	2,4	32,0	2.856,3	76,1	2,67%	2,3%	41,8	99,4
Intercept Pharmaceuticals	USD	0,5	105,9	3.141,0	57,6	1,84%	1,8%	138,5	75,3
Exelixis	USD	2,8	20,6	6.147,1	57,1	0,93%	1,7%	29,0	80,5
Voyager Therapeutics	USD	2,8	10,9	354,9	30,7	8,67%	0,9%	26,0	73,2
Nektar Therapeutics	USD	0,8	38,0	6.577,2	32,0	0,49%	1,0%	74,2	62,5
Intra-Cellular Therapies	USD	2,2	13,8	756,3	30,3	4,02%	0,9%	30,1	66,0
Alder Biopharmaceuticals	USD	2,3	13,3	906,0	30,0	3,32%	0,9%	22,1	50,0
Myokardia	USD	0,5	58,1	2.338,5	29,5	1,27%	0,9%	77,6	1,1
G1 Therapeutics	USD	0,4	34,5	1.282,5	14,6	1,14%	0,4%	71,0	30,1
Novavax	USD	8,3	2,0	777,2	16,9	2,18%	0,5%	4,2	34,9
Cidara	USD	2,3	3,7	101,3	8,4	8,29%	0,3%	13,6	31,1
Achillion Pharmaceuticals	USD	1,3	3,0	417,2	3,8	0,92%	0,1%	6,5	8,3
Scholar Rock Holding	USD	0,2	24,6	620,3	4,7	0,75%	0,1%	29,3	5,6
Radius Health Warrants 2019	USD	0,1	22,3	n.m.	1,6	n.m.	0,0%	22,3	1,6
Total					3.580,7				4.904,0
Other assets (debt)					-317,1				-317,1
Net cash (debt)					0,0				0,0
Capitalised hoding costs									
Net Asset Value					3.263,6				4.586,9
Nb of shares (m)					55,4				55,4
NAV per share (CHF)					59				83

Notes: * as of September 30th, 2018. ** securities prices and foreign exchange rates as of December 5th, 2018.

Source: BB Biotech, Pareto

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No near-term catalysts

Biotest is a small player in an attractive blood plasma market which offers high-single digit growth driven by immuno-globulins (IVIG). The company is particularly strong in hyperimmune globulin market. The blood plasma market is characterized as one with high barriers of entry, less pipeline and patent risk (relative to the broader biotech industry), as well as high margins. As a smaller player, Biotest, is at a considerable disadvantage relative to market leaders (Grifols, CSL Behring and Baxter), especially after the sale of its US operations. This biggest catalyst for the stock was a potential domination agreement with previously controlling shareholder, Creat. However, with its subsidiary Shanghai RAAS planning to buy 100% stake in Biotest, the fate of the preference (non-controlling) shareholders has become less certain. We initiate Biotest with a Hold, with target price of EUR 23.40.

Investment Case

Biotest is currently working to expand its production with so-called Biotest Next Level (BNL) project. Currently, the company generates roughly €300 of revenues per liter of plasma. After the completion of BNL the company should roughly double its yield, generating €550-650 per liter. This is primarily a result of additional products, such IgG and IgM, which the company is currently not producing. However, the benefits from the BNL projects would likely not be seen until at least 2023, or even later. At that point, revenues should be roughly double of what they are currently and EBIT margin in the mid to high teens. Until then, we expect low profitability, burdened by BNL-related investments.

Outside of plasma, Biotest has several therapeutic assets that are currently in development (with plans not to proceed further). Both BT-062 and BT-063 could provide revenue stream or cash proceeds, should Biotest manage to sell or license-out the assets.

EURm	2016	2017	2018e	2019e	2020e
Revenues	553	378	397	417	438
EBITDA	87	13	39	53	64
EBIT	65	(9)	12	17	22
EPS	(2,30)	(0,09)	(0,19)	(0,04)	0,12
EPS adj	0,87	(0,41)	(0,19)	(0,04)	0,12
DPS	0,12	0,06	0,04	0,04	0,06
EV/EBITDA	9,2	91,0	29,5	21,8	18,2
EV/EBIT	12,3	-	95,7	69,7	53,1
P/E adj	15,4	-	-	-	-
P/B	1,47	2,30	2,01	2,01	1,99
ROE (%)	-	-	-	-	1,1
Div yield (%)	0,9	0,3	0,2	0,2	0,3
Net debt	273	384	224	247	245

Source: Pareto



Target price (EUR)	23
Share price (EUR)	23

Forecast changes

%	2018e	2019e	2020e
Revenues	NM	NM	NM
EBITDA	NM	NM	NM
EBIT adj	NM	NM	NM
EPS reported	NM	NM	NM
EPS adj	NM	NM	NM

Source: Pareto

Ticker	BIOG.DE, BIO3 GR
Sector	Healthcare
Shares fully diluted (m)	39,6
Market cap (EURm)	916
Net debt (EURm)	224
Minority interests (EURm)	0
Enterprise value 18e (EURm)	1.140
Free float (%)	100

Performance

Source: Factset

Pareto Securities AS has been paid by the issuer to produce this research report. This material is considered by Pareto Securities to qualify as an acceptable minor non-monetary benefit according to the EU MIFID 2 directive.

Analysts

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*Provider of plasma proteins
and biological drugs*

Company profile

Biotest develops and distributes biological and biotechnological pharmaceutical products, such as immunoglobulins, coagulation factors and albumins based on human blood plasma. These are used for diseases of the immune and haematopoietic systems. The key therapeutic areas are clinical immunology, haematology, and intensive care medicine. In addition, Biotest develops monoclonal antibodies in the indications of cancer of plasma cells and systemic lupus erythematosus, which are produced by recombinant technologies.

Tiancheng (Germany), an indirectly controlled subsidiary of Creat Group Co of China holds a majority interest (89.88%) of the ordinary shares with voting rights of Biotest AG (since January 31, 2018). Tiancheng's ownership represents 44.94% of the total capital. In connection with the takeover by Creat, Biotest sold its US operations for to Grifols for \$286 million (closed on July 31, 2018). On November 22nd, Shanghai RAAS (subsidiary of Creat) announced it plans to buy 100% stake in Tiancheng.

Upcoming Triggers and Drivers

We expect most of the triggers to be medium to long-term in nature, related primarily with the expansion project:

6. Continued development milestones for BNL
7. Progress of the Phase III study of IgG Next Generation
8. Potential announcement of reinvigorated interest to enter into domination agreement (likely after H2 2019, if ever)

Next scheduled reporting: FY 2018 results in March 28, 2019

Risk to the investment case

Risks include delays, unexpected expenses or disruptions with the expansion project, BNL. Should the company be unable to secure partnerships or sell its antibody-based drug candidates, valuation would be further at risk. Upside risks include unexpected change of control (such as a domination agreement), in particular, where the controlling party would have to make an offer to all preference shareholders, that could be significantly more than current price.

Valuation and recommendation

Target price of EUR 23.40

We value Biotest (preference shares) based on combination of the DCF as well as the earnings-capacity model used to value the stock under the assumption of the implementation of the domination agreement. The significant driver of the stock is the potential rewards once BNL is in full operation, expected in the mid 2020's. We value the antibody-based drug pipeline at roughly €242m.

We assign 20% probability of domination agreement, reflected in the outcome of the earnings-capacity model, which yields €27.70 per share. We do note, that in this situation, there would be an attractive risk-reward profile for some investors, with a yet-to-be determined potential floor price with an element of optionality inherent in the process, including a potential guaranteed dividend yield between 4% and 5%, in our estimate.

In addition to the earnings-capacity model, we incorporate our traditional discounted cash flow method. We assume a WACC of 8.5% and a Beta of 1.4. Our DCF based value is €22.30 per share.

Our target price of €23.40 is derived applying 20% to domination agreement scenario (€27.70) and 80% to DCF value of €22.30. We initiate Biotest with a Hold.

DCF

EUR m	Phase I					Phase II					Phase III	
	2018e	2019e	2020e	2021e	2022e	2023e	2024e	2025e	2026e	2027e		
Revenues	397.0	416.9	437.7	459.6	496.3	570.8	713.5	834.8	960.0	1,036.8		
growth rate	5.0%	5.0%	5.0%	5.0%	8.0%	15.0%	25.0%	17.0%	15.0%	8.0%		
EBIT	11.9	16.7	21.9	27.6	34.7	45.7	71.4	108.5	163.2	176.3		
EBIT margin	3.0%	4.0%	5.0%	6.0%	7.0%	8.0%	10.0%	13.0%	17.0%	17.0%		
Tax	-3.5	-4.8	-6.3	-8.0	-10.1	-13.2	-20.7	-31.5	-47.3	-51.1		
Tax rate	29%	29%	29%	29%	29%	29%	29%	29%	29%	29%		
Depr. & Amort.	26.7	36.8	41.9	41.9	42.1	36.7	45.8	53.6	61.7	66.6		
% of sales	6.7%	8.8%	9.6%	9.1%	8.5%	6.4%	6.4%	6.4%	6.4%	6.4%		
Capex	-60.0	-50.0	-40.0	-40.0	-38.2	-40.0	-49.9	-58.4	-67.2	-72.6		
% of sales	15.1%	12.0%	9.1%	8.7%	7.7%	7.0%	7.0%	7.0%	7.0%	7.0%		
Change in WC & P	-23.4	-7.6	-3.6	-3.6	-8.5	-20.7	-42.1	-32.3	-31.1	-13.8		
% of sales	5.9%	1.8%	0.8%	0.8%	1.7%	3.6%	5.9%	3.9%	3.2%	1.3%		
Free Cash Flow	-48.3	-9.0	13.7	17.9	20.1	8.4	4.4	40.0	79.2	105.3	1,649	
growth rate	-81%		NA	30%	12%	-58%	-47%	799%	98%	33%	2.0%	
Present Value FCF	-12.0	-8.3	11.6	13.9	14.4	5.6	2.7	22.4	40.9	50.2	785	
PV Phase I	20				Risk free rate		3.5%		Target equity ratio		70%	
PV Phase II	122				Premium Equity		5.0%		Beta		1.4	
PV Phase III	785				Premium Debt		2.0%		WACC		8.5%	
Enterprise value	927				Sensitivity		Growth in phase III					
+ Cash	120						1.0%	1.5%	2.0%	2.5%	3.0%	
+ Other financial assets	37				8.09%		21.33	22.84	24.61	26.70	29.20	
- Debt	441				8.30%		20.40	21.81	23.44	25.35	27.62	
- Non-controlling interests	0				WACC		8.52%	19.53	20.84	22.34	24.10	26.17
+ Antibody-based drug pipeline	242				8.73%		18.72	19.93	21.32	22.94	24.84	
Equity value	884				8.94%		17.95	19.08	20.37	21.86	23.60	
Number of shares	39.6											
Value per share - DCF (€)	22.30											

Source: Pareto

Earnings-capacity model

EUR m	2018e	2019e	2020e	2021e	2022e	2023e	2024e	2025e	2026e	2027e
Base interest rate before tax	1.25%	1.25%	1.25%	1.25%	1.25%	1.25%	1.25%	1.25%	1.25%	1.25%
Tax rate	26.4%	26.4%	26.4%	26.4%	26.4%	26.4%	26.4%	26.4%	26.4%	26.4%
Base interest rate after tax	0.92%	0.92%	0.92%	0.92%	0.92%	0.92%	0.92%	0.92%	0.92%	0.92%
Risk premium after tax	6.00%	6.00%	6.00%	6.00%	6.00%	6.00%	6.00%	6.00%	6.00%	6.00%
Market value equity	698.0	758.3	831.1	882.3	930.2	982.0	1,060.9	1,164.8	1,238.8	1,285.8
Market value debt	462.4	466.8	471.4	476.2	484.3	525.7	607.1	683.8	786.3	953.2
Indebtedness ratio	66%	62%	57%	54%	52%	54%	57%	59%	63%	74%
Beta factor unlevered	0.59	0.59	0.59	0.59	0.59	0.59	0.59	0.59	0.59	0.59
Beta factor levered	0.87	0.85	0.83	0.82	0.81	0.82	0.83	0.84	0.86	0.90
Risk premium	5.23%	5.11%	4.99%	4.92%	4.87%	4.91%	5.00%	5.04%	5.16%	5.43%
Growth rate										2.0%
Capitalisation rate	6.15%	6.03%	5.91%	5.84%	5.79%	5.83%	5.92%	5.96%	6.08%	4.35%
Net profit after tax	-7.7	-1.5	4.9	11.6	16.7	21.1	41.1	66.4	103.6	110.7
Growth rate		-80.8%	-430.7%	137.2%	43.9%	26.3%	95.0%	61.7%	56.1%	6.9%
Payout ratio	-21%	-107%	49%	47%	45%	44%	42%	41%	41%	41%
Net Investment and working capital	-57.8	-25.2	-6.4	-6.5	-12.7	-40.4	-77.6	-63.8	-64.2	-36.7
Value from accumulation	-67.1	-28.3	-3.9	-0.3	-3.4	-28.6	-53.8	-24.7	-2.8	28.9
Tax rate accumulation	13.2%	13.2%	13.2%	13.2%	13.2%	13.2%	13.2%	13.2%	13.2%	13.2%
Value from accumulation after tax	-67.1	-28.3	-3.9	-0.3	-3.4	-28.6	-53.8	-24.7	-2.8	25.1
Value from dividends	1.6	1.6	2.4	5.4	7.5	9.2	17.2	27.4	42.2	45.1
Tax rate dividends	26.4%	26.4%	26.4%	26.4%	26.4%	26.4%	26.4%	26.4%	26.4%	26.4%
Value from dividends after tax	1.2	1.2	1.7	4.0	5.5	6.8	12.7	20.1	31.1	33.2
Net income to the shareholder	-16.5	-27.1	-2.1	3.7	2.0	-21.8	-41.1	-4.6	28.3	1,341.7
Growth rate		65%	-92%	-273%	-44%	-1164%	89%	-89%	-714%	
Present value at year end	758.3	831.1	882.3	930.2	982.0	1,060.9	1,164.8	1,238.8	1,285.8	
Present value today	698.0									
Cash & Financial assets	156.6									
Antibody-based drug pipeline	241.7									
Earning-capacity value	1,096.3									
Number of shares (m)	39.6									
Value per share (EUR)	27.70									
					as of		03/12/2018			

Source: Pareto

PROFIT & LOSS (fiscal year) (EURm)	2013	2014	2015	2016	2017	2018e	2019e	2020e
Revenues	501	582	590	553	378	397	417	438
EBITDA	86	86	22	87	13	39	53	64
Depreciation & amortisation	(32)	(33)	(94)	(23)	(22)	(27)	(37)	(42)
EBIT	55	53	(70)	65	(9)	12	17	22
Net interest	(7)	(7)	(5)	(13)	(17)	(23)	(19)	(15)
Other financial items	-	-	-	-	-	-	-	-
Profit before taxes	48	47	(74)	53	(26)	(11)	(2)	7
Taxes	(16)	(28)	(8)	(18)	10	3	1	(2)
Minority interest	-	-	-	(46)	-	-	-	-
Net profit	32	19	(83)	(91)	(4)	(8)	(1)	5
EPS reported	0,89	0,49	(2,08)	(2,30)	(0,09)	(0,19)	(0,04)	0,12
EPS adjusted	0,89	0,49	(2,08)	0,87	(0,41)	(0,19)	(0,04)	0,12
DPS	-	-	0,46	0,12	0,06	0,04	0,04	0,06
BALANCE SHEET (EURm)	2013	2014	2015	2016	2017	2018e	2019e	2020e
Tangible non current assets	255	282	317	415	477	512	527	527
Other non-current assets	69	71	59	50	52	52	52	52
Other current assets	358	500	533	370	302	307	321	332
Cash & equivalents	204	179	54	73	22	152	128	130
Total assets	887	1.033	963	907	853	1.023	1.029	1.042
Total equity	461	480	412	361	348	456	456	461
Interest-bearing non-current debt	226	326	336	330	287	341	341	341
Interest-bearing current debt	5	6	9	16	120	34	34	34
Other Debt	105	113	99	72	(12)	80	82	84
Total liabilities & equity	887	1.033	963	907	853	1.023	1.029	1.042
CASH FLOW (EURm)	2013	2014	2015	2016	2017	2018e	2019e	2020e
Cash earnings	70	66	10	59	30	20	40	51
Change in working capital	(78)	(77)	29	16	(12)	(24)	(12)	(8)
Cash flow from investments	(33)	(44)	(101)	(144)	(135)	185	(50)	(40)
Cash flow from financing	187	87	(5)	(10)	56	(55)	(1)	(1)
Net cash flow	147	32	(67)	(79)	(61)	126	(23)	2
CAPITALIZATION & VALUATION (EURm)	2013	2014	2015	2016	2017	2018e	2019e	2020e
Share price (EUR end)	25,3	31,3	15,4	13,4	20,2	23,2	23,2	23,2
Number of shares end period	36	40	40	40	40	40	40	40
Net interest bearing debt	27	153	291	273	384	224	247	245
Enterprise value	937	1.393	900	803	1.184	1.140	1.163	1.161
EV/Sales	1,9	2,4	1,5	1,5	3,1	2,9	2,8	2,7
EV/EBITDA	10,9	16,2	40,2	9,2	91,0	29,5	21,8	18,2
EV/EBIT	17,1	26,1	-	12,3	-	95,7	69,7	53,1
P/E reported	28,4	64,6	-	-	-	-	-	-
P/E adjusted	28,4	64,6	-	15,4	-	-	-	-
P/B	2,0	2,6	1,5	1,5	2,3	2,0	2,0	2,0
FINANCIAL ANALYSIS & CREDIT METRICS	2013	2014	2015	2016	2017	2018e	2019e	2020e
ROE adjusted (%)	7,7	4,1	-	8,9	-	-	-	1,1
Dividend yield (%)	-	-	3,0	0,9	0,3	0,2	0,2	0,3
EBITDA margin (%)	17,1	14,8	3,8	15,7	3,4	9,7	12,8	14,6
EBIT margin (%)	10,9	9,2	-	11,8	-	3,0	4,0	5,0
NIBD/EBITDA	0,32	1,78	12,98	3,15	29,55	5,79	4,62	3,84
EBITDA/Net interest	12,23	13,22	4,98	8,00	3,80	1,70	2,85	4,25

High risk, higher reward

We believe Epigenomics could double, possibly triple if Epi proColon achieves pricing reimbursement in United States. While not being included in ACS's guidelines, the company still has multiple shots on goal to achieve successful commercialization of the blood-based test for colorectal cancer screening. Even risk-adjusting potential sales in US and assuming only 50% likelihood of reimbursement, the stock 100%+ upside, boosted by higher than expected recently finalized CMS reimbursement rate. The liver cancer test, "HCCBloodTest" presents another potential revenue stream that should have an easier road to commercialization, but likely carry less upside than Epi proColon, in our view. We rate Epigenomics a Buy with a target price of EUR 3.90.

Investment Case

The ACS (American Cancer Society) option may not be out of the question in the long term. In its updated guideline, ACS stated that, "there has been no microsimulation modelling of the newer version of the test to estimate its benefit, a benefit-harm ratio, or a screening interval for regular testing". While the low sensitivity was a concern, ACS noted that, "even a test with somewhat poorer performance would likely make a contribution in adults persistently nonadherent to screening recommendations". This view gives us confidence, that while near term update is unlikely, with additional data and analysis, the test may have a higher chance of being included in the next year's guidelines, despite having lower sensitivity than desired. The company is currently working with ACS on providing a sophisticated model to show the relevant data.

There are two initiatives currently in both the House and the Senate. At this time, the bill is with the CBO, and we remain hopeful noting positive signals from the U.S. Congress, which has recently urged CMS to cover colorectal cancer blood tests.

EURm	2016	2017	2018e	2019e	2020e
Revenues	4	2	2	11	28
EBITDA	(12)	(10)	(13)	(11)	1
EBIT	(12)	(10)	(14)	(12)	(0)
EPS	(0,55)	(0,43)	(0,38)	(0,25)	(0,04)
EPS adj	(0,55)	(0,43)	(0,38)	(0,25)	(0,04)
DPS	-	-	-	-	-
EV/EBITDA	-	-	-	-	81,1
EV/EBIT	-	-	-	-	-
P/E adj	-	-	-	-	-
P/B	5,96	9,00	2,87	4,27	4,27
ROE (%)	-	-	-	-	-
Div yield (%)	-	-	-	-	-
Net debt	(12)	(13)	(21)	(10)	(5)

Source: Pareto



Target price (EUR)	3,9
Share price (EUR)	2,0

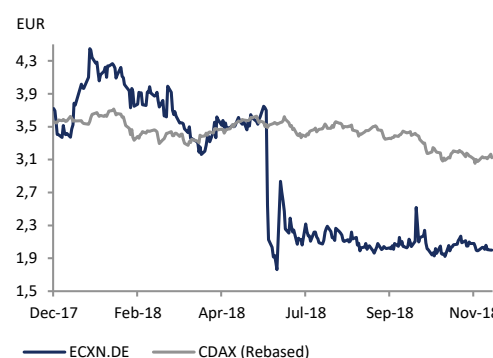
Forecast changes

%	2018e	2019e	2020e
Revenues	NM	NM	NM
EBITDA	NM	NM	NM
EBIT adj	NM	NM	NM
EPS reported	NM	NM	NM
EPS adj	NM	NM	NM

Source: Pareto

Ticker	ECXN.DE, ECX GR
Sector	Healthcare
Shares fully diluted (m)	36,0
Market cap (EURm)	72
Net debt (EURm)	-21
Minority interests (EURm)	0
Enterprise value 18e (EURm)	51
Free float (%)	68

Performance



Source: Factset

Pareto Securities AS has been paid by the issuer to produce this research report. This material is considered by Pareto Securities to qualify as an acceptable minor non-monetary benefit according to the EU MIFID 2 directive.

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Develops blood-based tests for the detection of cancer

Company profile

Epigenomics AG is a molecular diagnostics company, developing and commercializing blood-based tests for the detection of cancer, using proprietary DNA methylation biomarkers. Its flagship product, Epi proColon, is a blood-based test for the early detection of colorectal cancer. The company also offers liver cancer test for patients with cirrhosis, commercialized under the brand name "HCCBloodTest". The company was founded by Oliver Schacht, Christian Piepenbrock, Kurt Berlin, Jörn Walter, and Ivo Gut on April 30, 1997 and is headquartered in Berlin, Germany.

In October 2018, Epigenomics successfully executed capital raise of €22.3m of gross proceeds (€21.25m in cash). The private placement was significantly oversubscribed. The company is planning to use the funds for additional expenditures for achieving reimbursement for and subsequent commercialization of Epi proColon in the U.S. as well as developing the HCCBloodTest for which it recently obtained CE Mark. The timing was ahead of our expectations of acquiring the authorization by year-end. As with Epi proColon, we believe the significant opportunity lies in US. With the new funds, the company should be able to start a prospective clinical trial in US in 2019, while exploring opportunities in China. Once the product is approved and reimbursed, the potential implied peak sales should be at least €25m, according to our estimates.

Upcoming Triggers and Drivers

With the recently executed capital raise, most important triggers would be steps to further progress in achieving commercial success for Epi proColon:

9. Inclusion of blood-based tests for colorectal cancer screening in the guidelines of professional societies, such as ACS
10. Achieving reimbursement for Epi proColon in US
11. Starting a prospective clinical trial in US for "HCCBloodTest", in hopes of getting FDA approval

Next scheduled reporting: TBD

Risk to the investment case

Downside risk to our thesis is primarily from the timing of reimbursement of Epi proColon by Medicare, as well as potential regulatory challenges with HCCBloodTest.

Valuation and recommendation

We derive the target price for Epigenomics using a DCF model. Like a typical small cap biotech, most of the value comes from the potential cash flows in the future, to come primarily from success of Epi proColon. Assuming sustained 30% market share within 30% penetration of blood-based tests among the unscreened population, we arrive at peak revenues of >€80m in 2024e (incorporating 50% probability of not receiving reimbursement).

We assume WACC of 10.0% in our DCF and derive a target price of €3.90 per share. We initiate Epigenomics with a Buy recommendation.

Target price of EUR 3.90

DCF

EUR m	Phase I										Phase II
	2018e	2019e	2020e	2021e	2022e	2023e	2024e	2025e	2026e	2027e	
Revenues	1.7	11.0	27.9	68.8	85.7	98.2	105.2	106.9	108.5	110.1	
growth rate	-9.8%	551.8%	154.2%	146.8%	24.7%	14.5%	7.2%	1.5%	1.5%	1.5%	
EBIT	-13.7	-12.0	-0.3	-6.9	0.0	16.7	18.9	23.5	25.5	26.1	
EBIT margin	-814.0%	-109.0%	-1.0%	-10.0%	0.0%	17.0%	18.0%	22.0%	23.5%	23.7%	
Tax	0.7	2.5	0.1	1.4	0.0	-3.5	-4.0	-4.9	-5.4	-5.5	
Tax rate	5%	21%	21%	21%	21%	21%	21%	21%	21%	21%	
Depr. & Amort.	0.3	0.6	1.1	2.3	2.7	3.0	3.3	3.3	3.6	3.3	
% of sales	19.9%	5.6%	3.9%	3.3%	3.1%	3.1%	3.1%	3.1%	3.3%	3.0%	
Capex	-0.1	-0.4	-1.0	-2.4	-2.8	-3.2	-3.5	-3.5	-3.8	-3.5	
% of sales	4.0%	3.5%	3.5%	3.5%	3.3%	3.3%	3.3%	3.3%	3.5%	3.2%	
Change in WC & P	0.7	-3.5	-5.1	-12.3	-5.1	-0.8	0.2	1.7	0.9	1.1	
% of sales	-44.0%	32.3%	18.2%	17.8%	5.9%	0.8%	-0.2%	-1.6%	-0.9%	-1.0%	
Free Cash Flow	-12.0	-12.7	-5.2	-17.8	-5.3	12.2	14.9	20.1	20.9	21.5	256.1
growth rate						NA	22.5%	34.4%	3.8%	3.0%	1.5%
Present Value FCF	-3.0	-11.5	-4.2	-13.3	-3.6	7.5	8.4	10.2	9.6	9.0	107.7

PV Phase I	9	Risk free rate	3.5%	Target equity ratio	75%
PV Phase II	108	Premium Equity	5.0%	Beta	1.7
		Premium Debt	2.0%	WACC	10.0%

Enterprise value	117	Growth in phase II					
+ Cash	27.9						
- Debt	6.0		0.5%	1.0%	1.5%	2.0%	2.5%
Equity value	139	9.51%	3.81	4.00	4.21	4.44	4.71
Number of shares	36.0	9.76%	3.66	3.83	4.02	4.24	4.49
		10.01%	3.51	3.67	3.85	4.05	4.28
		10.26%	3.38	3.53	3.69	3.88	4.09
		10.51%	3.25	3.39	3.54	3.72	3.91

Value per share - DCF (€)	3.90
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Source: Factset, Pareto

Epi proColon potential in US

US - epi proColon	2018e	2019e	2020e	2021e	2022e	2023e	2024e	2025e	2026e	2027e	2028e	2029e	2030e
Unscreened population (in m)	30	33	35	37	37	38	38	39	39	39	40	40	40
Price per test (€)	80	80	80	80	80	80	80	80	80	80	80	80	80
Penetration rate of blood-based tests	1%	3%	7%	15%	20%	25%	30%	35%	35%	35%	30%	25%	25%
Market share of Epi proColon	65%	60%	55%	50%	45%	40%	35%	30%	30%	30%	30%	30%	30%
In-market sales of Epi proColon	16	48	108	222	269	302	320	323	327	330	286	240	243
% of in-market sales recognized by ECX	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%
Sales recognized by Epigenomics	8	24	54	111	135	151	160	162	163	165	143	120	121
Probability of reimbursement	1%	30%	40%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%
Sales without reimbursement	1	2	2	3	3	3	3	3	3	3	3	3	3
Risk-adjusted US sales recognized by ECX	1	9	24	59	70	78	83	84	85	85	74	63	64

Source: Pareto

PROFIT & LOSS (fiscal year) (EURm)	2013	2014	2015	2016	2017	2018e	2019e	2020e
Revenues	2	2	2	4	2	2	11	28
EBITDA	(6)	(8)	(9)	(12)	(10)	(13)	(11)	1
Depreciation & amortisation	(1)	(1)	(1)	(0)	(0)	(0)	(1)	(1)
EBIT	(7)	(8)	(9)	(12)	(10)	(14)	(12)	(0)
Net interest	0	(0)	0	0	(0)	(1)	(1)	(2)
Other financial items	-	-	-	-	-	-	-	-
Profit before taxes	(7)	(9)	(9)	(12)	(10)	(14)	(13)	(2)
Taxes	(0)	0	0	1	0	1	4	0
Minority interest	-	-	-	-	-	-	-	-
Net profit	(7)	(9)	(9)	(11)	(10)	(14)	(9)	(1)
EPS reported	(0,62)	(0,70)	(0,52)	(0,55)	(0,43)	(0,38)	(0,25)	(0,04)
EPS adjusted	(0,62)	(0,70)	(0,52)	(0,55)	(0,43)	(0,38)	(0,25)	(0,04)
DPS	-	-	-	-	-	-	-	-
BALANCE SHEET (EURm)								
Tangible non current assets	0	1	1	1	1	1	1	1
Other non-current assets	2	1	1	2	2	3	2	2
Other current assets	2	2	3	4	4	3	9	16
Cash & equivalents	7	7	8	12	13	27	27	27
Total assets	11	11	13	18	20	33	39	46
Total equity	6	6	7	14	11	25	17	17
Interest-bearing non-current debt	-	-	-	-	-	-	-	-
Interest-bearing current debt	2	2	1	-	-	6	17	22
Other Debt	2	2	4	4	9	3	5	7
Total liabilities & equity	11	11	13	18	20	33	39	46
CASH FLOW (EURm)								
Cash earnings	(6)	(8)	(9)	(12)	(9)	(13)	(8)	1
Change in working capital	(0)	1	0	(1)	(0)	1	(4)	(5)
Cash flow from investments	(0)	(1)	(0)	(0)	(0)	(0)	(0)	(1)
Cash flow from financing	9	(11)	28	18	29	26	12	5
Net cash flow	2	(20)	20	4	20	14	-	-
CAPITALIZATION & VALUATION (EURm)								
Share price (EUR end)	5,7	4,74	2,07	4,24	3,96	2,00	2,00	2,00
Number of shares end period	12	13	18	20	24	36	36	36
Net interest bearing debt	(5)	(5)	(7)	(12)	(13)	(21)	(10)	(5)
Enterprise value	62	55	30	75	82	51	62	67
EV/Sales	39,2	36,6	14,4	17,7	44,2	30,2	5,7	2,4
EV/EBITDA	-	-	-	-	-	-	-	81,1
EV/EBIT	-	-	-	-	-	-	-	-
P/E reported	-	-	-	-	-	-	-	-
P/E adjusted	-	-	-	-	-	-	-	-
P/B	10,5	9,8	5,2	6,0	9,0	2,9	4,3	4,3
FINANCIAL ANALYSIS & CREDIT METRICS								
ROE adjusted (%)	-	-	-	-	-	-	-	-
Dividend yield (%)	-	-	-	-	-	-	-	-
EBITDA margin (%)	-	-	-	-	-	-	-	3,0
EBIT margin (%)	-	-	-	-	-	-	-	-
NIBD/EBITDA	0,81	0,63	0,78	0,96	1,29	1,59	0,86	(5,77)
EBITDA/Net interest	-	-	-	-	-	-	-	0,54

Growth seems to be finally back, but margins still not outstanding

Driven by the demand from pharma customers, mainly in the US, growth in the glass business has returned back. The picture in the plastics business remains mixed, with ongoing difficulties in the inhaler segment. However, margin picture in FY 2019e is expected to decline further. With that in mind, analysts and investors focus is on the first announcement of the new CEO, Mr. Siemssen, expected for February. With a TP of EUR 69 we rate Hold.

Investment Case

While the demand in the devices business keeps lagging, organic growth in glass accelerated sharply in Q3, leading to an impressive rate of 7.8% yoy on group level. The market development in the glass business seems to support growth in the quarters to come, since pharma customers are looking for increasing drug sales.

Gerresheimer's recent acquisition, Sensile Medical, will impact the company's business model meaningful, transferring the company from a classic contract manufacturer with limited R&D and IP capabilities towards an original equipment and design/development manufacturer. Founded in 2004, Sensile develops micro pumps for subcutaneous delivery of pharmaceutical and biotechnological products for self-administration by patients. The enhanced, new business model allows the company to enter much earlier in the customer's pipeline, and thus a closer customer ties. However, the benefits will take time and Sensile will be margin dilutive in the short-term.

Taking into account short-term impacts like ramp-up related cost increases and Sensile, Gerresheimer's earnings margin seems to have peaked in FY 2017, with an adj. EBITDA margin of 23.1%. We forecast the company to reach that level again in FY 2021e/22e at the earliest.

EURm	2016	2017	2018e	2019e	2020e
Revenues	1,375	1,348	1,375	1,441	1,556
EBITDA	266	306	286	287	337
EBIT	176	176	144	127	173
EPS	3.87	3.21	3.98	2.39	3.47
EPS adj	3.94	3.25	5.20	3.90	4.80
DPS	1.05	1.10	1.33	1.01	1.24
EV/EBITDA	12.0	9.9	10.3	10.5	8.9
EV/EBIT	18.1	17.2	20.5	23.6	17.2
P/E adj	17.5	20.6	12.1	16.2	13.1
P/B	2.98	2.80	2.34	2.26	2.07
ROE (%)	18.0	13.6	15.7	8.7	11.9
Div yield (%)	1.5	1.6	2.1	1.6	2.0
Net debt	812	732	779	822	797

Source: Pareto



Target price (EUR)	69
Share price (EUR)	63

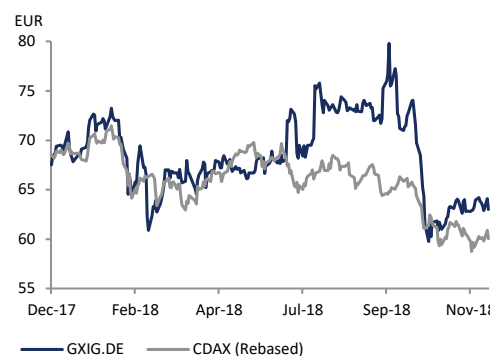
Forecast changes

%	2018e	2019e	2020e
Revenues	NM	NM	NM
EBITDA	NM	NM	NM
EBIT adj	NM	NM	NM
EPS reported	NM	NM	NM
EPS adj	NM	NM	NM

Source: Pareto

Ticker	GXIG.DE, GXI GR
Sector	Healthcare
Shares fully diluted (m)	31.4
Market cap (EURm)	1,978
Net debt (EURm)	938
Minority interests (EURm)	39
Enterprise value 18e (EURm)	2,952
Free float (%)	90

Performance



Source: Factset

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Global player for primary packaging

Company Profile

Gerresheimer is a global player in the primary packaging market for the pharma and healthcare industry and has a strong footprint in the segments where the company is active, typically being either #1 or #2 player. Primary packaging can be considered as consumables, as each drug needs a packaging solution. The company supplies over 1,500 customers worldwide, including the top 10 largest pharmaceutical manufacturers, and has a solid customer diversification with the largest customer being responsible for less than 7% of revenues. Gerresheimer operates in less cyclical markets, driven by the functional improvements of drug delivery systems and increasing complexity with newly created drugs.

Upcoming Triggers and Drivers

For FY 2019e we forecast a revenue growth of 4.8% yoy to EUR 1.44bn (consensus: EUR 1.44bn), while the adj. EBITDA margin should continue to decline to 20.7% (consensus: 21.4%), according to our estimates.

1. Ongoing recovery of demand at pharma customers, which should be the main growth driver in the glass business, which has usually a nature of low growth
2. Ramp-up process at the company's new US plant Peachtree should be growth supportive, while a contract cancellation from an inhaler customer will cause difficulties the accelerate growth in the plastics business
3. Initial revenues from 2 new customer projects in the plastics business could have low impacts on growth, while ramp-up related costs should burden margins
4. In February 2019, the new CEO Mr. Siemssen will probably give some initial insights about his future expectations for Gerresheimer

Next scheduled reporting: FY 2018e results on February 14, 2019.

Key Risks to the Investment Case

Risks are mainly related to ramp-up delays in the two new contracts and further difficulties in the inhaler business, where Gerresheimer is relatively high exposed to.

Valuation and recommendation

We value Gerresheimer using a DCF and peer group approach. In terms of the peer group valuation we used a wide range of companies from the packaging industry. We should note that no listed company covers the broad range of Gerresheimer's product portfolio. More specifically, competitors with focus on glass packaging do not offer plastic packaging, and vice versa.

If we analyse the peer group, we can see that competitors, who are offering devices solutions and have above average margins, like Becton Dickinson and Ypsomed are trading with a premium to the average. By applying EV/EBITDA, EV/EBIT and P/E multiples for the FY 2018e and FY 2019e we arrive at a fair value of EUR 65 per share. Our DCF yields a fair value of EUR 73 per share.

Our target price of EUR 69 implies a 2019e PE of 28.9x and an EV/EBITDA ratio of 11.2x. With an upside potential of 9% to our target price we rate with a Hold recommendation.

Exhibit 3: Peer Group Valuation

Company	PE 2019e	PE 2020e	EV/EBIT 2019e	EV/EBIT 2020e	EV/EBITDA 2019e	EV/EBITDA 2020e
Aptargroup, Inc.	23.5	20.6	17.2	15.2	12.1	11.0
Becton, Dickinson and Company	20.2	17.9	14.4	12.8	11.1	10.0
Berry Global Group Inc	13.1	12.1	12.2	11.4	7.7	7.3
Consort Medical Plc	11.1	10.3	9.3	9.0	7.4	6.8
Corning Inc	15.4	14.0	13.2	12.1	8.4	8.0
Nipro Corporation	15.0	14.1	24.3	21.3	10.1	9.4
West Pharmaceutical Services, Inc.	35.5	30.2	26.1	21.5	18.9	16.8
Median	15.4	14.1	14.4	12.8	10.1	9.4
Gerresheimer AG	15.6	12.7	14.9	12.4	10.4	8.8
relativ	100.7%	90.4%	103.2%	97.1%	103.0%	93.5%
Fair value per share at peer median	62.5	69.7	60.5	66.4	60.7	70.1
Fair value / share (av.)	65.0					

Source: FactSet, Pareto

Exhibit 4: DCF model

EUR m	Phase I					Phase II					Phase III
	2018e	2019e	2020e	2021e	2022e	2023e	2024e	2025e	2026e	2027e	
Revenues	1,375	1,441	1,556	1,677	1,817	1,953	2,084	2,207	2,320	2,401	
growth rate	2.0%	4.8%	7.9%	7.8%	8.3%	7.5%	6.7%	5.9%	5.1%	3.5%	
EBIT	149	132	177	209	242	266	291	316	340	360	
EBIT margin	10.8%	9.1%	11.4%	12.5%	13.3%	13.6%	14.0%	14.3%	14.7%	15.0%	
Tax	12	-36	-48	-56	-65	-72	-79	-85	-92	-97	
Tax rate	-8%	28%	27%	27%	27%	27%	27%	27%	27%	27%	
Depr. & Amort.	137	155	159	164	166	165	169	176	183	187	
% of sales	10.0%	10.8%	10.2%	9.8%	9.1%	8.5%	8.1%	8.0%	7.9%	7.8%	
Capex	-286	-233	-197	-176	-144	-155	-166	-176	-185	-192	
% of sales	20.8%	16.2%	12.7%	10.5%	8.0%	8.0%	8.0%	8.0%	8.0%	8.0%	
Change in WC & P	-5	-5	-22	-19	-22	-24	-25	-27	-28	-29	
% of sales	0.4%	0.3%	1.4%	1.1%	1.2%	1.2%	1.2%	1.2%	1.2%	1.2%	
Free Cash Flow	7	13	69	121	175	181	191	203	218	229	4,423
growth rate	nm	92.9%	nm	73.8%	45.4%	3.0%	5.5%	6.7%	6.9%	5.3%	2.0%
Present Value FCF	7	12	60	97	132	126	124	123	123	121	2,328
PV Phase I	307					Risk free rate	3.50%	Targ. equity ratio		70%	
PV Phase II	617					Premium Equity	5.00%	Beta		1.1	
PV Phase III	2,328					Premium Debt	2.00%	WACC		7.3%	
Enterprise value	3,253					Sensitivity		Growth in phase III			
- Net Debt (Cash)	732							1.0%	1.5%	2.0%	2.5%
- Pension Provisions	159					6.60%	74.4	82.1	91.6	103.4	118.6
- Minorities & Peripherals	36					6.96%	67.0	73.6	81.6	91.3	103.6
+ MV of financial assets						WACC 7.33%	60.6	66.2	73.0	81.1	91.2
- Paid-out dividends for last FY	35					7.70%	54.8	59.7	65.5	72.4	80.7
+/- Other EV items						8.06%	49.7	53.9	58.9	64.8	71.8
Equity value	2,291										
Number of shares	31.4										
Value per share (€)	73.0										
Current Price (€)	63.0										
Upside	16%										

Source: Pareto

PROFIT & LOSS (fiscal year) (EURm)	2013	2014	2015	2016	2017	2018e	2019e	2020e
Revenues	1,266	1,290	1,283	1,375	1,348	1,375	1,441	1,556
EBITDA	215	215	264	266	306	286	287	337
Depreciation & amortisation	(82)	(86)	(82)	(85)	(125)	(137)	(155)	(159)
EBIT	133	130	176	176	176	144	127	173
Net interest	(34)	(31)	(29)	(29)	(31)	(26)	(19)	(19)
Other financial items	-	-	-	-	-	-	-	-
Profit before taxes	99	99	147	147	145	118	107	153
Taxes	(30)	(26)	(43)	(42)	(42)	9	(30)	(41)
Minority interest	(6)	(7)	(8)	(47)	(2)	(3)	(3)	(3)
Net profit	62	66	104	122	101	125	75	109
EPS reported	1.98	2.11	3.32	3.87	3.21	3.98	2.39	3.47
EPS adjusted	2.30	2.53	3.04	3.94	3.25	5.20	3.90	4.80
DPS	0.70	0.75	0.85	1.05	1.10	1.33	1.01	1.24
BALANCE SHEET (EURm)	2013	2014	2015	2016	2017	2018e	2019e	2020e
Tangible non current assets	538	579	605	610	603	617	649	703
Other non-current assets	586	570	1,274	1,216	1,129	1,264	1,309	1,294
Other current assets	418	439	448	430	425	458	471	508
Cash & equivalents	73	68	94	118	287	599	357	382
Total assets	1,616	1,656	2,419	2,374	2,444	2,938	2,787	2,886
Total equity	563	604	698	763	790	883	919	999
Interest-bearing non-current debt	508	510	990	930	1,019	1,378	1,179	1,179
Interest-bearing current debt	-	-	-	-	-	-	-	-
Other Debt	368	358	553	508	477	518	530	550
Total liabilities & equity	1,616	1,656	2,419	2,374	2,444	2,938	2,787	2,886
CASH FLOW (EURm)	2013	2014	2015	2016	2017	2018e	2019e	2020e
Cash earnings	173	190	184	160	234	279	237	276
Change in working capital	(27)	(31)	19	13	(14)	(5)	(5)	(22)
Cash flow from investments	(116)	(122)	(122)	(107)	(117)	(286)	(233)	(197)
Cash flow from financing	26	(19)	456	(87)	56	324	(241)	(32)
Net cash flow	(13)	(5)	26	25	159	312	(242)	25
CAPITALIZATION & VALUATION (EURm)	2013	2014	2015	2016	2017	2018e	2019e	2020e
Share price (EUR end)	49.7	44.4	73.9	68.9	67.1	62.9	63.0	63.0
Number of shares end period	31	31	31	31	31	31	31	31
Net interest bearing debt	435	442	897	812	732	779	822	797
Enterprise value	2,228	2,082	3,466	3,184	3,033	2,952	3,001	2,979
EV/Sales	1.8	1.6	2.7	2.3	2.2	2.1	2.1	1.9
EV/EBITDA	10.4	9.7	13.1	12.0	9.9	10.3	10.5	8.9
EV/EBIT	16.8	16.0	19.7	18.1	17.2	20.5	23.6	17.2
P/E reported	25.1	21.0	22.3	17.8	20.9	15.8	26.4	18.2
P/E adjusted	21.6	17.6	24.3	17.5	20.6	12.1	16.2	13.1
P/B	3.1	2.6	3.7	3.0	2.8	2.3	2.3	2.1
FINANCIAL ANALYSIS & CREDIT METRICS	2013	2014	2015	2016	2017	2018e	2019e	2020e
ROE adjusted (%)	13.1	13.6	14.6	17.0	13.2	19.5	13.6	15.7
Dividend yield (%)	1.4	1.7	1.2	1.5	1.6	2.1	1.6	2.0
EBITDA margin (%)	17.0	16.7	20.6	19.3	22.7	20.8	19.9	21.6
EBIT margin (%)	10.5	10.1	13.7	12.8	13.1	10.5	8.8	11.1
NIBD/EBITDA	2.02	2.05	3.40	3.05	2.39	2.72	2.86	2.37
EBITDA/Net interest	6.29	7.05	9.11	9.07	9.98	11.12	14.73	17.34

Unique approach to treat cancer

While still in early stage, we believe Heidelberg Pharma's proprietary ATAC technology could become a viable solution to treat multiple myeloma, via its lead candidate HDP-101, for which Phase I trials are expected begin in H2 2019. The company should have enough cash to fund operations until 2020. With strong shareholder backing, we do not expect liquidity issues in the medium-term, if HDP-101 continue to show good data. We assign Heidelberg Pharma a Buy rating with a target price of EUR 3.70.

Investment Case

Heidelberg Pharma, was previously known as Willex and had experienced disappointments, especially with its drug candidate Rencarex. Since then, the company has shifted direction, and focused on ATAC (Antibody Targeted Amanitin Conjugate) technology. It's now developing HDP-101, a lead candidate indicated for multiple myeloma targeting BCMA. ATAC is a form of ADC (Antibody Drug Conjugates) based on the compound Amanitin as a toxin. The basis of ADC technology is the conjugation of specific antibodies to a toxin via a chemical linker. These antibodies transport the toxin selectively to the cancer cell, which internalizes the toxin.

The lead candidate, HDP-101, has promising preclinical data but is still years away from a potential market entrance. We model €690m of peak sales for HDP-101 in the multiple myeloma indication, which we consider a prudent estimate given the competition.

Heidelberg Pharma has several other assets that it has outlicensed namely Mesupron and Redectane. The latter, also known as TLX-250 (now owned by Telix Pharma) has entered Phase III clinical trial in Europe imaging of renal (kidney) cancer with PET. TLX-250 could provide some near-term revenues, although the opportunity would likely be much smaller than with HDP-101.

EURm	2016	2017	2018e	2019e	2020e
Revenues	3	2	4	4	5
EBITDA	(6)	(10)	(11)	(12)	(12)
EBIT	(6)	(11)	(11)	(13)	(12)
EPS	(0,53)	(0,49)	(0,39)	(0,45)	(0,44)
EPS adj	(0,53)	(0,49)	(0,39)	(0,45)	(0,44)
DPS	-	-	-	-	-
EV/EBITDA	-	-	-	-	-
EV/EBIT	-	-	-	-	-
P/E adj	-	-	-	-	-
P/B	2,63	2,48	3,24	7,12	-
ROE (%)	-	-	-	-	-
Div yield (%)	-	-	-	-	-
Net debt	(1)	(30)	(19)	(6)	7

Source: Pareto



Target price (EUR)	3,7
Share price (EUR)	2,9

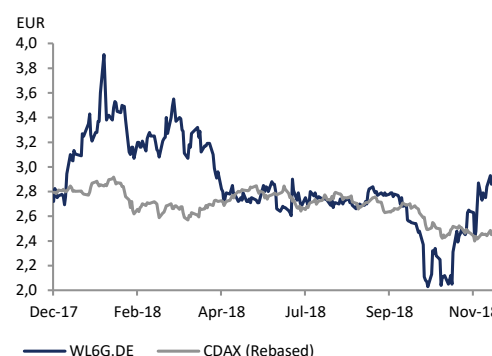
Forecast changes

%	2018e	2019e	2020e
Revenues	NM	NM	NM
EBITDA	NM	NM	NM
EBIT adj	NM	NM	NM
EPS reported	NM	NM	NM
EPS adj	NM	NM	NM

Source: Pareto

Ticker	WL6G.DE, WL6 GR
Sector	Healthcare
Shares fully diluted (m)	28,1
Market cap (EURm)	80
Net debt (EURm)	-19
Minority interests (EURm)	0
Enterprise value 18e (EURm)	61
Free float (%)	21

Performance



Source: Factset

Pareto Securities AS has been paid by the issuer to produce this research report. This material is considered by Pareto Securities to qualify as an acceptable minor non-monetary benefit according to the EU MIFID 2 directive.

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Early-stage biotech oncology company with proprietary ATAC technology

Company profile

Headquartered in Ladenburg, Germany, Heidelberg Pharma is the first company to develop the toxin Amanitin into cancer therapies using its proprietary Antibody Targeted Amanitin Conjugate (ATAC) technology and to advance the biological mode of action of the toxin as a novel therapeutic principle. This proprietary technology platform is being applied to develop the Company's proprietary therapeutic ATACs as well as in third-party collaborations to create a variety of ATAC candidates. The proprietary lead candidate HDP-101 combines Amatoxin, a linker and BCMA antibody to treat multiple myeloma.

Heidelberg Pharma has entered into partnerships to further develop and commercialize its clinical assets Mesupron and Redectane, while Rencarex is available for out-licensing and further development.

Upcoming Triggers and Drivers

Most important near to medium term triggers relate to ATAC technology and further progress with its lead candidate, HDP-101:

12. Finishing final HDP-101 preclinical studies
13. Start of Phase I trial for HDP-101 (estimate in H2 2019)
14. Licensing partnerships to develop ATAC with other companies

Next scheduled reporting: TBD

Risk to the investment case

Downside risks to our thesis include the risk that none of the current and/or future proprietary or out-licensed ATAC-based drug candidates reach the market, and/or the failure (or "shelving" by Heidelberg Pharma's partners) of the legacy pipeline projects in development. Upside risk notably arises from significant pipeline maturation, and/or partnering of the legacy asset Rencarex.

Valuation and recommendation

Target price of EUR 3.70

We derive the target price for Heidelberg Pharma using a Sum-of-the-Parts analysis. Around 63% of NPV is attributed to the ATAC technology, which largely includes proprietary multiple myeloma lead candidate, HDP-101. We model €690m of peak sales (partly due to high competitive landscape for multiple myeloma), significantly less than €1.8bn opportunity viewed by the company. We believe the upside could be greater should HDP-101 prove to be effective and safe. Currently in phase II, a competing asset (also an ADC targeting BCMA) by GSK has risk-adjusted 2024e consensus sales of roughly €780m. For HDP-101, we model 7% probability, given the drug candidate is currently in the process of entering phase I clinical trial.

About 16% of the value lies in the clinical assets, primarily Redectane, now known as TLX-250. We do not believe the opportunity for these assets would be as large as for HDP-101, with Heidelberg Pharma only to receive potential milestones and royalties.

We initiate Heidelberg Pharma with a Buy recommendation and target price of €3.70 per share.

Sum-of-the-Parts

Sum of the Parts Valuation of Heidelberg Pharma shares				
	% royalty rate	NPV (EUR m)	Per Share (EUR)	% of Total Fair Value
Heidelberg Pharma	NA, in-house	65.3	2.32	63%
Development projects		16.2	0.58	16%
Rencarex	NA	1.0	0.04	1%
Redectane	2.5%-10%	13.9	0.49	13%
Mesupron	20%	1.3	0.05	1%
Cash & CE		22.7	0.81	22%
Fair Value		104.3	3.70	100%

Source: Factset, Pareto

HDP-101 NPV Model

In-house ATAC (HDP-101)												
€m	2019e	2020e	2021e	2022e	2023e	2024e	2025e	2026e	2027e	2028e	2029e	2030e-2035e
Revenues (before risk adjustment)	3	4	4	4	4	138	345	414	621	690	690	
Revenues (after risk adjustment, based on 7% success probability)	3	4	4	4	4	10	24	29	43	48	48	
SG&A, R&D and other expenses (risk-adjusted)	-13	-8	-5	-5	-1	-3	-7	-9	-13	-14	-14	
EBIT (risk-adjusted)	-10	-4	-1	-1	3	7	17	20	30	34	34	
Net profit (assuming a 30% tax rate)	-10	-4	-1	-1	2	5	12	14	21	24	24	103
NPV of net profit (risk-adjusted, based on 10% discount rate)	-9	-3	-1	-1	1	3	6	7	9	9	8	36
Total risk-adjusted NPV	65.3											

Source: Pareto

PROFIT & LOSS (fiscal year) (EURm)	2013	2014	2015	2016	2017	2018e	2019e	2020e
Revenues	19	5	4	3	2	4	4	5
EBITDA	(3)	(5)	(6)	(6)	(10)	(11)	(12)	(12)
Depreciation & amortisation	(2)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
EBIT	(5)	(6)	(7)	(6)	(11)	(11)	(13)	(12)
Net interest	(0)	(0)	0	(0)	(0)	-	-	-
Other financial items	-	-	-	-	-	-	-	-
Profit before taxes	(5)	(6)	(7)	(6)	(11)	(11)	(13)	(12)
Taxes	(0)	(0)	(0)	(0)	-	-	-	-
Minority interest	-	-	-	-	-	-	-	-
Net profit	(5)	(6)	(7)	(6)	(11)	(11)	(13)	(12)
EPS reported	(0,64)	(0,73)	(0,75)	(0,53)	(0,49)	(0,39)	(0,45)	(0,44)
EPS adjusted	(0,64)	(0,73)	(0,75)	(0,53)	(0,49)	(0,39)	(0,45)	(0,44)
DPS	-	-	-	-	-	-	-	-
BALANCE SHEET (EURm)								
Tangible non current assets	1	1	1	1	1	1	1	1
Other non-current assets	12	9	8	9	9	9	9	8
Other current assets	0	3	2	1	1	1	1	1
Cash & equivalents	9	2	1	5	30	19	6	3
Total assets	22	15	12	15	41	30	17	14
Total equity	15	12	9	10	37	25	11	(2)
Interest-bearing non-current debt	(6)	(2)	(1)	(1)	(30)	(19)	(6)	7
Interest-bearing current debt	3	0	-	4	-	-	-	10
Other Debt	11	5	4	3	35	25	12	(1)
Total liabilities & equity	22	15	12	15	41	30	17	14
CASH FLOW (EURm)								
Cash earnings	(3)	(4)	(4)	(6)	(10)	(11)	(12)	(12)
Change in working capital	(11)	(2)	(1)	(1)	2	1	0	0
Cash flow from investments	(0)	(0)	(0)	(1)	(0)	(1)	(1)	(1)
Cash flow from financing	-	-	-	4	14	-	-	10
Net cash flow	(15)	(7)	(5)	(3)	6	(11)	(13)	(3)
CAPITALIZATION & VALUATION (EURm)								
Share price (EUR end)	5,1	1,71	1,58	2,14	3,25	2,86	2,86	2,86
Number of shares end period	8	8	9	12	28	28	28	28
Net interest bearing debt	(6)	(2)	(1)	(1)	(30)	(19)	(6)	7
Enterprise value	34	11	13	25	61	61	74	87
EV/Sales	1,8	2,2	3,2	9,0	24,7	15,3	16,9	18,1
EV/EBITDA	-	-	-	-	-	-	-	-
EV/EBIT	-	-	-	-	-	-	-	-
P/E reported	-	-	-	-	-	-	-	-
P/E adjusted	-	-	-	-	-	-	-	-
P/B	2,7	1,1	1,5	2,6	2,5	3,2	7,1	-
FINANCIAL ANALYSIS & CREDIT METRICS								
ROE adjusted (%)	-	-	-	-	-	-	-	-
Dividend yield (%)	-	-	-	-	-	-	-	-
EBITDA margin (%)	-	-	-	-	-	-	-	-
EBIT margin (%)	-	-	-	-	-	-	-	-
NIBD/EBITDA	1,93	0,42	0,21	0,14	2,94	1,78	0,50	(0,55)
EBITDA/Net interest	-	-	-	-	-	-	-	-

Core holding in a volatile market

With a recent share price run up, Merck is no longer a steal, but we do believe the stock is a core holding even at these levels. The company is diversified across three distinct segments: Healthcare, Life Science and Performance Materials. Consensus pipeline expectations are fairly low, but we do see positive surprise opportunities. LS should continue to outperform peers in the medium-term, thanks to the Sigma-Aldrich acquisition in 2015. With much lower expectations and greater transparency, PM is not likely to disappoint to the extent we have seen in the last 2 years. We initiate Merck with a Hold and a target price of EUR 99.

Investment Case

Since mid-2017 until mid-2018, Merck's share price dropped roughly 30%, primarily due to loss of dominance of Merck's liquid crystal business. This was a major overreaction given the decreasing significance of liquid crystals (our current estimate – 14% of Group's adj. EBITDA). As the company took great effort in introducing more transparency and clarity into the business, the share price pivoted and rose >25%. With more manageable expectations (greater transparency and heavy reduction in mid-term guidance), we do not see further major disappointment for this segment in the near-term.

With low expectation of the pipeline, there is a good opportunity for a positive surprise, both with late-stage (especially with Mavenclad) as well as early-stage drug candidates. We would not be surprised with potential partnerships for the latter, which would unlock some value in the near-term. With perpetual mid to high single digit declines of its two top selling drugs, Rebif and Erbitux, Merck will need to deliver on Bavencio, which so far has disappointed in a number of failed clinical trials, as well as being relatively late to the market, in general. Life Science should continue to outperform the market; however, it may become increasingly difficult to maintain the high growth and still expanding margins, in the long-term.

EURm	2016	2017	2018e	2019e	2020e
Revenues	15.024	15.327	14.696	15.177	15.667
EBITDA	4.415	4.282	3.615	4.030	4.255
EBIT	2.481	2.525	1.910	2.436	2.745
EPS	3,75	6,00	2,96	3,89	4,49
EPS adj	6,21	6,16	5,07	5,62	6,04
DPS	1,20	1,25	1,30	1,35	1,40
EV/EBITDA	12,4	11,5	13,9	12,1	11,1
EV/EBIT	22,0	19,5	26,3	20,1	17,3
P/E adj	16,0	14,6	19,5	17,6	16,4
P/B	3,08	2,79	2,47	2,35	2,21
ROE (%)	12,2	18,6	8,2	9,5	10,3
Div yield (%)	1,2	1,4	1,3	1,4	1,4
Net debt	11.513	10.144	7.169	5.815	4.353

Source: Pareto



Target price (EUR)	99
Share price (EUR)	99

Forecast changes

%	2018e	2019e	2020e
Revenues	NM	NM	NM
EBITDA	NM	NM	NM
EBIT adj	NM	NM	NM
EPS reported	NM	NM	NM
EPS adj	NM	NM	NM

Source: Pareto

Ticker	MRCG.DE, MRK GR
Sector	Healthcare
Shares fully diluted (m)	434,8
Market cap (EURm)	43.019
Net debt (EURm)	7.169
Minority interests (EURm)	64
Enterprise value 18e (EURm)	50.252
Free float (%)	30

Performance



Source: Factset

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*German conglomerate,
specializing in Healthcare, Life
Sciences, and Performance
Materials*

Company profile

Headquartered in Darmstadt, Germany, Merck is a global science and technology company, divided in three distinct business segments: Healthcare, Life Science, and Performance Materials.

Within Healthcare (~42% of total '18e sales, ~41% of adj. EBITDA), the company discovers, develops and manufactures prescription medicines used to treat cancer, multiple sclerosis, and infertility. Top selling products include: Rebif, Erbitux, Gonal-f, Glucophage, Concor, Euthyrox, Neurobion and Saizen.

In Life Science (~42% of total '18e sales, ~49% of adj. EBITDA), Merck offers 300,000 products that range from lab water systems to genome-editing tools, antibodies and cell lines, as well as end-to-end bioprocessing systems to support the manufacturing needs of both emerging biotech and large pharma companies.

Finally within Performance Materials (~16% of total '18e sales, ~20% of adj. EBITDA), the company develops specialty chemicals and materials for applications such as liquid crystals and OLED materials for displays, as well as pigments for coatings and cosmetics and materials for the manufacture of integrated circuits.

Upcoming Triggers and Drivers

Most expected upcoming triggers are related to progress in the clinical development of drug candidates. The following are the most important expected in H1 2019:

15. Cladribine (Mavenclad) tablets - Expected FDA decision. Mavenclad (for multiple sclerosis), is already approved in EU. With €500m of projected 2024e consensus sales, we see a significant revision upward perhaps even double of current estimates), should FDA grant the approval.
16. Evobrutinib - Ph IIb 48 week data presentation & decision on PhIII (MS) trial design
17. Avelumab – NSCLC 1L. Number of other avelumab read-outs throughout the year. The drug is currently approved for metastatic Merkel cell carcinoma and locally advanced or metastatic urothelial carcinoma, as well as being studied in the 30 different clinical programs, including 8 Phase III trials, representing the most important drug in the pipeline.

Next scheduled reporting: March 7th, 2019

Risk to the investment case

In the short to medium term, downside risks include more clinical trial disappointments for avelumab, and FDA not approving Mavenclad in US in 2019. A slow down in the high growth biologics and research activity (especially in China), could hamper the ability of Merck to maintain outperformance in Life Sciences.

Valuation and recommendation

We derive the target price for Merck using a DCF model as well as Sum-of-the-Parts Analysis. Our DCF analysis yields a value of €93 per share, while Sum of Parts is slightly higher value of €104 per share. We attribute the higher value of the latter to relatively high multiples of Life Science peers. In our DCF, we use a fundamental Beta of 0.9 and a WACC of 6.8%.

We blend the results of both valuation methods evenly arriving at a target price of €99 per share. We assign Merck a Hold recommendation.

Target price of EUR 99

Sum-of-the-Parts valuation

	Adj. EBITDA 2019e	Fair multiple 2019e	EV
Healthcare	1,676	10.5x	17,585
Life Sciences	2,014	16.5x	33,238
Performance Materials	712	13.2x	9,372
Other	-375	13.7x	-5,127
Group	4027.1		55,068
+ Cash & equivalents			589
- Debt			10,823
- Pensions			2,257
+ MV of Financial Assets			534
- Paid-out dividends for last FY			624
- Minorities & Peripherals			63
+ Other EV items			2,875
Equity Value			45,299
<i># of shares year end</i>			434.8
Fair value per share			104.0

Source: Factset, Pareto

DCF

	Phase I									Phase II
	2018e	2019e	2020e	2021e	2022e	2023e	2024e	2025e	2026e	2027e
Revenues	14,696	15,177	15,667	16,327	17,323	18,108	18,775	19,331	19,886	20,490
growth rate	1.2%	3.3%	3.2%	4.2%	6.1%	4.5%	3.7%	3.0%	2.9%	3.0%
EBIT	1,910	2,436	2,745	2,999	3,334	3,570	3,724	3,949	4,172	4,433
EBIT margin	13.0%	16.1%	17.5%	18.4%	19.2%	19.7%	19.8%	20.4%	21.0%	21.6%
Tax	-477	-609	-686	-750	-834	-892	-931	-987	-1,043	-1,108
Tax rate	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%
Depr. & Amort.	1,706	1,594	1,510	1,260	1,066	976	924	900	896	838
% of sales	11.6%	10.5%	9.6%	7.7%	6.2%	5.4%	4.9%	4.7%	4.5%	4.1%
Capex	-926	-941	-956	-980	-1,022	-1,050	-1,070	-1,083	-1,094	-1,106
% of sales	6.3%	6.2%	6.1%	6.0%	5.9%	5.8%	5.7%	5.6%	5.5%	5.4%
Change in WC	-315	-318	-333	-394	-513	-472	-454	-434	-448	-480
% of sales	2.1%	2.1%	2.1%	2.4%	3.0%	2.6%	2.4%	2.2%	2.3%	2.3%
Free Cash Flow	1,897	2,162	2,280	2,135	2,032	2,131	2,193	2,346	2,483	2,576
growth rate	13.9%	5.5%	-6.4%	-4.9%	4.9%	2.9%	2.9%	7.0%	5.9%	3.7%
Present Value FCF	1,888	2,014	1,990	1,745	1,555	1,527	1,472	1,475	1,462	1,420
										33,863
PV Phase I		16,549			Risk free rate		3.5%		Target equity ratio	75%
PV Phase II		33,863			Premium Equity		5.0%		Beta	0.9
					Premium Debt		1.0%		WACC	6.8%
Enterprise value		50,412								
+ Cash & equivalents		589								
- Debt		10,823								
- Pensions		2,257				6.44%	84.51	92.60	102.73	115.79
+ MV of Financial Assets		534				6.61%	81.02	88.46	97.70	109.49
- Paid-out dividends for last FY		624			WACC	6.78%	77.76	84.62	93.07	103.75
- Minorities & Peripherals		63				6.95%	74.70	81.04	88.80	98.51
+/- Other EV items		2,700				7.12%	71.83	77.70	84.83	93.69
Equity value		40,468								
Number of shares		434.8								
Value per share - DCF (€)		93								

Source: Factset, Pareto

Pareto vs. consensus

		2018e			2019e			2020e	
	Pareto	Cons.	Delta	Pareto	Cons.	Delta	Pareto	Cons.	Delta
Revenues	14,696	14,666	0.2%	15,177	15,174	0.0%	15,667	15,754	-0.5%
EBITDA pre	3,782	3,813	-0.8%	4,030	4,039	-0.2%	4,255	4,316	-1.4%
% of sales	25.7%	26.0%	26 BP	26.6%	26.6%	-7 BP	27.2%	27.4%	-24 BP
EPS pre	5.07	5.24	-3.3%	5.62	5.68	-1.0%	6.04	6.19	-2.5%

Source: Vara Consesus,, Pareto

PROFIT & LOSS (fiscal year) (EURm)	2013	2014	2015	2016	2017	2018e	2019e	2020e
Revenues	10.700	11.363	12.845	15.024	15.327	14.696	15.177	15.667
EBITDA	3.069	3.123	3.354	4.415	4.282	3.615	4.030	4.255
Depreciation & amortisation	(1.458)	(1.361)	(1.511)	(1.934)	(1.758)	(1.706)	(1.594)	(1.510)
EBIT	1.611	1.762	1.843	2.481	2.525	1.910	2.436	2.745
Net interest	(222)	(205)	(357)	(326)	(300)	(240)	(158)	(125)
Other financial items	-	-	-	-	-	-	-	-
Profit before taxes	1.389	1.557	1.487	2.154	2.224	1.670	2.277	2.621
Taxes	0	(392)	(368)	(521)	386	(417)	(569)	(655)
Minority interest	(7)	(7)	(9)	(4)	(10)	(15)	(15)	(15)
Net profit	1.382	1.157	1.115	1.629	2.609	1.287	1.693	1.951
EPS reported	3,18	2,66	2,56	3,75	6,00	2,96	3,89	4,49
EPS adjusted	4,39	4,60	4,87	6,21	6,16	5,07	5,62	6,04
DPS	0,95	1,00	1,05	1,20	1,25	1,30	1,35	1,40
BALANCE SHEET (EURm)	2013	2014	2015	2016	2017	2018e	2019e	2020e
Tangible non current assets	2.647	2.990	4.009	4.230	4.512	4.768	5.030	5.290
Other non-current assets	10.787	12.539	26.648	26.351	23.654	22.361	21.338	20.428
Other current assets	3.993	5.402	6.291	6.585	6.776	6.749	7.089	7.442
Cash & equivalents	3.391	5.078	1.059	1.084	679	650	650	679
Total assets	20.819	26.010	38.007	38.251	35.621	34.528	34.107	33.839
Total equity	11.069	11.801	12.855	14.050	14.066	17.484	18.379	19.505
Interest-bearing non-current debt	3.257	3.561	9.616	8.809	8.033	7.033	6.033	5.033
Interest-bearing current debt	440	2.076	4.097	3.788	2.790	786	433	-
Other Debt	4.130	6.126	8.748	8.457	7.686	6.282	6.249	6.216
Total liabilities & equity	20.819	26.010	38.007	38.251	35.621	34.528	34.107	33.839
CASH FLOW (EURm)	2013	2014	2015	2016	2017	2018e	2019e	2020e
Cash earnings	2.201	2.727	2.203	2.492	2.866	2.234	3.337	3.502
Change in working capital	25	(21)	(8)	26	(170)	(315)	(318)	(333)
Cash flow from investments	(407)	(481)	(514)	(716)	(919)	(926)	(941)	(956)
Cash flow from financing	(1.540)	(400)	(4.258)	(1.696)	(2.097)	(994)	(2.079)	(2.184)
Net cash flow	278	1.825	(2.577)	107	(320)	-	-	30
CAPITALIZATION & VALUATION (EURm)	2013	2014	2015	2016	2017	2018e	2019e	2020e
Share price (EUR end)	65,1	78,4	89,6	99,2	89,8	98,9	98,9	98,9
Number of shares end period	435	435	435	435	435	435	435	435
Net interest bearing debt	307	559	12.654	11.513	10.144	7.169	5.815	4.353
Enterprise value	28.671	34.714	51.667	54.684	49.230	50.252	48.899	47.436
EV/Sales	2,7	3,1	4,0	3,6	3,2	3,4	3,2	3,0
EV/EBITDA	9,3	11,1	15,4	12,4	11,5	13,9	12,1	11,1
EV/EBIT	17,8	19,7	28,0	22,0	19,5	26,3	20,1	17,3
P/E reported	20,5	29,5	34,9	26,5	15,0	33,4	25,4	22,0
P/E adjusted	14,8	17,0	18,4	16,0	14,6	19,5	17,6	16,4
P/B	2,6	2,9	3,0	3,1	2,8	2,5	2,3	2,2
FINANCIAL ANALYSIS & CREDIT METRICS	2013	2014	2015	2016	2017	2018e	2019e	2020e
ROE adjusted (%)	17,8	17,5	17,2	20,1	19,0	14,0	13,6	13,9
Dividend yield (%)	1,5	1,3	1,2	1,2	1,4	1,3	1,4	1,4
EBITDA margin (%)	28,7	27,5	26,1	29,4	27,9	24,6	26,6	27,2
EBIT margin (%)	15,1	15,5	14,3	16,5	16,5	13,0	16,1	17,5
NIBD/EBITDA	0,10	0,18	3,77	2,61	2,37	1,98	1,44	1,02
EBITDA/Net interest	12,07	14,19	8,15	13,57	15,22	15,76	25,44	34,13

Attractive market, valuation too rich

We view Siegfried as a major beneficiary of continued outsourcing by pharma & biotech to CDMOs (Contract Development and Manufacturing Organization) which taking place due to a number of benefits, such as: access integrated solutions ("one-stop-shops"), taking advantage of CDMO's scalable capacity, regulatory and technological expertise as well as shifting the risk of potential failure with drug candidates (development and commercial). Siegfried operates in two distinct segments - Drug Products, supported by sterile and aseptic filling as well as Drug Substances driven by opioid derivatives, strong pain killers, and APIs used in addiction therapy. We believe that at the current valuation, investors expect the company to continue to "fire on all cylinders". Although, we do expect the company to meet its targets, these developments now appear to be largely priced-in. We rate Siegfried a Hold rating with a target price of CHF 378.

Investment Case

Over the last few years, Siegfried's revenues grew substantially primarily driven by the acquisitions of BASF's CMO assets. Siegfried continued expanding, opening up a facility in Nantong, China to improve its cost efficiency.

As the company has gained critical size in most of its businesses, improving operating efficiency is the focus. We believe the most important KPI is EBITDA margin progression, which has historically declined in part due to acquisitions. Currently, the company has a medium term ambition of 20%. We expect achieving this target would take several years, and currently forecast near 19% margin by 2020, driven by continued focus on asset optimization.

On the other hand, Siegfried is looking to strengthen its Drug Products segment, specifically in the field of complex solid dosage forms. While we do not expect Siegfried to make a large transformative acquisition, even a smaller tuck-on could be margin dilutive and delay margin expansion aspirations.

CHFm	2016	2017	2018e	2019e	2020e
Revenues	718	751	807	863	919
EBITDA	97	114	139	165	176
EBIT	47	65	86	109	117
EPS	7,04	9,76	15,51	20,20	21,68
EPS adj	7,04	9,76	15,51	20,20	21,68
DPS	1,80	1,97	2,70	3,00	3,30
EV/EBITDA	10,4	12,9	11,7	9,5	8,7
EV/EBIT	21,4	22,8	18,9	14,4	13,1
P/E adj	30,3	33,2	23,5	18,0	16,8
P/B	1,25	1,91	2,10	1,90	1,73
ROE (%)	4,8	6,0	9,3	11,4	11,1
Div yield (%)	0,8	0,6	0,7	0,8	0,9
Net debt	174	189	164	122	76

Source: Pareto



Target price (CHF)	378
Share price (CHF)	365

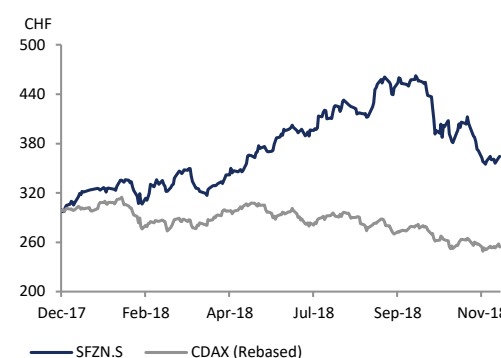
Forecast changes

%	2018e	2019e	2020e
Revenues	NM	NM	NM
EBITDA	NM	NM	NM
EBIT adj	NM	NM	NM
EPS reported	NM	NM	NM
EPS adj	NM	NM	NM

Source: Pareto

Ticker	SFZN.S, SFZN SW
Sector	Chemicals
Shares fully diluted (m)	4,1
Market cap (CHFm)	1.510
Net debt (CHFm)	164
Minority interests (CHFm)	0
Enterprise value 18e (CHFm)	1.620
Free float (%)	90

Performance



Source: Factset

Pareto Securities AS has been paid by the issuer to produce this research report. This material is considered by Pareto Securities to qualify as an acceptable minor non-monetary benefit according to the EU MIFID 2 directive.

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Fast growing Swiss CDMO, with strong presence in addiction therapy and pain killers

Company profile

Headquartered in Zofingen, Switzerland, Siegfried develops and manufactures active pharmaceutical ingredients for pharmaceutical clients with research and development programs, related intermediates, and controlled substances. The company also provides development and production services for finished dosage forms including sterile filling. Siegfried considers itself global market leader in APIs used in addiction therapy as well as strong pain killers, used mainly for cancer patients.

Siegfried's production network today comprises 9 sites, of which 6 are active in the area of Drug Substance and 3 in Drug Product. The company was founded by Samuel Benoni Siegfried in 1873.

Upcoming Triggers and Drivers

Most drivers are long-term in nature:

18. Sustainable EBITDA margin expansion
19. Continued outsourcing by pharma & biotech
20. Further repatriation of manufacturing from the East, especially due to supply chain concerns linked with increasing pressure from US and European regulators
21. Further tuck-on acquisitions

Next scheduled reporting: March 7th, 2019

Risk to the investment case

Risks to our thesis include, but are not limited to: a possible decrease in the propensity of pharmaceutical and biotechnology companies to outsource drug production, delays or disruptions to production at Siegfried's facilities, the unexpected loss of business (e.g. in case of the withdrawal of a drug from the market), execution risk in connection with recent acquisitions and expansion. Upside risks include faster than expected rise in pharma outsourcing as well as Siegfried surpassing growth and margins progression expectations.

Valuation and recommendation

We derive the target price for Siegfried using a DCF model as well as peer analysis. Our DCF analysis yields a value of CHF 338 per share, while peer analysis produces a higher value of CHF 417 per share. In our DCF, we use a fundamental Beta of 1.0 and a WACC of 7.2%. We attribute the higher value derived from peer analysis to relatively high multiples of strong peers such as Lonza and West Pharma as well as favourable growth market dynamics, supported by APIs & Intermediates (2015-2020 CAGR of +8.1%) and Finished Dose markets (+9.4%) in the CDMO industry (Frost and Sullivan).

We blend the results of both valuation methods evenly arriving at a target price of CHF 378 per share. We assign Siegfried a Hold recommendation.

Target price of CHF 378

Peer Analysis

Company	EV/EBITDA 2019	EV/EBITDA 2020	PE 2019	PE 2020
Lonza Group AG	15.8	14.1	22.8	20.6
Catalent Inc	11.9	10.7	20.8	18.6
West Pharmaceutical Services, Inc.	19.1	17.0	35.6	30.3
Consort Medical Plc	8.9	8.2	13.6	12.3
Recipharm AB Class B	10.1	9.0	24.1	20.6
Median	11.9	10.7	22.8	20.6
Siegfried	11.2	10.2	17.6	16.4
relativ	93.6%	95.5%	77.5%	79.7%
Forecasts EBITDA (reported) / EPS (adj.)	165.3	175.9	20.2	21.7
Forecasts Net debt (incl. pensions, hybrid capital)	378	332		
No. Shares at year end	4.1	4.1		
Fair value per share at peer median	386.8	376.8	459.6	446.5
Fair value / share (av.)	417			

Source: Factset, Pareto

DCF

EUR m	Phase I									Phase II	
	2018e	2019e	2020e	2021e	2022e	2023e	2024e	2025e	2026e	2027e	
Revenues	807	863	919	975	1,028	1,080	1,128	1,173	1,214	1,251	
growth rate	7.5%	7.0%	6.5%	6.0%	5.5%	5.0%	4.5%	4.0%	3.5%	3.0%	
EBIT	86	109	117	124	131	139	145	152	158	164	
EBIT margin	10.6%	12.7%	12.7%	12.7%	12.8%	12.8%	12.9%	12.9%	13.0%	13.1%	
Tax	-15	-20	-21	-22	-24	-25	-26	-27	-28	-29	
Tax rate	18%	18%	18%	18%	18%	18%	18%	18%	18%	18%	
Depr. & Amort.	53	56	59	62	65	68	70	73	75	76	
% of sales	6.5%	6.5%	6.4%	6.4%	6.3%	6.3%	6.2%	6.2%	6.1%	6.1%	
Capex	-55	-59	-62	-65	-69	-71	-74	-76	-79	-80	
% of sales	6.9%	6.8%	6.8%	6.7%	6.7%	6.6%	6.6%	6.5%	6.5%	6.4%	
Change in WC & P	-17	-17	-18	-18	-18	-18	-17	-17	-16	-15	
% of sales	2.1%	2.0%	1.9%	1.8%	1.7%	1.6%	1.5%	1.4%	1.3%	1.2%	
Free Cash Flow	51	70	75	81	87	93	98	104	110	115	2,276
growth rate		36.5%	8.0%	7.6%	7.1%	6.7%	6.3%	5.8%	5.4%	4.9%	2.0%
Present Value FCF	51	65	65	65	65	65	65	64	63	61	1,216
PV Phase I	629										
PV Phase II	1,216										
Enterprise value	1,845										
+ Cash	34										
- Debt	100										
- Pension Provisions	123										
- Hybrid Capital	256										
Equity value	1,400										
Number of shares	4.1										
Value per share - DCF (€)	338										
Risk free rate	3.5%										Target equity ratio 65%
Premium Equity	5.0%										Beta 1.0
Premium Debt	2.0%										WACC 7.2%
Sensitivity											Growth in phase II
											1.0% 1.5% 2.0% 2.5% 3.0%
6.80%	313	340	372	412	462						
6.98%	300	325	354	391	436						
WACC 7.16%	288	311	338	371	412						
7.33%	276	298	323	353	391						
7.51%	265	285	309	336	371						

Source: Pareto

PROFIT & LOSS (fiscal year) (CHFm)	2013	2014	2015	2016	2017	2018e	2019e	2020e
Revenues	375	315	481	718	751	807	863	919
EBITDA	65	59	77	97	114	139	165	176
Depreciation & amortisation	(25)	(25)	(34)	(50)	(49)	(53)	(56)	(59)
EBIT	41	34	43	47	65	86	109	117
Net interest	9	(2)	(6)	(12)	(8)	(8)	(8)	(8)
Other financial items	-	-	-	-	-	-	-	-
Profit before taxes	50	32	37	35	57	78	101	109
Taxes	4	7	2	(7)	(17)	(14)	(18)	(19)
Minority interest	-	-	-	-	-	-	-	-
Net profit	54	39	39	28	40	64	83	89
EPS reported	13,69	9,97	9,76	7,04	9,76	15,51	20,20	21,68
EPS adjusted	12,14	9,97	9,76	7,04	9,76	15,51	20,20	21,68
DPS	1,20	1,53	1,51	1,80	1,97	2,70	3,00	3,30
BALANCE SHEET (CHFm)	2013	2014	2015	2016	2017	2018e	2019e	2020e
Tangible non current assets	208	315	470	488	500	503	506	509
Other non-current assets	32	41	72	64	55	23	23	23
Other current assets	170	223	415	437	479	514	549	583
Cash & equivalents	127	50	47	32	34	68	119	174
Total assets	538	630	1.004	1.021	1.069	1.107	1.196	1.289
Total equity	362	383	493	661	673	694	765	841
Interest-bearing non-current debt	60	113	215	91	100	100	100	100
Interest-bearing current debt	17	22	10	-	-	-	-	-
Other Debt	98	111	172	154	173	181	190	198
Total liabilities & equity	538	630	1.004	1.021	1.069	1.107	1.196	1.289
CASH FLOW (CHFm)	2013	2014	2015	2016	2017	2018e	2019e	2020e
Cash earnings	64	58	65	96	127	125	147	156
Change in working capital	3	(33)	(42)	(39)	(43)	(17)	(17)	(18)
Cash flow from investments	(46)	(91)	(88)	(65)	(52)	(55)	(59)	(62)
Cash flow from financing	(19)	(9)	(29)	(33)	(40)	(19)	(20)	(21)
Net cash flow	3	(75)	(94)	(41)	(7)	34	51	55
CAPITALIZATION & VALUATION (CHFm)	2013	2014	2015	2016	2017	2018e	2019e	2020e
Share price (CHF end)	161,6	162,0	195,7	213,0	324,0	364,5	364,5	364,5
Number of shares end period	4	4	4	4	4	4	4	4
Net interest bearing debt	(50)	86	292	174	189	164	122	76
Enterprise value	528	713	1.066	1.002	1.475	1.620	1.578	1.532
EV/Sales	1,4	2,3	2,2	1,4	2,0	2,0	1,8	1,7
EV/EBITDA	8,1	12,1	13,8	10,4	12,9	11,7	9,5	8,7
EV/EBIT	13,0	20,9	24,5	21,4	22,8	18,9	14,4	13,1
P/E reported	11,8	16,3	20,0	30,3	33,2	23,5	18,0	16,8
P/E adjusted	13,3	16,3	20,0	30,3	33,2	23,5	18,0	16,8
P/B	1,6	1,6	1,6	1,3	1,9	2,1	1,9	1,7
FINANCIAL ANALYSIS & CREDIT METRICS	2013	2014	2015	2016	2017	2018e	2019e	2020e
ROE adjusted (%)	14,0	10,3	8,9	4,8	6,0	9,3	11,4	11,1
Dividend yield (%)	0,7	0,9	0,8	0,8	0,6	0,7	0,8	0,9
EBITDA margin (%)	17,3	18,7	16,1	13,5	15,2	17,2	19,1	19,1
EBIT margin (%)	10,9	10,8	9,0	6,5	8,6	10,6	12,7	12,7
NIBD/EBITDA	(0,76)	1,46	3,78	1,80	1,65	1,18	0,74	0,43
EBITDA/Net interest	-	26,52	12,15	8,06	13,90	17,31	20,66	21,99

Atellica Solution, the catalyst for further upside

Driven by the innovative product portfolio as well as the healthy market, growth in the segments Imaging and Advanced Therapies should remain at a high level. As the ongoing successful launch of Atellica continues, the Diagnostics segment is expected to gain momentum. The catch-up potential here is the main key for further margin improvement. With a TP of EUR 39, we rate as a Hold.

Investment Case

Siemens Healthineers has a very strong market position, with either being #1 or #2 in its relevant markets. Driven by structural changes as aging, increasing population and market access in developing countries, as well as technological innovations, the company predicts an annual growth of mid-single digit for its markets.

We believe that Healthineers should be able to outperform the market growth in two of its segments Imaging and Advanced Therapies. However, in the Diagnostics segment the company has still a clear catch-up potential. To achieve at least market growth rates of c.5% in that segment from FY 2020e and onwards, the company has launched its new laboratory diagnostics automation platform Atellica Solution, which combines Healthineers' key competence in automation with high number of available tests. In FY 2018e, the ramp-up of Atellica was successful with order intake of around 1,000 units, reaching the upper end of the company's target.

The company is characterized by stable margins, steady growth profile and a high cash generation potential. The innovative product portfolio in the Imaging segment should support industry-leading margins of around 20% stable. The success of Atellica will be the tip of scale to boost adj. profit margin in the Diagnostics segment from 12% to 18%. The low beta profile and the high share of recurring revenues of c.60% make the future growth highly dependable.

EURm	2017	2018	2019e	2020e	2021e
Revenues	13,677	13,429	14,124	14,723	15,347
EBITDA	2,804	2,498	2,815	3,056	3,307
EBIT	2,232	1,968	2,283	2,522	2,772
EPS	1.38	1.27	1.53	1.70	1.88
EPS adj	1.54	1.51	1.69	1.85	2.01
DPS	-	0.70	0.88	0.98	1.08
EV/EBITDA		16.6	14.5	13.1	11.8
EV/EBIT		21.1	17.9	15.9	14.1
P/E adj		25.1	22.8	20.8	19.2
P/B		4.38	4.07	3.74	3.44
ROE (%)	49.2	21.3	16.8	17.2	17.5
Div yield (%)		1.8	2.3	2.5	2.8
Net debt	6,492	2,800	1,523	599	(343)

Source: Pareto



Target price (EUR)	39
Share price (EUR)	39

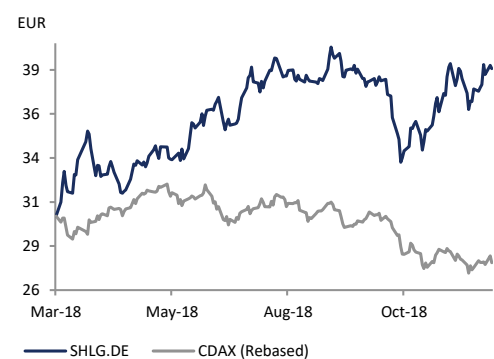
Forecast changes

%	2019e	2020e	2021e
Revenues	NM	NM	NM
EBITDA	NM	NM	NM
EBIT adj	NM	NM	NM
EPS reported	NM	NM	NM
EPS adj	NM	NM	NM

Source: Pareto

Ticker	SHLG.DE, SHL@GR
Sector	Healthcare
Shares fully diluted (m)	1,000.0
Market cap (EURm)	38,570
Net debt (EURm)	2,368
Minority interests (EURm)	3
Enterprise value 19e (EURm)	40,941
Free float (%)	15

Performance



Source: Factset

Analysts

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Cash conversion rate of around 100%, targeted payout of 50-60%

Company Profile

Siemens Healthineers is a global leader in the medical imaging business which accounts for c.60% of its revenues. In its second largest segment, Diagnostics (c.30% of group revenues), Healthineers launched its new flagship product, the Atellica Solution, a highly automated testing platform. In terms of global presence, Siemens Healthineers is evenly diversified across major geographies with 40% of revenues generated from Americas, 32% from EMEA, and 28% from Asia-Pacific regions. Healthineers has a strong recurring business with 56% of its revenues coming from consumables and services. Given its high cash generation potential, with a cash conversion rate of around 100%, the company aims to payout 50-60% of its future net income as dividends. Following the IPO in March 2018, Siemens AG holds an 85% stake in Healthineers.

Upcoming Triggers and Drivers

The next quarters should show an ongoing strong growth in the segments Imaging and Advanced Therapies, while growth in the Diagnostics segment should gain momentum. Following factors should support this development:

1. The very healthy market environment in Imaging, supported by Healthineers' product innovation
2. Order execution in the Advanced Therapies, since some projects experienced delays
3. Atellica installations should trigger consumable sales and growth momentum, as new order development is expected to remain high
4. Slight tailwind from FX, after FY 2018 was burdened by massive headwinds

For FY 2019e we expect revenues to grow by 5% yoy to EUR 14.14bn (consensus: EUR 14.09bn) and adj. profit to improve by 9% yoy to EUR 2.51bn (consensus: EUR 2.54bn), implying a profit margin of 17.8% (consensus: 18.1%).

Key Risks to the Investment Case

Lack of customer acceptance for Atellica and lower than expected deliveries, further installation delays at Advanced Therapies and further tariffs from the US and China, which could affect Imaging business, are currently the key risks to our investment case.

Next scheduled reporting: Q1 2019e results scheduled for January 29, 2019.

Valuation and recommendation

Given the expected steady revenue growth and margin improvement as well as the high cash flow profile, we believe the DCF model is the most suitable valuation method for the Siemens Healthineers shares. Furthermore, the DCF approach is the only valuation model, which should be able to reflect the expected upturn trend in the Diagnostics business. We think it is useful also to consider the SOTP valuation, as there is a clear difference between the segments.

Our DCF and SOTP blended TP of EUR 39 implies a PE of 25.6x for FY 2019e and an EV/EBITDA of 14.7x. We rate the SHL shares as a Hold.

Exhibit 5: DCF model

EUR m	Phase I					Phase II					Phase III
	2019e	2020e	2021e	2022e	2023e	2024e	2025e	2026e	2027e	2028e	
Revenues	14,124	14,723	15,347	16,044	16,726	17,417	18,116	18,822	19,533	20,224	
growth rate	5.2%	4.2%	4.2%	4.5%	4.3%	4.1%	4.0%	3.9%	3.8%	3.5%	
EBIT	2,274	2,513	2,763	3,003	3,235	3,391	3,551	3,715	3,881	4,045	
EBIT margin	16.1%	17.1%	18.0%	18.7%	19.3%	19.5%	19.6%	19.7%	19.9%	20.0%	
Tax	-660	-729	-801	-871	-938	-983	-1,030	-1,077	-1,125	-1,173	
Tax rate	29%	29%	29%	29%	29%	29%	29%	29%	29%	29%	
Depr. & Amort.	532	534	536	538	540	578	610	638	665	691	
% of sales	3.8%	3.6%	3.5%	3.4%	3.2%	3.3%	3.4%	3.4%	3.4%	3.4%	
Capex	-445	-465	-485	-505	-515	-573	-615	-649	-678	-708	
% of sales	3.2%	3.2%	3.2%	3.1%	3.1%	3.3%	3.4%	3.4%	3.5%	3.5%	
Change in WC & P	207	-94	-145	-123	33	33	34	34	34	33	
% of sales	-15%	0.6%	0.9%	0.8%	-0.2%	-0.2%	-0.2%	-0.2%	-0.2%	-0.2%	
Free Cash Flow	1,909	1,760	1,868	2,042	2,354	2,447	2,550	2,661	2,776	2,888	54,156
growth rate	nm	-7.8%	6.1%	9.3%	15.3%	3.9%	4.2%	4.3%	4.3%	4.0%	2.0%
Present Value FCF	1,767	1,516	1,498	1,524	1,636	1,582	1,535	1,491	1,448	1,402	26,289
PV Phase I	7,942				Risk free rate	3.50%		Targ. equity ratio	80%		
PV Phase II	7,458				Premium Equity	5.00%		Beta	1.0		
PV Phase III	26,289				Premium Debt	1.00%		WACC	7.44%		
Enterprise value	41,689				Sensitivity	Growth in phase III					
- Net Debt (Cash)	300					1.0%	1.5%	2.0%	2.5%	3.0%	
- Pension Provisions	145				6.70%	42.4	45.1	48.4	52.5	57.7	
- Minorities & Peripherals	20				7.07%	39.6	41.9	44.7	48.0	52.2	
+ MV of financial assets					WACC	7.44%	37.2	39.1	41.5	44.3	47.7
- Paid-out dividends for last FY	-230				7.81%	35.0	36.7	38.6	41.0	43.9	
+/- Other EV items					8.18%	33.0	34.5	36.2	38.2	40.6	
Equity value	41,454										
Number of shares	1,000										
Value per share (€)	41.5										
Current Price (€)	38.6										
Upside	7%										

Source: FactSet, Pareto

Exhibit 6: SOTP valuation

EUR m	Adj. EBIT 2019e	Applied multiples	Implied EV	Adj. EBIT 2020e	Applied multiples	Implied EV
Imaging	1,655	15.3	25,301	1,782	13.7	24,413
Diagnostics	599	18.5	11,097	682	15.8	10,773
Advanced Therapies	300	13.4	4,014	318	11.7	3,733
Corporate	-45	16.2	-729	-45	14.5	-653
Consolidated EV			39,682			38,266
Net debt			2,368			1,444
Equity Value			37,314			36,822
Number of shares			1,000			1,000
Fair value per share			37.31			36.82
Fair value per share, average					37.07	

Source: FactSet, Pareto

PROFIT & LOSS (fiscal year) (EURm)	2014	2015	2016	2017	2018	2019e	2020e	2021e
Revenues	12,429	12,936	13,547	13,677	13,429	14,124	14,723	15,347
EBITDA	2,413	2,536	2,714	2,804	2,498	2,815	3,056	3,307
Depreciation & amortisation	(2,413)	(573)	(597)	(581)	(537)	(541)	(543)	(545)
EBIT	-	1,972	2,123	2,232	1,968	2,283	2,522	2,772
Net interest	2,027	(96)	(205)	(255)	(169)	(111)	(109)	(105)
Other financial items	-	-	-	-	-	-	-	-
Profit before taxes	2,027	1,876	1,918	1,977	1,799	2,172	2,413	2,667
Taxes	-	(584)	(590)	(581)	(515)	(630)	(700)	(773)
Minority interest	-	15	17	17	19	17	17	17
Net profit	-	1,277	1,311	1,379	1,265	1,525	1,697	1,876
EPS reported	-	1.28	1.31	1.38	1.27	1.53	1.70	1.88
EPS adjusted	-	1.46	1.50	1.54	1.51	1.69	1.85	2.01
DPS	-	-	-	-	0.70	0.88	0.98	1.08
BALANCE SHEET (EURm)								
Tangible non current assets	-	1,305	1,524	1,566	1,919	1,830	1,744	1,661
Other non-current assets	-	10,134	10,142	9,769	10,036	10,038	10,055	10,087
Other current assets	-	3,889	4,471	4,565	5,888	5,523	5,637	5,807
Cash & equivalents	-	73	206	184	1,915	3,192	4,116	5,058
Total assets	-	15,401	16,343	16,084	19,758	20,583	21,552	22,613
Total equity	-	3,728	2,407	3,242	8,676	9,484	10,287	11,171
Interest-bearing non-current debt	-	6,459	7,574	6,676	4,715	4,715	4,715	4,715
Interest-bearing current debt	-	-	-	-	-	-	-	-
Other Debt	-	3,969	4,230	4,434	5,522	5,539	5,705	5,883
Total liabilities & equity	-	15,401	16,343	16,084	19,758	20,583	21,552	22,613
CASH FLOW (EURm)								
Cash earnings	-	4,093	2,049	1,986	2,162	2,215	2,360	2,548
Change in working capital	-	(2,192)	(200)	(11)	(567)	207	(94)	(145)
Cash flow from investments	-	(356)	(424)	(466)	(530)	(445)	(465)	(485)
Cash flow from financing	-	4,621	(181)	(1,530)	(488)	(700)	(877)	(976)
Net cash flow	-	73	133	(22)	549	1,277	924	942
CAPITALIZATION & VALUATION (EURm)								
Share price (EUR end)	-	-	-	-	37.9	38.6	38.6	38.6
Number of shares end period	-	1,000	1,000	1,000	1,000	1,000	1,000	1,000
Net interest bearing debt	-	6,386	7,368	6,492	2,800	1,523	599	(343)
Enterprise value	-	-	-	-	41,540	40,941	40,000	39,041
EV/Sales	-	-	-	-	3.1	2.9	2.7	2.5
EV/EBITDA	-	-	-	-	16.6	14.5	13.1	11.8
EV/EBIT	-	-	-	-	21.1	17.9	15.9	14.1
P/E reported	-	-	-	-	29.9	25.3	22.7	20.6
P/E adjusted	-	-	-	-	25.1	22.8	20.8	19.2
P/B	-	-	-	-	4.4	4.1	3.7	3.4
FINANCIAL ANALYSIS & CREDIT METRICS								
ROE adjusted (%)	-	78.6	48.8	54.6	25.3	18.6	18.7	18.8
Dividend yield (%)	-	-	-	-	1.8	2.3	2.5	2.8
EBITDA margin (%)	19.4	19.6	20.0	20.5	18.6	19.9	20.8	21.6
EBIT margin (%)	-	15.2	15.7	16.3	14.7	16.2	17.1	18.1
NIBD/EBITDA	-	2.52	2.71	2.32	1.12	0.54	0.20	(0.10)
EBITDA/Net interest	-	26.42	13.24	11.00	14.78	25.36	28.04	31.50

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Appendix A

Disclosure requirements pursuant to the Norwegian Securities Trading Regulations section 3-10 (2) and section 3-11 (1), letters a-b

The below list shows companies where Pareto Securities AS - together with affiliated companies and/or persons – own a portion of the shares exceeding 5 % of the total share capital in any company where a recommendation has been produced or distributed by Pareto Securities AS.

Companies	No. of shares	Holdings in %	Companies	No. of shares	Holdings in %
Helgeland Sparebank	1.988.203	9,53%	SpareBank 1Østfold Akersl	1.129.560	9,12%
Pareto Bank ASA	10.839.382	18,49%	Sparebanken Vest	4.506.060	7,63%

Pareto Securities AS or its affiliates own as determined in accordance with Section 13(d) of the US Exchange Act, 1 % or more of the equity securities of:

Companies	No. of shares	Holdings in %	Companies	No. of shares	Holdings in %
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NHST Media Group AS	21.475	1,85%	SpareBank 1Østfold Akersl	1.129.560	9,12%
Pareto Bank ASA	10.839.382	18,49%	Sparebanken Møre	311.739	3,15%
Selvaag Bolig ASA	2.179.147	2,32%	Sparebanken Sør	460.589	2,94%
SpareBank 1BV	1.549.440	2,46%	Sparebanken Vest	4.506.060	7,63%
SpareBank 1Nord-Norge	1.129.459	1,12%			

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Please find below an overview of material interests in shares held by employees in Pareto Securities AS, in companies where a recommendation has been produced or distributed by Pareto Securities AS. "By material interest" means holdings exceeding a value of NOK 50 000.

Company	Analyst holdings*	Total holdings	Company	Analyst holdings*	Total holdings	Company	Analyst holdings*	Total holdings
AF Gruppen	0	1.675	Golden Ocean Group	0	1.824	Prosafe	0	5.984
Aker	0	514	Grieg Seafood	0	770	Protector Forsikring	0	14.285
Aker BP	0	860	Helgeland Sparebank	0	1.700	REC Silicon	0	159.908
Aker Solutions	0	2.085	Höegh LNG	0	8.703	SailMar	0	130
AKVA Group	0	1.500	Ice Group AS	0	55.500	Sandnes Sparebank	0	18.032
Archer	0	73.520	Jæren Sparebank	0	500	Scatec Solar	0	35.635
Atea	0	450	Komplett Bank	0	99.357	Seadrill	0	6.615
Austevoll Seafood	0	5.780	Kongsberg Gruppen	0	4.010	Selvaag Bolig	0	10.000
Avance Gas	0	34.201	Lerøy Seafood	0	33.795	SpareBank 1BV	0	10.000
Axactor	0	21.647	Marine Harvest	0	1.864	SpareBank 1Nord-Norge	0	30.000
Bonheur	0	44.509	Monobank	0	1.355.000	SpareBank 1SMN	0	16.590
Borr Drilling	0	4.415	NEXT Biometrics	0	1.730	SpareBank 1SR-Bank	0	39.187
BWLPG	0	5.569	Nordic Semiconductor	0	6.000	SpareBank 1Østlandet	0	2.891
DNB	0	35.822	Norsk Hydro	0	112.501	Sparebanken Møre	0	6.550
DNO	0	24.392	Northern Drilling	0	2.099	Sparebanken Sør	0	43.280
DOF	0	138.498	Norwegian Air Shuttle	0	3.172	Sparebanken Øst	0	3.000
Entra	0	14.362	Norwegian Property	0	150.000	Storebrand	0	5.005
Equinor	0	10.266	Ocean Yield	0	31.967	Subsea 7	0	7.351
Europris	0	14.510	Odffell Drilling	0	8.731	Telenor	0	2.272
Faroe Petroleum	9.600	9.600	Orkla	0	23.746	TGS-NOPEC	0	2.000
Flex LNG	0	13.352	Panoro Energy	0	5.670	XXL	0	7.270
Frontline	0	13.943	Pareto Bank	0	963.509	Yara International	0	19.079
Gjensidige Forsikring	0	8.547	Petroleum Geo-Services	0	57.884	Zenterio	0	78.865

This overview is updated monthly (last updated 21.11.2018).

*Analyst holdings refer to positions held by the Pareto Securities AS analyst covering the company.

Appendix B

Disclosure requirements pursuant to the Norwegian Securities Trading Regulation § 3-11, letters e-f, ref the Securities Trading Act Section 3-10

Overview over issuers of financial instruments where Pareto Securities AS have prepared or distributed investment recommendation, where Pareto Securities AS have been lead manager/co-lead manager or have rendered publicly known not immaterial investment banking services over the previous 12 months:

Africa Energy	Floatel	Okea AS
Akva Group	Fortum	Pandion Energy
Arnarlax	Genel Energy	Pareto Bank
Atlantic Sapphire AS	Gfinity Plc	Petro Matad Limited
Avida Holding AB	Gulf Keystone Petroleum	Petrolat LLC
Bank Norwegian	Hertha BSC GmbH	Pioneer Public Properties Finland Oy
Borealis Finance	Hunter Group	Point Resources AS
Borr Drilling Limited	Idavang A/S	Quant AB
Brado AB	Instabank	Sakthi Global Auto Holdings
Camanchaca	Komplett Bank	Sand Hill Petroleum
DNO ASA	McDermott International	SAS
DOF ASA	MMA Offshore	Scatec Solar
Echo Energy	Monobank ASA	Scorpio Tankers
Eco Atlantic Oil and Gas	Nemaska Lithium	Shamran
Eidesvik Offshore	Northern Drilling	Siccar Point Energy
Eland Oil & Gas	Northmill Group AB	SL Bidco
Embarcadero Maritime II LLC	Norwegian Air Shuttle	SpareBank 1 Buskerud-Vestfold
Faroe Petroleum	Ocean Yield	Sparebanken Vest
FFS Bidco	Odfjell	Union Maritime Limited
Filo Mining Corp	Odfjell Drilling	Zwipe AS
Flex LNG		

This overview is updated monthly (this overview is for the period 31.10.2017 – 31.10.2018).

Appendix C

Disclosure requirements pursuant to the Norwegian Securities Trading Regulation § 3-11(4)

Distribution of recommendations

Recommendation	% distribution
Buy	76%
Hold	20%
Sell	4%

Distribution of recommendations (transactions*)

Recommendation	% distribution
Buy	100%
Hold	0%
Sell	0%

* Companies under coverage with which Pareto Securities Group has on-going or completed public investment banking services in the previous 12 months

This overview is updated monthly (last updated 21.11.2018).

Appendix D

This section applies to research reports prepared by Pareto Securities AB.

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The Pareto Group has material holdings of other financial instruments than shares issued by the following companies included in Pareto Securities AB's research coverage universe: None

Disclosure of assignments and mandates

Overview over issuers of financial instruments where Pareto Securities AB has prepared or distributed investment recommendation, where Pareto Securities AB has been lead manager or co-lead manager or has rendered publicly known not immaterial investment banking services over the previous twelve months:

Aspire	Green Landscaping Holding	Powercell	Sedana Medical
Cibus Nordic Real Estate	Lehto Group	Magnolia Bostad	Shamara Petroleum
Climeon	Organoclick	Scibase	Vostok New Ventures

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Byggmästare Anders J Ahlström	Delarka Holding	SciBase Holding	Vostok Emerging Finance
Byggpartner i Dalarna	International Petroleum Corporation	Sedana Medical	

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Appendix E

Disclosure requirements pursuant to the Norwegian Securities Trading Regulation § 3-11, letter d, ref the Securities Trading Act Section 3-10

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Demire	Logwin *	RIB Software *	Viscom *
Epigenomics AG*	Manz AG *	S&T AG *	windeln.de
Euromicron AG *	MAX Automation SE *	Schaltbau Holding AG	
Eyemaxx Real Estate	Merkur Bank	SCOUT24	

* The designated sponsor services include a contractually agreed provision of research services.

Appendix F

Disclosure requirements pursuant to the Norwegian Securities Trading Regulation § 3-11, letter g, ref the Securities Trading Act Section 3-10

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BB Biotech	Merkur Bank	Schaltbau Holding AG	
Eyemaxx Real Estate	MOBOTIX AG	Siegfried Holding AG	

This overview is updated monthly (last updated 05.12.2018).