

Masterflex (MZX GY) | Industrial Technology

March 02, 2022

Prepared for further expansion

The Masterflex group is looking back on a very robust performance in 2021e. All restructuring measures have been implemented according to plan. Revenues per employee have been increased considerably and the groups site network has been restructured. Revenues per head are the key lever behind the group's margin rebound. Adding current business activities and the restructured cost base together, the speciality hose-maker should be in a position to achieve its target of double digit EBIT-margins this year. Comparing Masterflex top-line progression through 2021e with the sector, the group seemed to have outperformed its peers in the plastics- tubes- and fluid handling industries. Given its strong exposure to the capital goods sector, we would expect Masterflex to capitalize on any further rebound of industrial production in Europe. Surprisingly, orders from the aerospace industry already picked-up considerably while business with the medtech sector is still lagging behind. With the internal restructuring process finished, non-organic growth may receive greater attention by management on the way to achieve a sales target north of EUR100m by 2024 and even EUR200m by 2030e.

Valuation: We retain our peer-group based fair value assessment and earnings estimates. Masterflex shares trade on a c. 13% discount vs the peers on P/E and Ev/EBITDA for FY22e/FY23e. Based on MZX' EBITDA-margin premium vs the peers and key valuation metrics for MZX shares being below historic troughs, we continue to consider the shares to be clearly undervalued.

Fundamentals (in EUR m) ¹	2018	2019	2020	2021e	2022e	2023e
Sales	77	80	72	77	84	93
EBITDA	9	9	7	10	13	15
EBIT	6	5	2	5	9	10
EPS adj. (EUR)	0.36	0.26	0.08	0.34	0.58	0.68
EBIT (adj)	-0.2	5.1	3.2	5.6	9.0	10.4
DPS (EUR)	0.00	0.00	0.08	0.10	0.15	0.20
BVPS (EUR)	4.23	4.43	4.26	4.70	5.27	5.95
Net Debt incl. Provisions	21	23	17	18	16	13
Ratios ¹	2018	2019	2020	2021e	2022e	2023e
EV/EBITDA	9.5	7.2	9.8	7.8	5.7	4.8
EV/EBIT	14.6	14.6	30.8	14.6	8.3	6.9
P/E adj.	19.8	17.0	67.8	19.2	10.6	9.0
Dividend yield (%)	0.0	0.0	1.4	1.5	2.4	3.3
EBITDA margin (%)	12.2	11.4	10.2	13.3	15.7	16.2
EBIT margin (%)	7.9	5.7	3.2	7.1	10.7	11.2
Net debt/EBITDA	2.3	2.5	2.4	1.7	1.2	0.9
PBV	1.7	1.0	1.3	1.4	1.2	1.0

¹Sources: Bloomberg, Metzler Research

Buy



unchanged

Price*

EUR 6.14

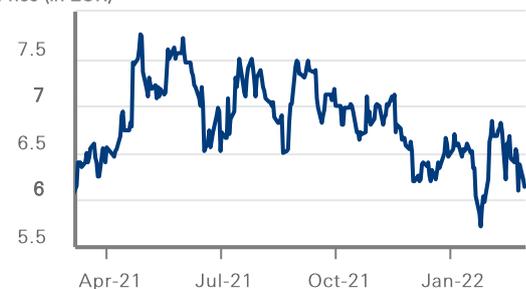
Price target

EUR 8.50 (unchanged)

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

Market Cap (EUR m) ¹	59
Enterprise Value (EUR m) ¹	75
Free Float (%) ¹	100.0

Price (in EUR)¹



Performance (in %) ¹	1m	3m	12m
Share	-8.1	-1.0	-4.1
Rel. to SDAX	1.1	15.2	5.3

Changes in estimates (in %) ¹	2021e	2022e	2023e
Sales	1.6	1.6	1.6
EBIT	6.4	1.5	5.4
EPS	13.9	1.7	-22.9

Sponsored Research



Author: Alexander Neuberger

Financial Analyst Equities

+49 69 2104-4366

A.Neuberger@metzler.com

company note

Promising start into the running year

Robust Q4 trends seem to persist into Q1

Based on the first nine months of last year, Masterflex performed above plans for the previous year with almost all industries and customer groups contributing to this performance. With no material change through the final quarter of 21, we expect the group finished the year at the upper end of the revenue- and EBIT-guidance. The same trends that likely provided a sound Q4/21 apparently persisted throughout the first weeks of the new fiscal year. Cyclical industries like capital goods continue to provide the strongest stimulus to the group's further expansion, while order activity out of the medtech-sector remains below previous years volumes.

Med-tech is somewhat behind

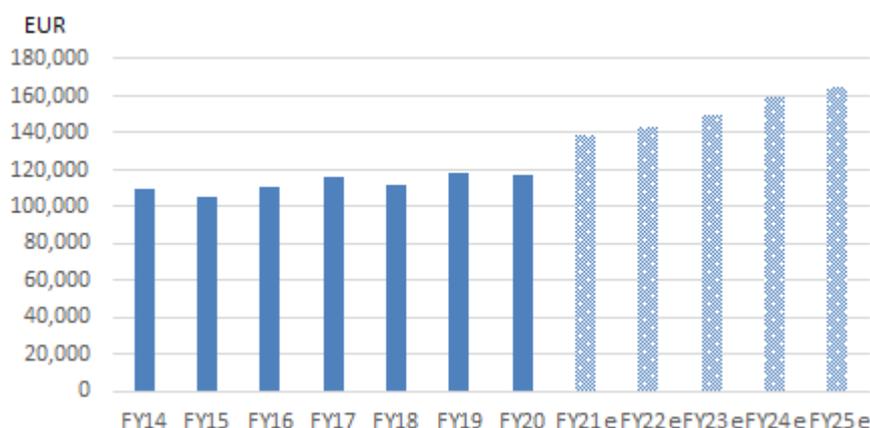
Apparently, the postponement of operations still weighs on demand for new medical equipment. Most recently, order intake from medtech-customers picked-up, bearing a chance for that business to recover from Q2/22 on. Last year, medtech revenues declined to about 17% of group sales from 20% a year before. Surprisingly, business activity from Masterflex' two customers from the aerospace industry – Airbus Industries and Bombardier – picked-up considerably. The increase in demand even exceeds recently optimized capacities at the group's site in Hamburg that is specialised on those customers.

Aerospace demand is the positive surprise

It remains to be seen whether the group is able to handle the sharp increase in demand for aerospace components within its existing assembly facility network. Both aerospace customers represent around 5% of group sales. Hence, the revitalisation of that specific business is not of major importance to Masterflex' top-line. All in all, it appears Masterflex performed and continues to perform well out of last year and into the running year, paving the way for a robust Q1/22 performance that would be the basis to achieve the target of double-digit returns on the EBIT-line in FY22e.

Well on track to achieve the mid-term guidance

Revenues per employee facilitated the earnings rebound



Source: Metzler Research

company note

Key restructuring targets have been achieved

Masterflex finished its restructuring plan in 2021. Both key targets – closing loss-making sites and raising revenues per employee – were already met with the release of the 9M21 report. The further top-line expansion but also the establishment of Masterflex' brands among a broader customer base and across more industries, remains an ongoing task. This is also true for the further rise in revenues per employee. Both efforts could make the group less exposed to cyclical industries and help to sustain EBIT-margins north of 10%. We project a rise in revenues per head to roughly EUR143k in 2022e from EUR117k only two years ago. A big jump in the expansion already occurred last year. As of now, still more than two thirds of group revenues are coming out of the capital goods industry.

A strong cap goods exposure is good for now

This pronounced cyclical exposure could well turn out to be an advantage over the next quarters if the global economy continues its rebound from the pandemic. Over the longer run however, a greater exposure to customers from sectors like food&beverage, utility or healthcare could certainly facilitate a less volatile earnings progression throughout the cycle. A greater exposure to the semiconductor industry via Masterflex' Novoplast brand is also on the agenda. Although still small, the business could double in size over the next years, not least after the semi-industry and the European Commission decided to ramp-up investments into the sector to reduce the dependence on Asian suppliers.

A new low-cost site for aerospace remains on the agenda

Assuming order activity from Bombardier and Airbus continues to be above management plans, the opening of a new low-cost site for Matzen&Timm which is the Masterflex brand for that industry, may reappear on the agenda. We would rule-out any expansion of the existing site in Hamburg as the cost-base of that site is not competitive enough to allow sustainable profits. Apparently, it is the only loss-making activity in the group today. Given the strong competitive position and growth perspectives of Boeing, a closure of Masterflex' aerospace activities to us doesn't appear as a reasonable alternative to an expansion of the business – under the prerequisite that production costs in the division are under control.

High single-digit top-line growth in FY22e

Assuming top-line growth around 9.5% y/y in 2022e the group should achieve group sales around EUR85m. Maintaining that expansion rate for another two years would propel sales above the EUR100m threshold which is managements target for FY24. The biggest risk to that growth we would identify are supply chain restrictions that, for the time being, had only a minor negative impact on revenue generation. Management reports about some scarcity for select plastics as the key concern. Its exposure to semiconductors is negligible and does not impact the production process of hoses within the group.

Price increases have been communicated

Price increases for procurement parts have largely been communicated to customers, while prices within the project-business have been adjusted already. Adjustments within running framework contracts should have been implemented at the end of H1/22. Given Masterflex' cyclical exposure at or close to the beginning of a new growth cycle, top-line targets for the coming 24months appear achievable. Top priority however is the achievement of an EBIT-margin of at least 10% in the running year, and the sustainment of that level over the years to come. We project a jump from an EBIT of EUR5.6m in FY21e to EUR9.0m in FY22e. This would comprise a margin expansion from 7.2% to 10.7%, implying an ambitious operating leverage of 48%.

company note

Solid chance to maintain margins above 10%

However, we assume last years capacity constraints in the loss-making aerospace division burdened group EBIT with at least EUR1,0m. Adjusting last years EBIT for that amount, the implied operating leverage, required to arrive at the 10.7% EBIT margin would only be 34% - which is a reasonable figure for a capital-intensive, cyclical company. Backed by a restructured business set-up and a tailwind from the economy. Management may put a greater focus on its plans to double the company in size between 2024e and 2030e. The German speciality hose-maker aims to raise group revenues to EUR200m by 2030 from EUR100 in 2024e. About EUR80 of that growth is supposed to be non-organic.

Coming closer to an expansion via non-organic growth**Organic growth may provide a greater part of the pie**

Assuming that mix behind the expansion, organic sales growth in the 2024 - 2030 period would be a mere 2.6%. This compares with a sales CAGR of 6.0% for the years 2009 to 2020. Hence, the planning either comprises a future recession to happen before 2030, including a contraction of group sales in any given year between 2024 and 2030, or it contains a safety margin with respect to non-organic growth. After all, EUR80m non-organic sales, even spread over a period of about eight years, means the company adds revenues roughly equal to its current size. Against that background, we would forecast Masterflex organic expansion until 2030 to be greater and the acquired portion to be smaller than comprised in the 2030 projections.

6.4% organic growth for EUR135m sales

Assuming average organic growth (2021e-2030e) of 6.4% would end-up in EUR135m group sale at the end of the decade and leave EUR65m non-organic expansion. Further anticipating Masterflex would raise its existing equity by 15% (EUR9.38m and uses half of its cash pile (EUR4.8m) and finally adds EUR10,0 debt, it could spend about EUR24m for an acquisition. For a potential target, we would roughly assume the following key metrics: EUR24m sales with EUR2.7m EBITDA (12% margin) and a net debt position of EUR6.7m.

Key metrics behind an acquisition

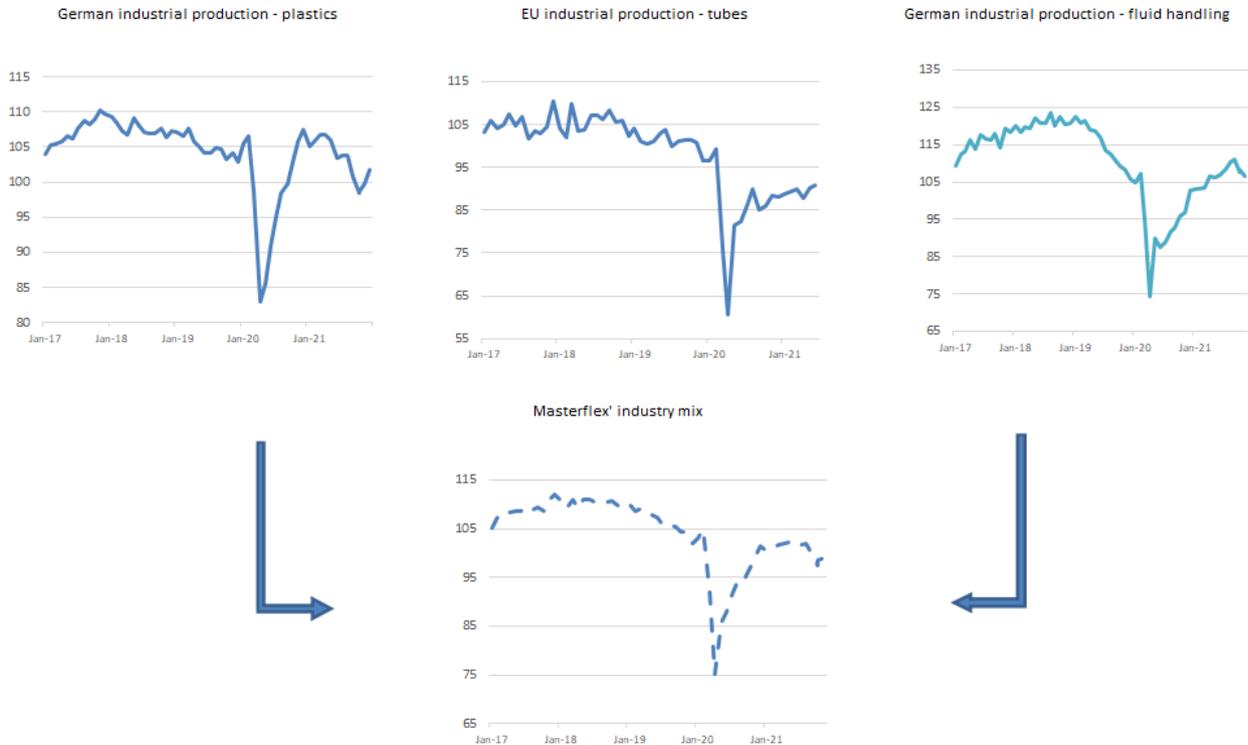
Under such a scenario, Masterflex would acquire a target for an EV/EBITDA multiple of 9.0x. Group sales of the new entity would jump close to EUR100m. The new groups EBITDA margin of 13.0% would be broadly unchanged vs today. Masterflex Ev/EBITDA would expand to 3.0x from 1,7x in FY21e. A takeover multiple of 9.0x appears to be somewhat below the 10.0x average for current deals in the sector. However, assuming the target needs some restructuring and could only unfold its true profitability potential after its integration into an existing plant-network, Masterflex may find a target that is not attractive for financial investors and hence close a deal somewhat below current market prices.

Macro environment of the group**Two ways to assess MZX' environment**

We continue to assess Masterflex' macro-environment by looking into industrial production figures for the German plastics and fluid-handling industry as well as the European tubes business. The assessment of the situation among Masteflex' customers rests on the observation of European and German industrial production figures for the respective sectors the group is trading with. Finally, to illustrate the overall sentiment within the German industrial sector, we use the IFO indicator for business expectations in Masterflex' home-turf. The latter index basically is a lead-indicator for industrial production figures several months ahead.

company note

Industrial production within Masterflex' sector



Source: Metzler Research

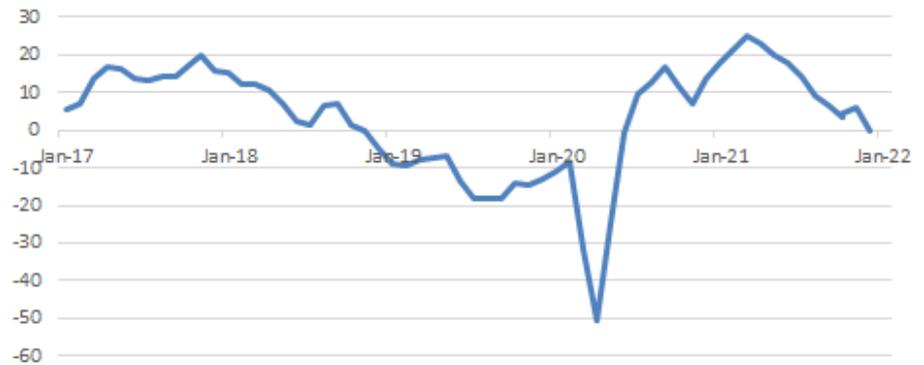
Looking into industrial production figures for plastics, tubes and fluid handling components, over the last five years, the picture is quite divergent. Plastic device manufacturer experienced a very sharp rebound in business activity early 2021, even exceeding the levels achieved before the pandemic. Throughout the third quarter, production declined considerably until a rebound began from October through December. Industrial production out of the fluid handling and tubes sectors illustrate a steady rebound from trough levels in April 2020.

Masterflex seemingly outperformed its industry peers in the rebound

However, both sectors remain substantially below their business activity seen before the pandemic. Against that background, Masterflex' development through 2021 is all the more encouraging as the group managed a steady expansion of its top- and bottom-line vs 2020 and even seemed to have reached group revenues through H2/21 very close to H2/19. While our industry-mix chart suggests Masterflex' sector peers are still operating considerably below 2019 levels, including a dip in Q3/21, Masterflex continued its expansion.

company note

IFO: German manufacturing business expectations



Sources: Bloomberg, Metzler Research

A key reason for Masterflex robust performance through last years was most likely its customer industry mix. About 65% of all produced hoses and tubes is going into the capital goods industries. Based on business expectations for manufacturing industries in Germany, industrial activity in 2021 returned to the levels before the pandemic in many industrial corporations, and stayed there, despite the dip in the sentiment indicator towards year-end 2021.

EU industrial production - rail & rolling stock



Sources: Bloomberg, Metzler Research

EU industrial production - medical & dental instruments



Sources: Bloomberg, Metzler Research

company note

German industrial production - food



Sources: Bloomberg, Metzler Research

EU industrial production - aerospace



Sources: Bloomberg, Metzler Research

Masterflex was not always able to outperform business trends in its customer industries. European production data for medical & dental instruments shows a strong pick-up in production through 2021, well above pre-pandemic levels. This by no means reflects Masterflex's situation: The group still delivers less tubes into the medtech-sector compared with two years ago as many operations were postponed last year to free capacities for covid-patients. Surprisingly, Masterflex volumes delivered into the aerospace sector – namely to Airbus Industries and Bombardier – achieved far better levels, compared with the overall European aerospace sector.

All in all we expect Masterflex' strong exposure into capital goods sectors helps the group to continue its top-line expansion with its portfolio of specialised tubes in 2022 and to grow group sales to a level that surpasses 2019 revenues. This would then be the basis to surpass the EUR100m threshold by 2024e. Assuming non-organic additions to the portfolio before, the EUR100m level could be achieved even earlier than 2024.

Valuation

MZX shares trade far below the historic average

Based on our assumptions for FY23e, Masterflex shares trade on historic lows. The P/E for FY23 is at 9.5x vs 17.5x on average over roughly two cycles (2007-2021e). MZX' Ev/EBITDA for FY23e stands at 5.3x. This compares with an average of 8.9x for the same time span. The multiple is also the lowest in every year since 2007. One reason for these valuation levels might be the market capitalisation of Masterflex' shares of EUR62.4m that moved the shares off the radar screen of many investors. The other reason could be that the group's most recent restructuring efforts have been overlooked and question marks regarding the sustainability of the most recent rebound in profitability persist.

company note

Key Data

Company profile

CEO: Dr. Andreas Bastin

CFO: Mark Becks

Gelsenkirchen

Major shareholders

Key figures

P&L (in EUR m)	2018	%	2019	%	2020	%	2021e	%	2022e	%	2023e	%
Sales	77	3.4	80	3.5	72	-10.1	77	7.4	84	9.4	93	10.0
EBITDA	9	-3.5	9	-3.2	7	-20.0	10	40.4	13	29.1	15	13.6
EBITDA margin (%)	12.2	-6.7	11.4	-6.5	10.2	-11.0	13.3	30.7	15.7	18.1	16.2	3.2
EBIT	6	-7.6	5	-25.6	2	-48.6	5	134.5	9	64.9	10	15.2
EBIT margin (%)	7.9	-10.6	5.7	-28.1	3.2	-42.8	7.1	118.3	10.7	50.8	11.2	4.7
Financial result	-1	10.3	-1	-21.9	-1	29.5	-1	1.1	-1	-22.2	-1	9.1
EBT	5	-7.0	3	-35.5	1	-56.2	5	221.2	8	73.3	9	18.6
Taxes	-2	-67.6	-1	54.2	-1	23.0	-1	-120.0	-2	-73.3	-3	-18.6
Tax rate (%)	-35.1	n.a.	-24.9	n.a.	-43.8	n.a.	-30.0	n.a.	-30.0	n.a.	-30.0	n.a.
Net income	3	-25.0	2	-25.4	1	-67.2	3	300.0	6	73.3	7	18.6
Minority interests	0	n.m.	0	-42.0	0	-100.0	0	n.a.	0	-100.0	0	n.a.
Net Income after minorities	3	-21.5	3	-26.2	1	-68.4	3	303.1	6	72.0	7	18.6
Number of shares outstanding (m)	10	2.0	10	0.0	10	0.0	10	0.0	10	0.0	10	0.0
EPS adj. (EUR)	0.36	-23.0	0.26	-26.2	0.08	-68.4	0.34	303.1	0.58	72.0	0.68	18.6
DPS (EUR)	0.00	n.a.	0.00	n.a.	0.08	n.a.	0.10	25.0	0.15	50.0	0.20	33.3
Dividend yield (%)	0.0	n.a.	0.0	n.a.	1.4	n.a.	1.5	n.a.	2.4	n.a.	3.3	n.a.
Cash Flow (in EUR m)	2018	%	2019	%	2020	%	2021e	%	2022e	%	2023e	%
Gross Cash Flow	8	-12.1	8	8.5	7	-19.7	9	33.0	11	22.3	12	12.5
Increase in working capital	-2	n.a.	-2	n.a.	4	n.a.	-2	n.a.	-4	n.a.	-0	n.a.
Capital expenditures	-4	9.3	-2	38.0	-2	20.8	-2	-32.6	-3	-45.8	-4	-10.0
D+A/Capex (%)	-93.8	n.a.	-208.4	n.a.	-284.8	n.a.	-206.7	n.a.	-125.0	n.a.	-125.0	n.a.
Free cash flow (Metzler definition)	2	-9.1	4	110.3	9	108.1	5	-51.3	4	-11.3	8	100.5
Free cash flow yield (%)	3.1	n.a.	10.3	n.a.	17.0	n.a.	7.2	n.a.	6.8	n.a.	13.6	n.a.
Dividend paid	0	n.a.	0	n.a.	-1	n.a.	-1	-25.0	-1	-50.0	-2	-33.3
Free cash flow (post dividend)	2	-9.1	4	110.3	10	125.4	5	-45.4	5	-0.5	10	82.7
Balance sheet (in EUR m)	2018	%	2019	%	2020	%	2021e	%	2022e	%	2023e	%
Assets	75	3.0	82	8.5	76	-6.4	82	7.1	87	6.4	96	10.1
Goodwill	9	0.0	9	0.0	9	0.0	9	0.0	9	0.0	10	10.9
Shareholders' equity	40	7.6	42	4.5	41	-1.7	45	8.1	50	12.3	58	15.1
Equity/total assets (%)	53.5	n.a.	51.5	n.a.	54.1	n.a.	54.6	n.a.	57.6	n.a.	60.2	n.a.
Net Debt incl. Provisions	21	9.5	23	8.3	17	-24.6	18	1.3	16	-8.1	13	-20.2
thereof pension provisions	0	n.a.	0	n.a.	0	n.a.	0	n.a.	0	n.a.	0	n.a.
Gearing (%)	53.2	n.a.	55.2	n.a.	42.3	n.a.	39.7	n.a.	32.5	n.a.	22.5	n.a.
Net debt/EBITDA	2.3	n.a.	2.5	n.a.	2.4	n.a.	1.7	n.a.	1.2	n.a.	0.9	n.a.

Structure

Sales by region (mln) 2020



Sources: Bloomberg, Metzler Research

company note

Disclosures

Recommendation history

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

Date of dissemination	Metzler recommendation * Previous	Current	Current price **	Price target *	Author ***
Issuer/Financial Instrument (ISIN): Jungheinrich (DE0006219934)					
16.12.2021	Buy	Buy	42.96 EUR	55.00 EUR	Bauer, Stephan
12.08.2021	Buy	Buy	46.02 EUR	54.00 EUR	Bauer, Stephan
28.04.2021	Buy	Buy	47.32 EUR	54.00 EUR	Bauer, Stephan
Issuer/Financial Instrument (ISIN): Kronos (DE0006335003)					
24.02.2022	Hold	Hold	82.90 EUR	96.00 EUR	Bauer, Stephan
11.01.2022	Hold	Hold	89.90 EUR	96.00 EUR	Bauer, Stephan
01.09.2021	Hold	Hold	85.75 EUR	90.00 EUR	Bauer, Stephan
11.06.2021	Hold	Hold	76.10 EUR	77.00 EUR	Bauer, Stephan
Issuer/Financial Instrument (ISIN): Masterflex (DE0005492938)					
06.10.2021	Buy	Buy	7.00 EUR	8.50 EUR	Neuberger, Alexander
01.04.2021	Buy	Buy	6.40 EUR	8.50 EUR	Neuberger, Alexander

* 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

Masterflex

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: March 02, 2022 07:58 AM CET

Initial release: March 02, 2022 07:58 AM CET

company note

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 (*Wertpapierhandelsgesetz*)

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.

company note

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.

Definition of categories for investment recommendations

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.

company note

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	Pascal Spano	Head of Research	4365
Fax +49 69 283159			
	Guido Hoymann	Head of Equity Research	398
		Transport, Utilities/Renewables	
	Stephan Bauer	Industrial Technology	4363
	Stephan Bonhage	Small/Mid Caps, Construction	525
	Tom Diedrich	Media, Retail	239
	Alexander Neuberger	Industrial Technology, Small/Mid Caps	4366
	Holger Schmidt	Software, Technology, Telecommunications	4360
	Jochen Schmitt	Financials, Real Estate	4359
	David Varga	Basic Resources	4362
	Jürgen Pieper	Automobiles, Senior Advisor	529
	Hendrik König	Strategy / Quantitative Research	4371
	Sergii Piskun	Quantitative Research	237
	Eugen Keller	Head of FI/FX Research	329
	Cem Keltek	FI/FX Strategy	527
	Juliane Rack	FI/FX Strategy	1748
	Sebastian Sachs	FI/FX Strategy	526
Equities	Mustafa Ansary	Head of Equities	351
		Head of Equity Sales	
Sales	Eugenia Buchmüller		238
	Uwe Hohmann		366
	Hugues Jaouen		4173
	Alexander Kravkov		4172
	Jasmina Schul		1766
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
	Thomas Burkart		511
	Adrian Takacs		512

company note

Fixed Income (FI)	Sebastian Luther	Head of Fixed Income	688
FI Sales	Minush Nori	Head of Fixed Income Sales	689
	Silke Amelung		289
	Claudia Ruiu		683
	Gloria Traidl		280
FI Trading/ALM	Sven Klein	Head of ALM	686
	Bettina Koch		291
	Susanne Kraus		658
	Christian Bernhard	Head of Fixed Income Trading	266
	Dirk Lagler		685
Foreign Exchange (FX)	Özgür Atasever	Head of Foreign Exchange	281
FX Sales	Tobias Martin	Head of FX Sales & Trading	614
	Thomas Rost	FX Senior Advisor	292
	Steffen Völker		293
FX Trading	Rainer Jäger		276
	Andreas Zellmann		610
Currency Management	Dominik Müller	Head of Currency Management	274
CM Advisory	Jens Rotterdam		282
	Achim Walde		275
	Harwig Wild		279
CM Operations	Simon Wesch	Head of Operations	350
	Christopher Haase		1617
	Florian Konz		1773