Formycon (FYB GY) | Pharma/Healthcare

May 11, 2023

FY 2022 results - first license sales with FYB201

Recently, Formycon released FY 2022 results: Sales grew by 16% y-oy to EUR 43m, slightly above our expectations. While the majority of sales were remunerated R&D activities (mainly FYB201 & FYB203), Formycon generated first license sales with FYB201. While the contribution from FYB201 was rather small (EUR 330k), this still marks a major milestone in the history of Formycon. The EBITDA amounted to EUR -16m (in line with expectations), driven by continuous expenses for FYB202, as well as further investments into the pipeline. Cash & equivalents declined from EUR 25m in FY 2021 to EUR 10m in FY 2022. However, please note that Formycon carried out a capital increase in February in the amount of EUR 70m, considerably strengthening the balance sheet and cash position. For FY 2023, Formycon expects a significant increase in sales (commercialization of FYB201 & milestone payments for FYB202) in combination with an EBITDA at prior-year level - in line with our expectations. We continue to believe that with the introduction of FYB202 and FYB203 in FY 2025, profits should increase considerably - e.g. we anticipate an at least double digit move into the profit zone. Positive news flow was recently also announced for FYB202 - where Formycon successfully concluded the extended Phase I clinical study. The regulatory submission for EU and the US is planned for Q3. We are confident that FYB202 can be launched soon after patent expiration in Europe. With Fresenius Kabi, Formycon has also secured a strong marketing partner in our view. Overall, we consider the prospects to be promising.

Valuation: Based on minor model adjustments and the roll-over of our model (rNPV), we derive a new PT of EUR 114.

Fundamentals (in EUR m) ¹	2020	2021	2022	2023e	2024e	2025e
Sales	34	37	42	71	110	257
EBITDA	-5	-12	-16	-17	9	95
EBIT	-6	-13	-18	-20	6	90
EPS adj. (EUR)	-0.54	-1.22	2.62	-1.38	0.14	4.00
DPS (EUR)	0.00	0.00	0.00	0.00	0.00	0.00
BVPS (EUR)	6.16	5.08	26.00	25.22	25.36	29.36
Net Debt incl. Provisions	-42	-25	33	-11	-13	-79
Ratios ¹	2020	2021	2022	2023e	2024e	2025e
EV/EBITDA	-112.9	-50.5	-76.5	-65.6	128.2	11.3
EV/EBIT	-94.8	-47.0	-68.8	-57.4	203.6	12.0
P/E adj.	-98.8	-48.4	33.0	-52.3	504.8	18.0
Dividend yield (%)	0.0	0.0	0.0	0.0	0.0	0.0
EBITDA margin (%)	-14.1	-33.5	-37.5	-24.4	8.1	37.1
EBIT margin (%)	-16.7	-36.1	-41.7	-27.9	5.1	34.8
Net debt/EBITDA	8.8	2.1	-2.1	0.6	-1.4	-0.8
PBV	8.6	11.6	3.3	2.9	2.8	2.5

¹Sources: Bloomberg, Metzler Research

Buy

unchanged

Price*

EUR 72.00

Price target

EUR 114.00 (124.00)

* XETRA trading price at the close of the previous day unless stated otherwise in the Disclosures

Market Cap (EUR m) ¹	1,155
Enterprise Value (EUR m) ¹	1,144
Free Float (%) ¹	39.7



Performance (in %)1	1m	3m	12m
Share	8.4	-8.2	15.9
Rel. to Prime All Share	6.9	-10.9	3.1
Changes in estimates (in %)1	2023e	2024e	2025e
Sales	0.0	-8.3	0.0
EBIT	0.0	-72.7	0.0
FPS	-65.6	-85.2	0.0

Sponsored Research



Author: Tom Diedrich
Financial Analyst Equities
+49 69 2104-239
tom.diedrich@metzler.com

Review of FY 2022 results

Recently, Formycon released its FY 2022 results. Key highlights were the following:

- Sales (which include in addition to Formycon AG also the fully consolidated subsidiaries Formycon Project 201 GmbH, FYB202 Project GmbH, Formycon Project 203 GmbH, Bioeq GmbH and the 50% stake in Bioeq AG) in FY 2022 grew by 16% y-o-y to EUR 43m, slightly above our expectations (M'e: EUR 38m).
- While sales in H1/22 were only remunerated research & development activities (mainly FYB201 & FYB203), H2/22 sales included biosimilar license sales for the first time. As a reminder: The U.S. Food and Drug Administration (FDA) approved FYB201 on August 3 2022 as the first biosimilar interchangeable with Lucentis (and for all five indications) in the US. Approval by the European Commission followed on August 26. While the contribution from FYB201 was rather small (EUR 330k), this still marks a major milestone in the history of Formycon. In this context, we also appreciate that Formycon now provides relevant key (financial) figures on a segment level (e.g. for the different pipeline products).
- The FY 2022 EBITDA amounted to EUR -16m, fully in line with our expectations (M'e: EUR -16m). The negative EBITDA was driven by continuous expenses for FYB202 (biosimilar candidate for Stelara pharmacokinetics Phase I study the submissions for FYB202 are planned for Q3/23), as well as further investments into biosimilars such as FYB206 (biosimilar candidate for Keytruda), FYB208 (undisclosed) and FYB209 (undisclosed).
- Depreciation & amortization in FY 2022 amounted to EUR 2m consequently the EBIT came in at EUR -18m.
- The FY 2022 net income of EUR 36m was strongly impacted by the ATHOS transaction and included finance income in the amount of EUR 54m. As part of the ATHOS transaction, Formycon exited as shareholder of the FYB202 GmbH & Co. KG and realized a non-cash gain of EUR EUR 90m. In addition, a non-cash financial expense of around EUR 23m was recognized from the fair value measurement of the contingent purchase price payments associated with the transaction. Finally, the pro-rata loss of Bioeq AG in the amount of EUR 13m was also recognized in the financial result. Adjusting for these effects, the net income would have amounted to EUR -18m.
- Cash & cash equivalents declined from EUR 25m in FY 2021 to EUR 10m in FY 2022, reflecting continuous investments into the pipeline. However, please note in this context that Formycon carried out a capital increase in February this year in the amount of EUR 70m (910k shares / 6% of share capital), considerably strenghtening the balance sheet and cash position. Formycon plans to use the proceeds for the further development of FYB202, FYB206, FY208 and FYB209 and the expansion of the biosimilar pipeline. Hence, the liquidity and financial position remains stable.

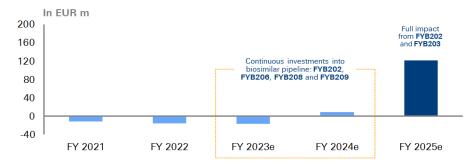
First (minor) sale	s contribution	from	FYB201	in FY	2022
EUR m					

	FY 2020	H1/21	H2/21	FY 2021	H1/22	H2/22	FY 2022	FY 2022 Guidance	Metzler FY 2023e	FY 2023 Guidance
Sales	34	20	17	37	18	25	43	Above last year's level	71	Significant increase
Growth y-o-y (in %)	3	23	-6	8	-13	49	16		68	n/a
EBITDA	-5	-10	-3	-12	-8	-8	-16		-17	Previous year level
Margin %	-14	-48	-16	-34	-43	-33	-37		-24	n/a
EBIT	-6	-10	-3	-13	-9	-9	-18		-20	n/a
Margin %	-17	-50	-19	-36	-48	-37	-42		-28	n/a
Net Income	-6	-10	-3	-13	80	-44	36		-22	Previous year level*
Margin %	-17	-50	-19	-36	455	-177	85		-31	n/a
Cash & equivalents	42	34	25	25	18	10	10	n/a	54	n/a

^{*} excluding the non-recurring gain from Formycon's former investment participation in the FYB 202 GmbH & Co. KG partnership Source: Metzler Research, company data

- Formycon also released its outlook for FY 2023. The company expects a significant increase of sales vs. FY 2022, mainly resulting from the commercialization of FYB201 as well as the anticipated milestone payments for FYB202. We forecast sales of EUR 71m in total with positive contribution of the above with around EUR 43m.
- In addition, the FY 2022 EBITDA is expected to remain at prior-year level also in line with our expectations. In FY 2023, Formycon will continue to invest into the own biosimilar pipeline e.g. FYB202, FYB206, FYB208 and finally, FYB209. Accordingly, we forecast a negative EBITDA of EUR -17m for FY 2023. However, with the introduction of FYB202 and FYB203 in FY 2025, profits should increase considerably:

Expected earnings development (EBITDA)



Sources: Company data, Metzler Research

Recent news flow on FYB202

Recently, Formycon also announced the successful conclusion of the extended Phase I clinical study of FYB202.

As a reminder: FYB202 is Formycon's biosimilar candidate for Stelara, developed by Janssen Pharmaceutical (subsidiary of Johnson & Johnson) and marketed since 2009. Stelara was originally used in the treatment of psoriasis, an inflammatory, non-infectious skin disease. In the meantime, however, Stelara was also approved for Crohn's disease (2016) and Ulcerative Colitis (2019). Patents expire in September 2023 in the US and around one year later in Europe. Global sales of Stelara amounted to USD 9.7bn in FY 2022. Stelara thus, clearly belongs to the global blockbuster medications.

Following the successful conclusion of Phase I, Formycon plans the regulatory submissions for Europe and the US in Q3 this year. Assuming the successful approval by the health agencies, Fresenius Kabi will commercialize FYB202 in the key global markets. Fresenius Kabi is a good strategic fit in our view given its strong access to hospitals.

Due to the attractive end market, other pharmaceutical companies are also developing a biosimilar for Stelara (see table below for a detailed list). A main competitior in this field, Alvotech already announced in the beginning of this year, that both, the FDA and EMA, have accepted a Marketing Authorization Application (MAA) for AVT04 (Alvotech's biosimilar candidate for Stelara). Approval could be granted as early as the second half of the year. Formycon's FYB202 will therefore most likely not be the first available biosimilar for Stelara. Nevertheless, FYB202 should at least be launched soon after the expiration of the EU patents in summer 2024. With Fresenius Kabi, Formycon has also secured an attractive marketing partner offering a strong network. We are thus, confident that FYB202 will quickly gain market share following approval.

Competitive landscape for Stelara (Ustekinumab)

Company	Country	Stage of development	Remarks
Formycon		Extended Phase I clinical study and Phase III study successfully concluded	European and US regulatory submissions are planned for Q3/23. Provided successfull approval, Fresenius Kabi will commercialize the product in global key markets
Alvotech	Iceland	FDA and EMA have accepted a biologics application	Pipeline of 4 biosimilars - partnership with Fuji Pharma (commercialization in Japan), Stada (commercialization in Europe), and Teva Pharmaceuticals (commercialization in US)
Bio-Thera	China	Phase III in progress	Developing several additional biosimilars including a biosimilar to Humira which is approved by the NMPA in China
Celltrion	South Korea	Phase III completed in May 2022	Pipeline of 5 biosimilars. Hikma and Celltrion signed exclusive licensing agreement for ustekinumab
NeuClone	Australia	Phase I completed in Oct 2020	Company has total pipeline of 8 biosmilars - developed with Serum Institute in India
Amgen	USA	Phase III completed Apr 2022, filed BLA in Nov 2022	Company has total pipeline of 3 biosimilars
Samsung Bioepis	South Korea	Phase III completed Dec 2022	Company has total pipeline of 4 biosimilars

Note: Further competitors may exist but did not publish their stage of development yet Sources: Company data, Metzler Research

Valuation - Risk-adjusted NPV approach

We continue to value Formycon shares based on our risk-adjusted net present value approach. We have defined probabilities for each stage of development, thus, being able to value each of Formycon's pipeline products separately. We keep our main parameters in our model unchanged:

- WACC: We are using a discount rate (WACC) of 12.7% which is based on the following factors: Risk-free rate of 2.0%, market risk premium of 6.5% and Beta of 1.6.
- Terminal growth rate: For the terminal value calculation of each project, we are using a terminal growth rate of -10%. Overall, we assumed that after ~10 years of marketing of the biosimilar, the overall life cycle of the product will be impacted by alternative treatment methods, leading to a gradual decline of sales.

rNPV Analysis - Summary

Pipeline	Value / Costs
rNPV of FYB201 US (EURm)	175
rNPV of FYB201 Europe (EURm)	304
rNPV of FYB202 US (EURm)	714
rNPV of FYB202 Europe (EURm)	411
rNPV of FYB203 US (EURm)	268
rNPV of FYB203 Europe (EURm)	140
rNPV of FYB206 US (EURm)	807
rNPV of FYB206 Europe (EURm)	402
rNPV of FYB207 US (EURm)	85
rNPV of FYB207 Europe (EURm)	48
Total rNPV (EURm)	3,353
Unallocated costs* (EURm)	1,540
Enterprise Value (EURm)	1,813
Net debt (cash) (EURm)	-11
Equity Value (EURm)	1,824
Shares outstanding (m)	16
Target Price (EUR)	114

^{*} including COGS, Personnel, Taxes and Capex Source: Metzler Research

Key Data

Company profile

CEO: Dr. Stefan Glombitza CFO: Enno Spillner Martinsried (Planegg)

Formycon, headquartered in Martinsried-Planegg (Germany) is a leading developer of biosimilars with a focus on opthalmology and immunology. The current pipeline includes four biosimilars: FYB201 (biosimilar for Lucentis), FYB202 (biosimilar for Stelara), FYB203 (biosimilar for Eylea) and FYB206 (biosimilar for Keytruda). In addition, with FYB207, Formycon has developed an innovative antiviral drug for the treatment of Covid-19 based on a long-acting ACE2-lgG-Fc fusion molecule.

Major shareholders

ATHOS (26.7%), Wendeln & Cie. (14.9%), Active Ownership Corporations (6.7%), DSP Beteiligungsgesellschaft (5.5%), Founder and management (6.5%)

Key figures												
P&L (in EUR m)	2020	%	2021	%	2022	%	2023e	%	2024e	%	2025e	%
Sales	34	3.2	37	8.0	42	15.0	71	68.1	110	54.0	257	133.8
EBITDA	-5	-253.6	-12	-157.5	-16	-28.6	-17	-9.4	9	151.1	95	970.9
EBITDA margin (%)	-14.1	-242.5	-33.5	-138.4	-37.5	-11.8	-24.4	34.9	8.1	133.2	37.1	358.0
EBIT	-6	-152.0	-13	-132.8	-18	-33.0	-20	-12.4	6	128.2	90	n.m.
EBIT margin (%)	-16.7	-144.1	-36.1	-115.6	-41.7	-15.7	-27.9	33.1	5.1	118.3	34.8	582.4
Financial result	-0	-302.7	-0	-57.0	54	n.m.	-2	-103.9	-3	-28.3	-4	-40.3
EBT	-6	-153.7	-14		37	371.1	-22		3	113.0	186	n.m.
Taxes	-0	n.m.	0	126.1	-1	n.m.	0	100.0	1	n.a.	21	n.m.
Tax rate (%)	1.6	n.a.	-0.2	n.a.	-1.7	n.a.	0.0	n.a.	20.0	n.a.	11.5	n.a.
Net income	-6	-148.8	-14	-135.6	37	375.1	-22	-159.3	2	110.4	165	n.m.
Minority interests	0	n.a.	0	n.a.	0	n.a.	5	n.a.	5	0.0	5	0.0
Net Income after minorities	-6	-158.7	-13	-127.4	36	367.1	-22		2	110.4	64	n.m.
Number of shares outstanding (m)	11	10.5	11	0.0	14	24.2	16	17.0	16	0.0	16	0.0
EPS adj. (EUR)	-0.54	-134.2		-127.4	2.62	315.1	-1.38	-152.4	0.14	110.4	4.00	n.m.
DPS (EUR)	0.00	n.a.	0.00	n.a.	0.00	n.a.	0.00	n.a.	0.00	n.a.	0.00	n.a.
Dividend yield (%)	0.0	n.a.	0.0	n.a.	0.0	n.a.	0.0	n.a.	0.0	n.a.	0.0	n.a.
Cash Flow (in EUR m)	2020	%	2021	%	2022	%	2023e	%	2024e	%	2025e	%
Gross Cash Flow	-5	-244.7	-12	-163.0	-15	-23.4	-17	-13.7	8	147.8	74	787.6
Increase in working capital	-1	n.a.	-1	n.a.	1	n.a.	-3	n.a.	-0	n.a.	0	n.a.
Capital expenditures	1	14.1	1	5.6	27	n.m.	2	-90.7	3	10.0	4	30.9
D+A/Capex (%)	79.2	n.a.	77.3	n.a.	6.7	n.a.	100.0	n.a.	120.0	n.a.	164.3	n.a.
Free cash flow (Metzler definition)	-5	-83.1	-12	-132.2	-43	-249.6	-17	61.0	6	134.7	70	n.m.
Free cash flow yield (%)	-0.9	n.a.	-1.9	n.a.	-3.7	n.a.	-1.5	n.a.	0.5	n.a.	6.1	n.a.
Dividend paid	0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Free cash flow (post dividend)	0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Balance sheet (in EUR m)	2020	%	2021	%	2022	%	2023e	%	2024e	%	2025e	%
Assets	76	41.2	66	-12.3	761	n.m.	808	6.1	810	0.3	873	7.8
Goodwill	0	-36.3	0	0.0	488	n.m.	488	0.0	488	0.0	488	0.0
Shareholders' equity	68	41.1	56	-17.6	357	535.9	404	13.4	407	0.6	471	15.8
Equity/total assets (%)	90.0	n.a.	84.5	n.a.	46.8	n.a.	50.1	n.a.	50.2	n.a.	53.9	n.a.
Net Debt incl. Provisions	-42	-88.6	-25	40.0	33	229.4	-11	-133.7	-13	-14.1	-79	-521.9
thereof pension provisions	0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Gearing (%)	-62.3	n.a.	-45.3	n.a.	9.2	n.a.	-2.7	n.a.	-3.1	n.a.	-16.7	n.a.
Net debt/EBITDA	8.8	n.a.	2.1	n.a.	-2.1	n.a.	0.6	n.a.	-1.4	n.a.	-0.8	n.a.

Sources: Bloomberg, Metzler Research

Disclosures

Recommendation history

Recommendations for each financial instrument or issuer - mentioned in this document - published by Metzler in the past twelve months

Date of dissemi- nation	Metzler recomm Previous	endation * Current	Current price **	Price target * Author ***
Issuer/Financial I	nstrument (ISIN)	Formycon (DE0	00A1EWVY8)	
20.01.2023	Buy	Buy	85.80 EUR	124.00 EUR Diedrich, Tom
31.10.2022	Buy	Buy	74.20 EUR	87.00 EUR Diedrich, Tom
19.09.2022	Buy	Buy	70.80 EUR	85.00 EUR Diedrich, Tom
07.09.2022	Buy	Buy	71.10 EUR	85.00 EUR Diedrich, Tom
19.05.2022	Buy	Buy	69.50 EUR	88.00 EUR Diedrich, Tom

- * Effective until the price target and/or investment recommendation is updated (FI/FX recommendations are valid solely at the time of publication)
- ** XETRA trading price at the close of the previous day unless stated otherwise herein
- *** All authors are financial analysts

Formycon

13. Metzler, a company affiliated with Metzler and/or a person that has worked on compiling this report has reached an agreement with the issuer relating to the production of investment recommendations.

Compiled: May 11, 2023 07:56 AM CEST Initial release: May 11, 2023 07:56 AM CEST



Disclaimer

This document has been prepared by B. Metzler seel. Sohn & Co. AG (Metzler) and is addressed exclusively to eligible counterparties and professional clients. It is thus not suitable for retail clients.

This document is based on information which is generally available and which Metzler believes to be fundamentally reliable. Metzler has not verified the accuracy or completeness of the information, however, and thus provides no warranty or representation in respect of the accuracy or completeness of the information, opinions, estimates, recommendations and forecasts contained in this document. Neither Metzler nor any of its shareholders or employees are liable for damage or any other disadvantage suffered due to inaccurate or incomplete information, opinions, estimates, recommendations or forecasts as a result of the distribution or use of or in connection to this document.

This document does not constitute or form part of any offer to buy or solicitation of any offer to buy securities, other financial instruments or other investment instruments. Neither does it take account of the particular investment objectives, financial situation or needs of individual recipients nor does it constitute personal investment advice. Metzler does not act as investment advisor or portfolio manager in preparing and publishing this document. Recipients must make their own investment decisions in accordance with their specific financial situation and investment objectives, based on independent processes and analyses, taking sales or other prospectuses, information memoranda and other investor information into account, and consult with an independent financial advisor where necessary. Recipients should note that any information regarding past performance should not be relied upon as an indication of future performance and should therefore not form the basis of any decision whether or not to invest in any financial instruments.

The information, opinions, estimates, recommendations and forecasts contained in this document reflect the personal views of the author at the time of publication on the financial instruments or issuers that form the subject of this document and do not necessarily reflect the opinions of Metzler, the issuer or third parties. They may also be subject to change on account of future events and developments. Metzler has no obligation to amend, supplement or update this document or to otherwise notify recipients in the event that any information, opinions, estimates, recommendations or forecasts stated herein should change or subsequently become inaccurate, incomplete or misleading. The model calculations contained in this document, if any, are examples showing the possible performance and are based on various assumptions (e.g. regarding earnings and volatility). The actual performance may be higher or lower, depending on market trends and on the correctness of assumptions underlying the model calculations. Accordingly, actual performance cannot be guaranteed, warranted or assured.

Recipients should assume that (a) Metzler is entitled to acquire orders for investment banking, securities or other services from or with companies which form the subject of research publications and that (b) analysts who were involved in preparing research publications may, within the scope of regulatory laws, be indirectly involved in the acquisition of such orders.

Metzler and its employees may hold positions in securities of the companies analysed or in other investment objects or may conduct transactions with such securities or investment objects.

This document is provided for information purposes only and may not be copied, duplicated, forwarded to third parties or otherwise published, in whole or in part, without Metzler's written consent. Metzler reserves all copyrights and rights of use, including those relating to electronic media. Insofar as Metzler provides hyperlinks to websites of the companies cited in research publications, this does not mean that Metzler confirms, recommends or warrants any data contained on the linked sites or data which can be accessed from such sites. Metzler accepts no liability for links or data, nor for any consequences which may arise as a result of following the links and/or using the data.

This document is subject to the laws of the Federal Republic of Germany. Venue of jurisdiction for any disputes shall be Frankfurt am Main, Germany.

By accepting this document the recipient declares his/her agreement with the above provisions.

Information in accordance with Regulation (EU) No. 596/2014, Delegated Regulation (EU) No. 2016/958 and section 85 (1) of the German Securities Trading Act (Wertpapier-handelsgesetz)

Persons responsible for this document

The company responsible for preparing this document is B. Metzler seel. Sohn & Co. AG, Untermainanlage 1, 60329 Frankfurt am Main, Germany, which is subject to supervision by the German Federal Financial Supervisory Authority (*Bundesanstalt für Finanzdienstleistungsaufsicht*; BaFin), Marie-Curie-Straße 24–28, 60439 Frankfurt/Main, Germany, and by the European Central Bank (ECB), Sonnemannstraße 20, 60314 Frankfurt/Main, Germany.

Key information sources

The sources of information referred to when preparing research publications include publications by national and international media, the European Central Bank and other public authorities, information services (such as Reuters and Bloomberg), the financial press, published statistics, information published by rating agencies, annual reports and other information provided by the issuers.

Valuation criteria and methods

Valuations are based on standard and acknowledged methods of fundamental and technical analysis (e.g. DCF model, peer-group analysis, sum-of-the-parts model, relative-value analysis). The valuation models are affected by macro-economic values such as interest rates, exchange rates, commodities prices and economic performance, as well as by market sentiments. Detailed information on the valuation principles and methods used by Metzler and the assumptions on which they are based is available at: www.metzler.com/disclaimer-capital-markets-en.

Sensitivity of valuation parameters; risks

The figures on which the company valuations are based are date-specific estimates and thus carry inherent risks. They may be adjusted at any time without prior notice.



Irrespective of the valuation principles and methods used and the assumptions on which they are based, there is always a risk that a particular price target is not achieved or that the assumptions and forecasts prove inaccurate. This can, for instance, be the result of unexpected changes in demand, management, technology, economic or political developments, interest rates, costs, the competitive situation, the legal situation and other factors. Investments in foreign markets and instruments are subject to additional risks, as a result of changes in exchange rates or in the economic, political or social situation, for instance. This outline of risks makes no claim to be exhaustive.

<u>Definition of categories for investment recommendations</u>

The categories for investment recommendations in research publications by Metzler have the following meanings:

Shares:

BUY The price of the analysed financial instrument is expected to rise in the next 12 months.

HOLD The price of the analysed financial instrument is expected to largely remain stable in the next 12 months.

SELL The price of the analysed financial instrument is expected to fall in the next 12 months.

Bonds:

BUY The analysed financial instrument is expected to perform better than similar financial instruments.

HOLD The analysed financial instrument is not expected to perform significantly better or worse than similar financial instruments.

SELL The analysed financial instrument is expected to perform worse than similar financial instruments.

Summary of investment recommendations

A list of all investment recommendations for each financial instrument or issuer published by Metzler in the past twelve months can be found at www.metzler.com/disclaimer-capital-markets-en.

The quarterly quotation of the number of all investment recommendations given as "buy", "hold", "sell" or similar for the past 12 months as a proportion of the total number of investment recommendations made by Metzler and the quotation of the proportion of these categories relating to issuers to whom Metzler has provided services within the meaning of Annex I sections A and B of Regulation 2014/65/EU within the past 12 months can be accessed and downloaded at www.metzler.com/disclaimer-capital-markets-en

Planned updates of this document

This document reflects the opinion of the respective author at the time of its preparation. Any changes of factors can cause information, opinions, estimates, recommendations and forecasts contained in this document to cease to be accurate. No decision has as yet been taken as to whether, and if so when, this document will be updated. If an investment recommendation is updated, the updated investment recommendation replaces the previous investment recommendation upon publication.

Compliance arrangements; conflicts of interest

All analysts are bound by Metzler's internal compliance regulations which ensure that the research publications are prepared in accordance with statutory and regulatory provisions. The analysts are classified as working in a confidential sector and are thus required to observe the resulting statutory and regulatory provisions. This is monitored on a regular basis by the Compliance department and external auditors. The Compliance department ensures that potential conflicts of interest do not affect the original result of the analysis. Metzler has a binding Conflicts of Interest Policy in place which ensures that relevant conflicts of interest within Metzler, the Metzler Group, the analysts and staff of Metzler's Capital Markets division and persons associated with them are avoided or, if they cannot be avoided, are appropriately identified, managed, disclosed and monitored. A detailed description of Metzler's policy for avoiding conflicts of interest is available at www.metzler.com/disclaimer-capital-markets-en.

Details of the conflicts of interests to be disclosed under regulatory requirements are published at www.metzler.com/disclosures-en.

Remuneration

The remuneration of the Metzler staff members and other persons involved in preparing this document is in no way, either in whole or in any variable part, directly or materially linked to transactions in securities services or other transactions processed by Metzler.

Prices

All prices for financial instruments stated in this document are, unless otherwise stated, closing prices for the trading day preceding the respective stated publication date on the market which we regard as the most liquid market for the respective financial instrument.

Scope of application

This document was prepared in the Federal Republic of Germany in line with the legal provisions valid there. It may therefore be possible that this document does not comply with all provisions relating to the preparation of such documents in other countries.



Metzler Capital Markets

B. Metzler seel. Sohn & Co. AG Untermainanlage 1 60329 Frankfurt/Main, Germany Phone +49 69 2104-extension Fax +49 69 2104-679 www.metzler.com Mario Mattera

Head of Capital Markets

Research Fax +49 69 283159	Pascal Spano	Head of Research	4365
	Guido Hoymann	Head of Equity Research	398
	Stephan Bauer Tom Diedrich Oliver Frey	Transport, Utilities/Renewables Industrial Technology Media, Retail Software, Technology, Telecommunications	4363 239 4360
	Alexander Neuberger Jochen Schmitt	Industrial Technology, Small/Mid Caps Financials, Real Estate	4366 4359
	Thomas Schulte-Vor- wick	Basic Resources	234
	Pál Skirta	Mobility	525
	Jürgen Pieper	Mobility, Senior Advisor	529
	Uwe Hohmann	Equity Strategy	366
	Eugen Keller	Head of FI/FX Research	329
	Juliane Rack	FI/FX Strategy	1748
	Sebastian Sachs	FI/FX Strategy	526
	Stoyan Toshev	FI/FX Strategy	528
Equities	Mustafa Ansary	Head of Equities Head of Equity Sales	351
Sales	Eugenia Buchmüller		238
	Hugues Jaouen		4173
	Alexander Kravkov		4172
	Jasmina Schul		1766
	Markus Tozman		4174
Trading	Sven Knauer	Head of Equity Trading	245
	Kirsten Fleer		246
	Stephan Schmelzle		247
	Thomas Seibert		228
Corporate Solutions	Dr. Karsten Iltgen	Head of Corporate Solutions	510
	Stephan Averdung		514
	Thomas Burkart		511
	Christoph Hirth		513



	Adrian Takacs		512
Fixed Income (FI)	Sebastian Luther	Head of Fixed Income	688
FI Sales	Minush Nori Silke Amelung Claudia Ruiu Simon Tabath	Head of Fixed Income Sales	689 289 683 280
FI Trading/ALM	Burkhard Brod Bettina Koch Susanne Kraus Christian Bernhard Dirk Lagler	Head of ALM Head of Fixed Income Trading	659 291 658 266 685
Foreign Exchange (FX)	Özgur Atasever	Head of Foreign Exchange	281
FX Sales	Tobias Martin Steffen Völker	Head of FX Sales & Trading	614 293
FX Trading	Rainer Jäger Andreas Zellmann		276 610
Currency Management CM Advisory	Dominik Müller Achim Walde Jens Rotterdam	Head of Currency Management Head of Advisory	274 275 282
CM Operations	Simon Wesch Tessa Feller Florian Konz	Head of Operations	350 1696 1773
	Sergii Piskun	Senior Quantitative Analyst	237