

A grayscale photograph of an industrial manufacturing environment. In the foreground, a robotic arm is positioned over a workpiece, with a large volume of bright sparks being generated from a welding or grinding process. The background shows other industrial equipment and a factory ceiling with overhead lighting. The overall scene is dynamic and industrial.

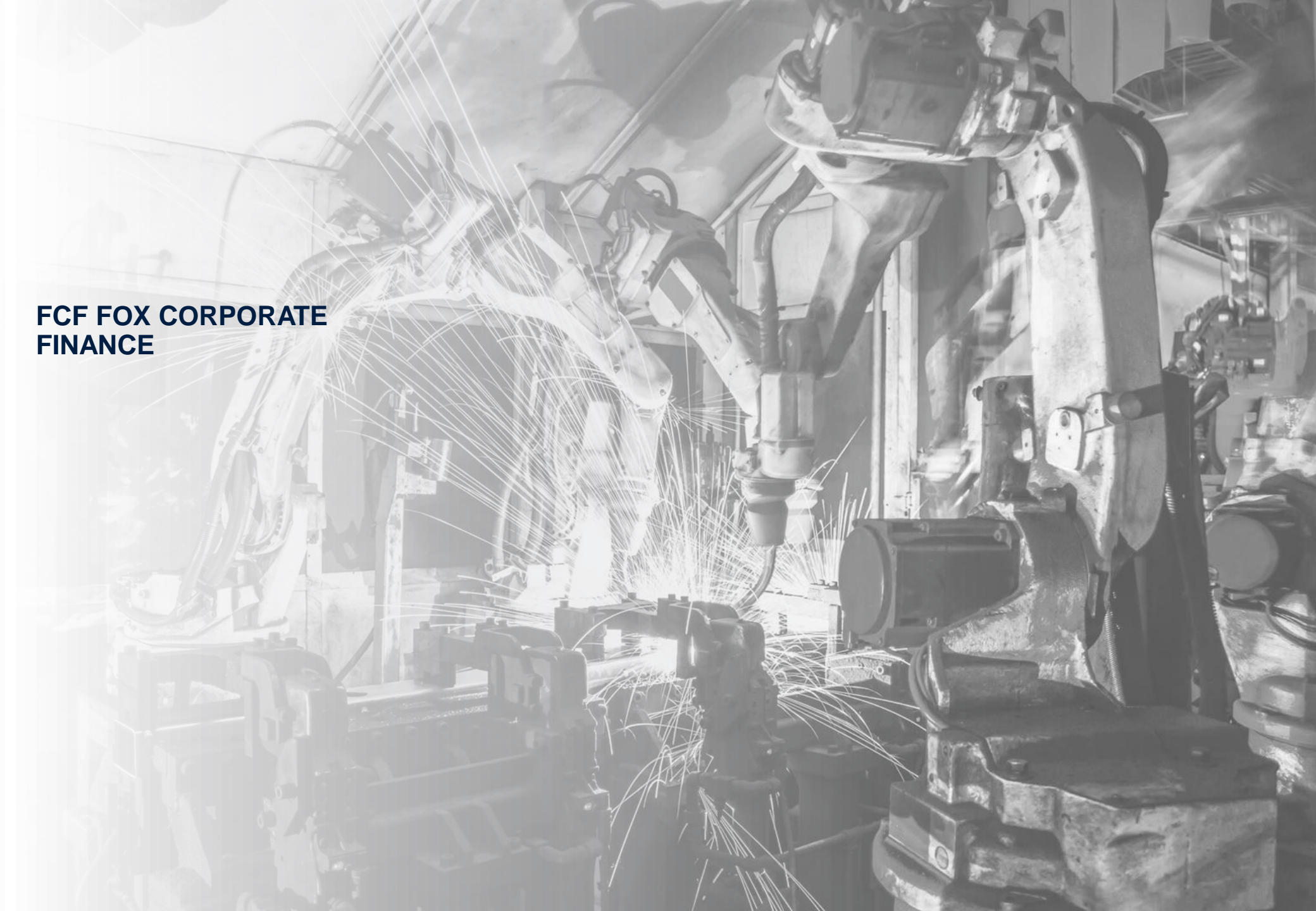
FCF SmallCap / MidCap Research Series

FCF Industrial Machinery Market Study

Last Update: April 2023



**FCF FOX CORPORATE
FINANCE**



FCF seeks to provide its clients with financing solutions

- (i) at the lowest cost,
- (ii) with the highest flexibility,
- (iii) in the shortest period of time,
- (iv) with the highest closing probability, and with
- (v) financing partners that integrate well into their strategy

Who We Are

- Specialized Investment Bank and Financing Specialist
- Advising public and private small- / midcap companies
- Advisor for structuring and placement of financing transactions:
 - All instruments: Unbiased approach to all available corporate financing instruments (no product selling approach), allowing for customized financing structures
 - All investors: Close and trusted relationships with senior executives of virtually all relevant equity and debt investors
 - Fast process: Process management skills and direct / personal access to institutional debt and equity investors enable fast transactions
- More than 150 transactions with a total placement volume in excess of EUR 5.0 billion since foundation in 2005
- More than 15 professionals headquartered in Munich

Capital Markets Capabilities and Services

Equity	Private / Pre-IPO	<ul style="list-style-type: none"> ■ Venture capital ■ Growth capital 	<ul style="list-style-type: none"> ■ Private equity
	Public	<ul style="list-style-type: none"> ■ Initial Public Offering (IPO) / Capital increase ■ Dual-track (IPO and alternative transaction) 	<ul style="list-style-type: none"> ■ pursued in tandem ■ Private investment in Public Equity (PIPE) ■ Block trade
Debt	Short-term Debt	<ul style="list-style-type: none"> ■ Receivables / Factoring / Asset-backed securities ■ Borrowing base / Inventory 	<ul style="list-style-type: none"> ■ Working capital / Revolving credit facility ■ Guarantees / Letter of credit
	Long-term Debt	<ul style="list-style-type: none"> ■ Bank loan facility / Syndicated loans ■ Sale-and-lease-back / Leasing ■ Corporate bonds (public / private placement) ■ High yield / PIK bond 	<ul style="list-style-type: none"> ■ Promissory note (<i>Schuldscheindarlehen</i>) ■ Second lien / Subordinated loans ■ Venture debt ■ Unitranches
	Hybrid	<ul style="list-style-type: none"> ■ Mezzanine capital 	<ul style="list-style-type: none"> ■ Convertible bonds

Selected Transactions

Capital Increase aerofolis GmbH [confidential] March 2023	M&A (Sell-Side) Energieinsel [confidential] March 2023	M&A (Sell-Side) PMG Projekttraum Management GmbH [confidential] March 2023	M&A (Sell-Side) SER / RUZ Group [confidential] February 2023	European Investment Bank Debt Facility German Bionic Systems GmbH EUR 15m December 2022	Financial Advisory Mitteldeutsche Flughafen AG [confidential] December 2022	Syndicated Loan ante Holding GmbH & Co. KG [confidential] December 2022	Working Capital Facility KKA Management GmbH EUR 7m November 2022	Software-Leasing Facility Leading Global Device-as-a-Service Company EUR 10m October 2022	Interest Rate Hedging Mitteldeutsche Flughafen AG EUR 150m October 2022	European Investment Bank Debt Facility Evum Motors GmbH > EUR 12m September 2022	Factoring Facility JORA Holding GmbH & Co. KG EUR 25m September 2022
Equity Transaction – Joint Venture with Family Office Doppstadt Group > EUR 50m September 2022	Acquisition Loan and Working Capital Facility Bencis > EUR 20m May 2022	Acquisition Loan Facility Lloyd Fonds AG [confidential] April 2022	European Investment Bank Debt Facility numares AG EUR 20m February 2022	Syndicated Loan Schnellecke Logistics SE EUR 70m December 2021	Syndicated Loan KWD Automotive AG & Co. KG EUR 70m December 2021	Syndicated Loan Top 25 Pharmaceutical Company EUR 80m November 2021	Syndicated Loan, Factoring, Real Estate Sale & Lease-Back Precisis AG EUR 85m October 2021	Venture Financing Ziegler Holzindustrie GmbH & Co. KG EUR 230m August 2021	Transaction Advisory Wismar Pellets Group [confidential] 2022	Syndicated Loan Asamer Baustoffe AG EUR 80m May 2021	



1

financing advisor in Germany, purely focusing on corporate financing transactions



More than
15

investment banking professionals



More than
100

years of aggregated, investment banking / financing experience



More than
150

completed transactions



More than
5 bn

total volume of advised & closed transactions since 2005



Network

access to more than 4000 international financial institutions



2000

contacts to family offices and ultra-high-net-worth individuals worldwide



More than
25

international conferences organized



More than
150

articles and research papers published



Leading

advisor for financing transactions with EIB in the DACH region



Kai Frömert

Managing Director

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Kai Frömert is a Managing Director in FCF's Corporate Finance Team. He joined FCF with a focus on debt capital markets.

Kai studied business economics in Frankfurt (D) and San Diego (USA) and holds a Diplom-Betriebswirt (FH) degree from HfB-Hochschule für Bankwirtschaft / Frankfurt School of Finance & Management. Prior to joining FCF, Kai gained more than 10 years of debt capital markets experience while working for the Markets & Investment Banking division of UniCredit and HypoVereinsbank as well as a further two years within the investment banking arm of Bank Vontobel. During the last 10 years, Kai focused on capital markets based corporate finance and project finance transactions, especially in the infrastructure and energy sectors.



Marcel Lange

Managing Director

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Marcel Lange joined FCF in April 2016 and is responsible for the SmallCap & Growth division.

Prior to joining FCF, he worked as an Associate Leveraged Finance at HSH Nordbank (today Hamburg Commercial Bank) since 2013. Marcel Lange completed his Bachelor's degree in Business Administration at the HSBA Hamburg School of Business Administration. During his studies he completed a trainee program in HSH Nordbank's Corporate Clients division and successfully completed his apprenticeship as a banker at the Hamburg Chamber of Commerce.



Tristan Blümli

Vice President

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Tristan Blümli joined FCF in September 2016, supporting the team in equity and debt financing transactions.

Tristan received his Master of Arts in Economics and Finance from Heriot-Watt University and his Master of Science in Finance and Management from Cranfield School of Management. During his studies, he completed a series of internships, most recently with Morgan Stanley.



Marco Buonafede

Vice President

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Marco Buonafede-Bennardo joined FCF as an analyst in January 2019 and supports the team in equity and debt advisory transactions.

Marco graduated with a bachelor's degree in business administration from the LMU in Munich. His major study focus was on accounting and finance. After his bachelor studies, he completed an internship at PwC AG in Munich in the audit service line. Marco gained also first working experience in corporate finance at ACXIT Capital Partners in Frankfurt am Main. Later, he received his master's degree in Finance & Management from the University of St. Andrews in Scotland.



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Senior Associate

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Yasmin Herrmann joined FCF in January 2019 and is responsible for the execution of equity and debt financing transactions in FCF's SmallCap & Growth team.

Yasmin graduated from the ISM in Dortmund with a BA in Management. Thereupon, she pursued her Master's Degree of Finance (MSc), with a specialization in Corporate Finance, at the Frankfurt School of Finance and Management. During her studies, Yasmin gained her first working experience in Corporate Finance as a working student at BNP Paribas in Frankfurt am Main.



Florian Hoch

Analyst

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Florian Hoch joined FCF in August 2021 and is part of the SmallCap & Growth team. He supports the team in equity and debt financing transactions and is responsible for the preparation of all relevant transaction documents as well as rating analyses and pitches.

Florian graduated from the University of Mannheim with a Bachelor of Science in Business Administration. During his studies, Florian gained first working experience in the Deal Advisory and Audit departments at KPMG.

A black and white photograph of an industrial manufacturing environment. In the foreground, a robotic arm is positioned over a workpiece, with a bright, intense light and a spray of sparks emanating from the point of contact, indicating a welding or grinding process. The background shows a complex network of pipes, cables, and other industrial machinery, creating a sense of a busy, automated factory floor. The overall lighting is somewhat dim, with the primary light source being the sparks from the robotic process.

EXECUTIVE SUMMARY

Growth Indicators

Revenue (Y-o-Y)

'21-'22 '22-'23e
17.8% **5.7%**

EBITDA (Y-o-Y)

'21-'22 '22-'23e
10.7% **23.2%**

EBIT (Y-o-Y)

'21-'22 '22-'23e
13.9% **19.2%**

Margins

EBITDA Margin

2021 2022 2023e
13.9% **13.1%** **15.3%**

EBIT Margin

2021 2022 2023e
10.3% **10.0%** **11.3%**

Valuation

EV / EBITDA

2021 2022 LTM
13.9x **10.6x** **11.7x**

EV / EBIT

2021 2022 LTM
20.3x **13.9x** **15.6x**

Net Leverage

2021 2022 LTM
1.5x **1.8x** **1.4x**

Equity Ratio

2021 2022 LTM
47.7% **45.1%** **45.1%**

Credit Statistics

Interest Cover Ratio

2021 2022 LTM
31.2x **29.6x** **37.2x**

Current Loan-to-Value

2021 2022 LTM
6.4% **7.2%** **7.2%**

Non-Current Loan-to-Value

2021 2022 LTM
35.6% **42.9%** **42.9%**

Rating

2021 2022 LTM
BXX+ **BXX+** **BXX+**

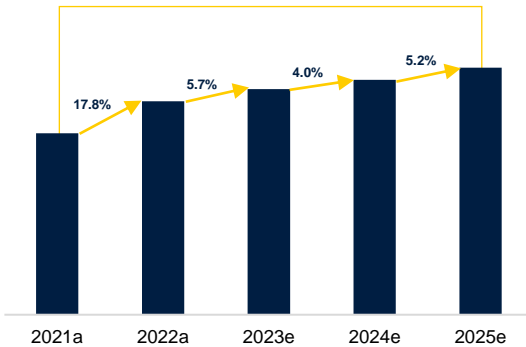
WACC

2021 2022 LTM
7.0% **6.5%** **6.5%**

Long-Term Development

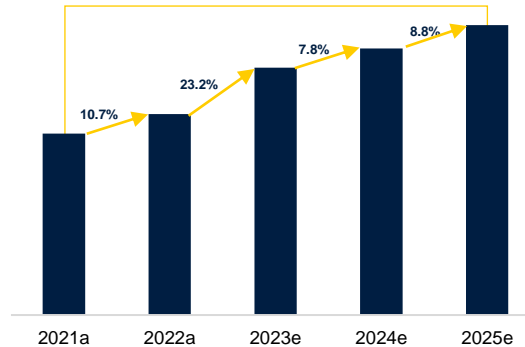
Revenue

CAGR: **+8.0%**



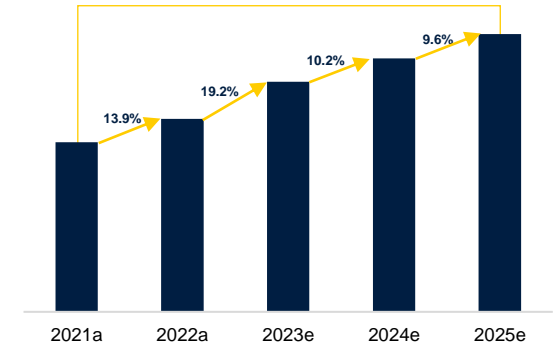
EBITDA

CAGR: **+12.4%**



EBIT

CAGR: **+13.1%**



The FCF Industrial Machinery Market Study is a standardized report / analysis of public European industrial machinery producers and manufacturers and provides valuable industry and competitive intelligence

More advanced, detailed and / or customized reports are available upon request

FCF Industrial Machinery Market Study

is a comprehensive publication of European industrial machinery producers. The analysis includes:

- **Market Fundamentals:** Development of key P&L metrics (revenue, EBITDA, EBIT) and profitability metrics (EBITDA-/ EBIT margin)
- **Market Valuation:** Development of valuation multiples (EV / EBITDA, EV / EBIT)
- **Credit Statistics:** Development of relevant credit metrics (net leverage ratio, equity ratio, EBITDA interest cover ratio and loan-to-value ratios), market rating and implied cost of capital (WACC)
- **Private Equity and Mergers & Acquisitions:** Development of deal volume and deal count

Selection of Companies

The selection of companies is primarily based on the following criteria:

- Industry classification: Industrial machinery
- Company status: Operating
- Ownership: Public, listed
- Geography (HQ / exchange country): Europe, excl. Russia
- Total revenues (last FY): EUR 50m - EUR 10,000m
- Total revenues (FY 2023e-2025e): Data available
- Market capitalization: >EUR 0
- Free float: >15%

Recipients

The FCF Industrial Machinery Market Study targets a wide audience, which includes:

- Executives
- Equity / debt investors
- Key personnel in corporate development / financing unit
- Shareholders

and provides in-depth and complete financial insights that highlight key trends within the European industrial machinery producer market

Data

All input data is provided by S&P Capital IQ and is not independently verified by FCF. Ratio and multiple calculations are driven based on the input data available. For additional information and disclaimer, please refer to the last page

Availability

The FCF Industrial Machinery Market Study is available on FCF's website at "www.fcf.de"

To recommend colleagues or fellow investors to be added to the mailing list, kindly send an email with the respective contact information

More advanced, detailed and / or customized reports can be ordered individually (e.g. for board reporting, strategy and competition analysis purposes)

MARKET FUNDAMENTALS

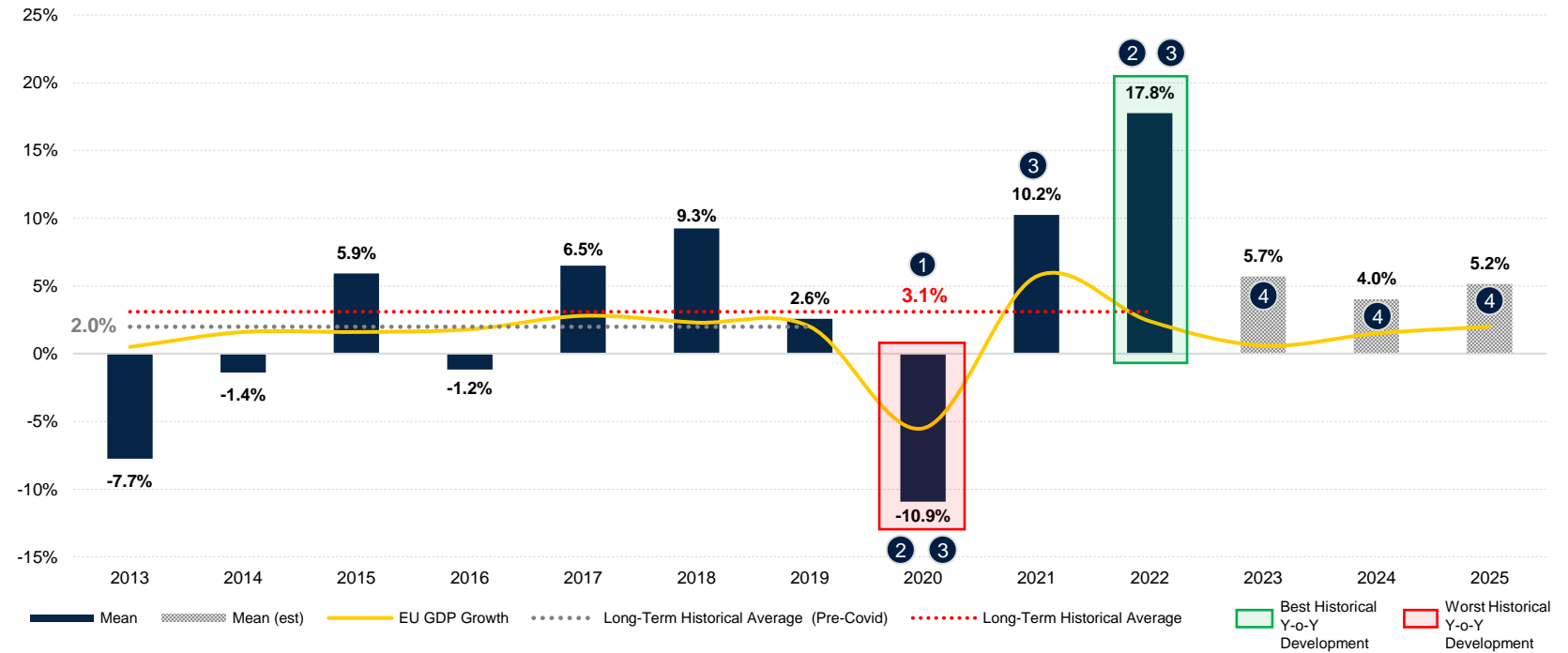


Market Fundamentals

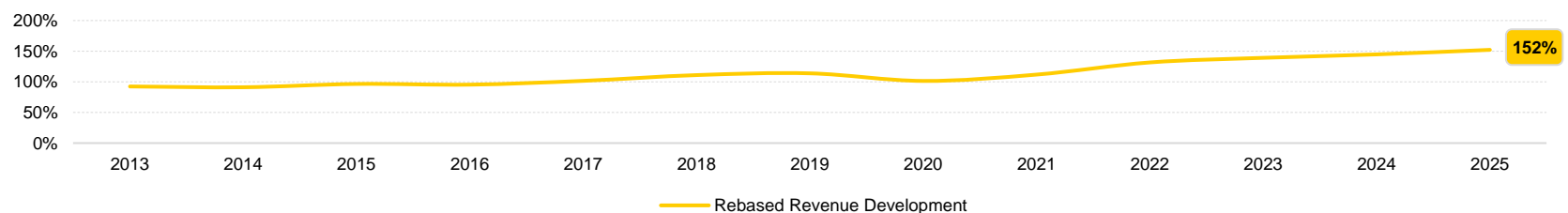
Historical & Forecasted Revenue Development (Current Market Expectations)

- 1 The revenues of the publicly listed industrial machinery companies overall show a positive historical development, growing at a 3.1% long-term average between '13 and '22
- 2 The revenue development Y-o-Y shows a high degree of volatility (growth rates between -10.9% and +17.8% ($\Delta 28.7\%$)), underscoring the cyclical nature of the market
- 3 The revenue drop in '20 due to Covid-19 pandemic is followed by a strong rebound in the following years, also driven by high inflation and supply chain issues
- 4 In '23, '24 and '25 the Y-o-Y revenue growth is expected to be above average

Revenue Development Year-on-Year (Mean '13 – '25)



Revenue Development (Rebased 2012 = 100%)

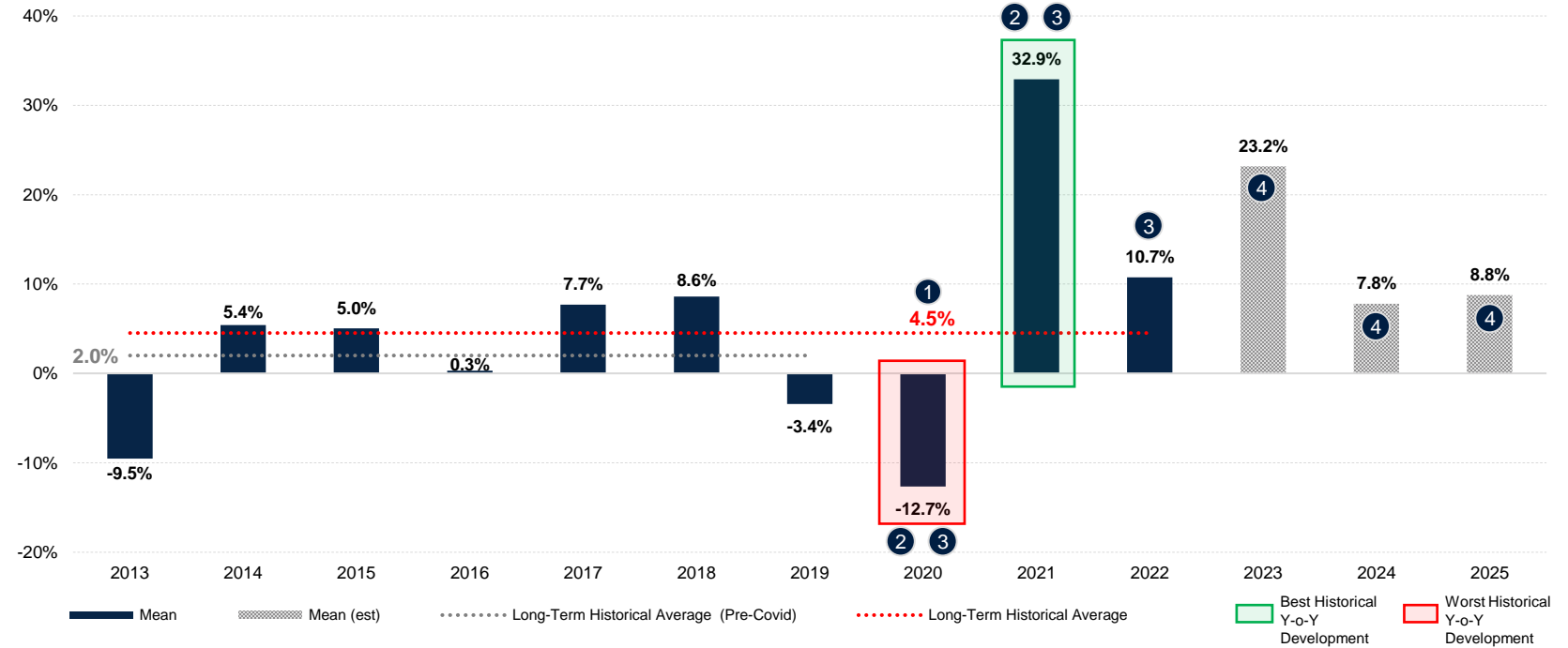


Market Fundamentals

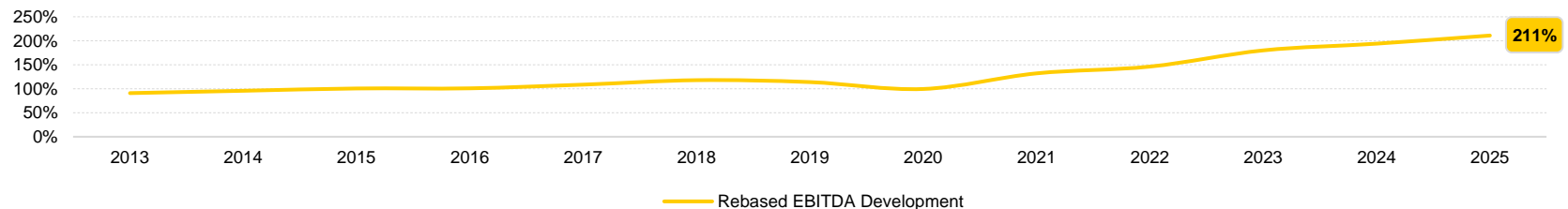
Historical & Forecasted EBITDA Development (Current Market Expectations)

- 1 The EBITDAs of the publicly listed industrial machinery companies overall show a positive historical development, growing at a 4.5% long-term average between '13 and '22
- 2 The EBITDA development shows a higher degree of volatility compared to revenue (growth rates between -12.7% and +32.9% ($\Delta 45.6\%$)), highlighting the high proportion of fixed costs which can not be adjusted quickly
- 3 EBITDA increased by 10.7% in '22, after already a strong rebound in '21
- 4 The expected EBITDA growth in '23, '24 and '25 suggests an ongoing positive development and pricing power

EBITDA Development Year-on-Year (Mean '13 – '25)



EBITDA Development (Rebased 2012 = 100%)

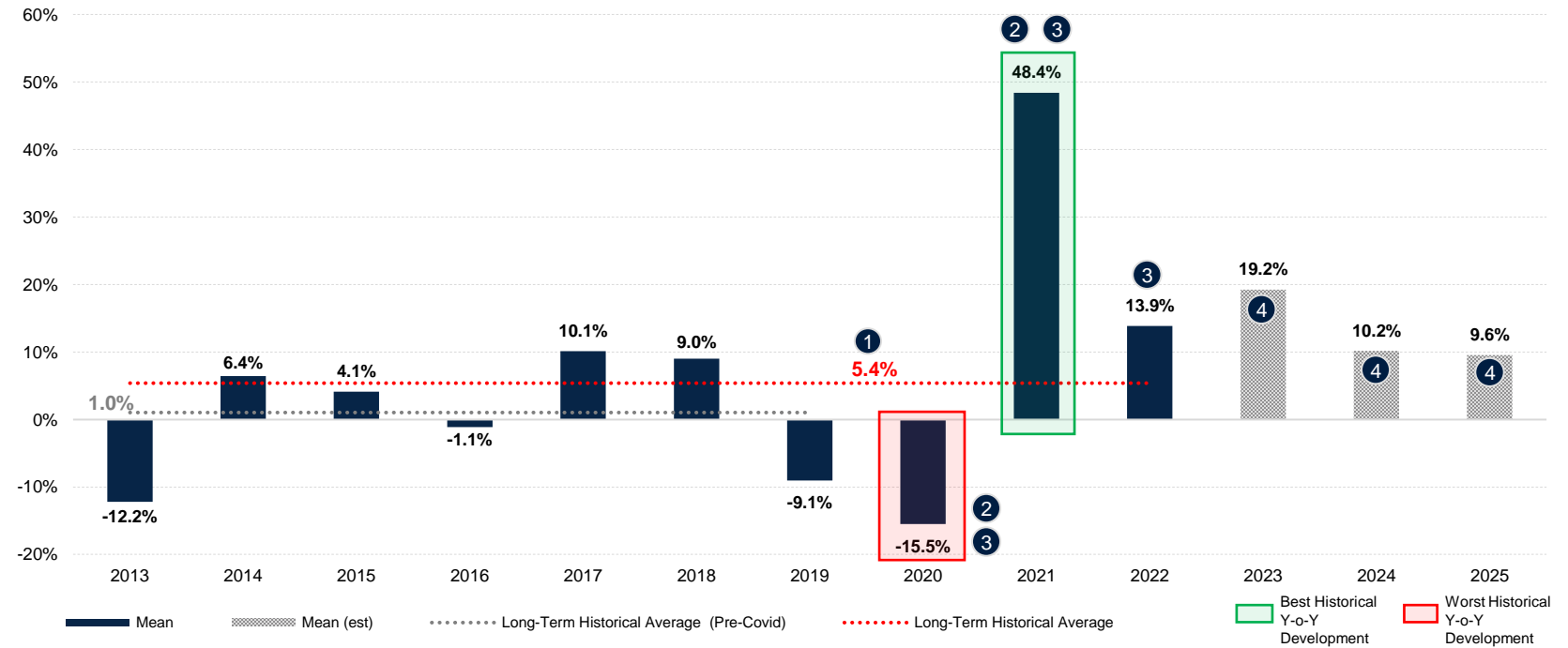


Market Fundamentals

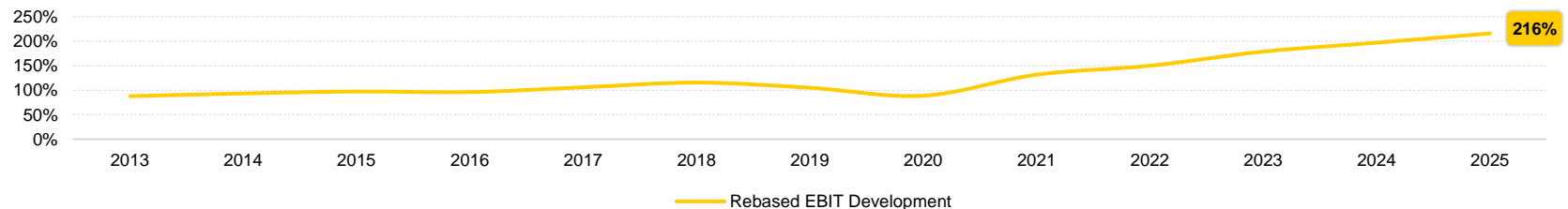
Historical & Forecasted EBIT Development (Current Market Expectations)

- 1 The EBITs of the publicly listed industrial machinery companies overall show a positive historical development, growing at a 5.4% long-term average between '13 and '22
- 2 The EBIT development shows a higher degree of volatility compared to revenue and EBITDA (growth rates between -15.5% and +48.4% ($\Delta 63.9\%$)), underscoring the high level of CAPEX investments and resulting fixed depreciation in the industry
- 3 EBIT in '21 and '22 increased sharply post-Covid '19
- 4 The expected EBIT growth in '23, '24 and '25 suggests an ongoing positive development

EBIT Development Year-on-Year (Mean '13 – '25)



EBIT Development (Rebased 2012 = 100%)



Market Fundamentals

Historical EBITDA / EBIT Margin Development

The industrial machinery market is characterized by a high degree of competition, which is reflected in overall lower margins (compared to other industries)

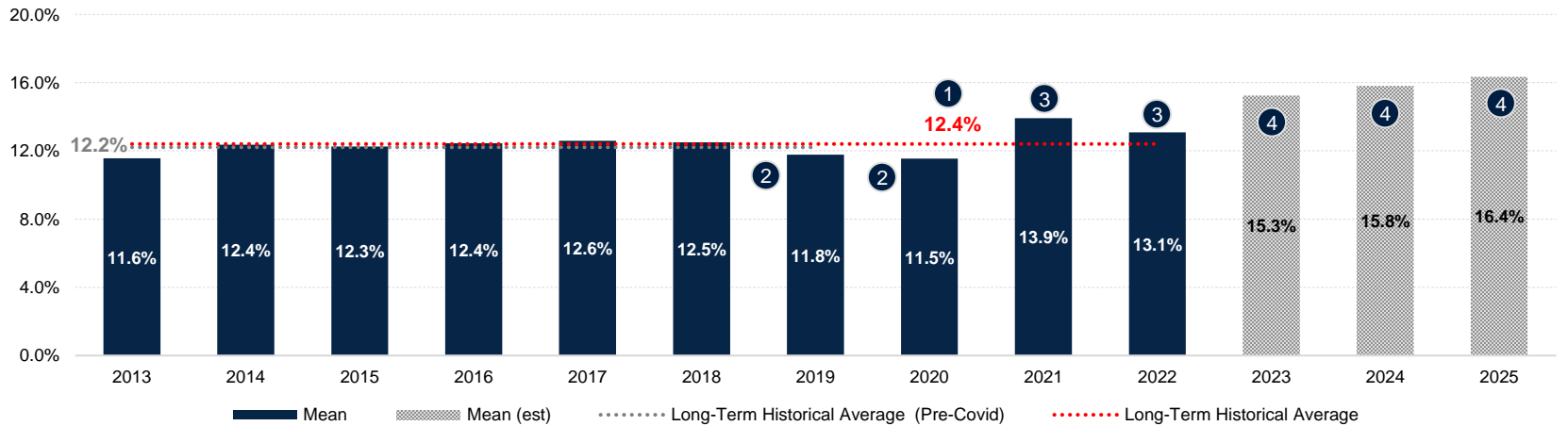
1 The long-term ('13 – '22) average EBITDA & EBIT margin is 12.4% and 8.9%, respectively

2 General market challenges and the global Covid-19 pandemic have led to a decline in EBITDA / EBIT margins in '19 and '20

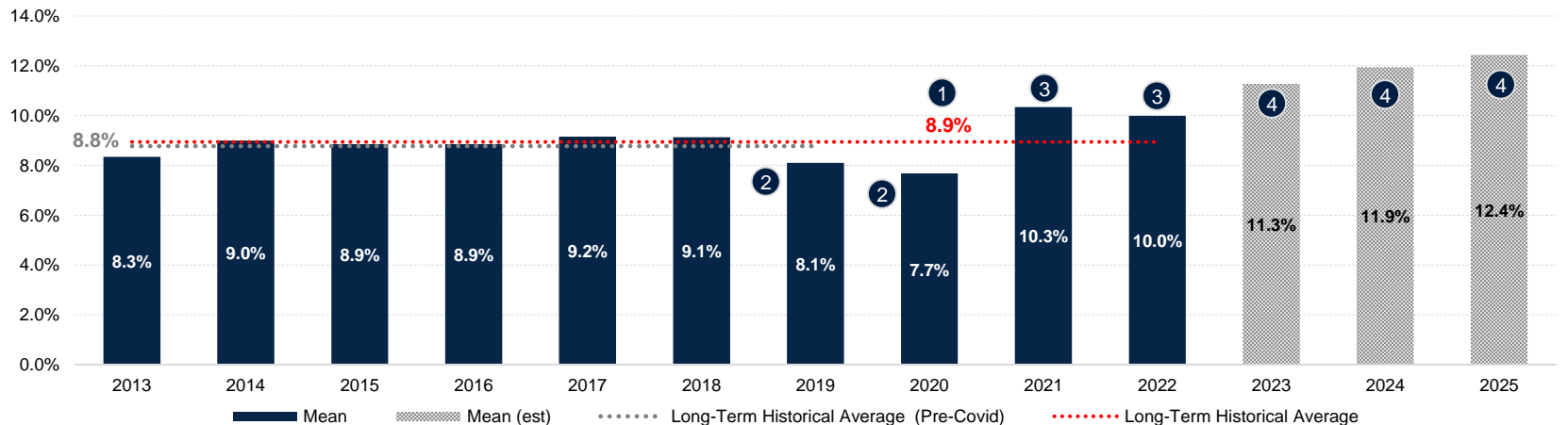
3 The recovery in '21 and '22 has led to margins above the historic long-term average

4 Strong demand in the sector is expected to allow for even higher margins in the coming years

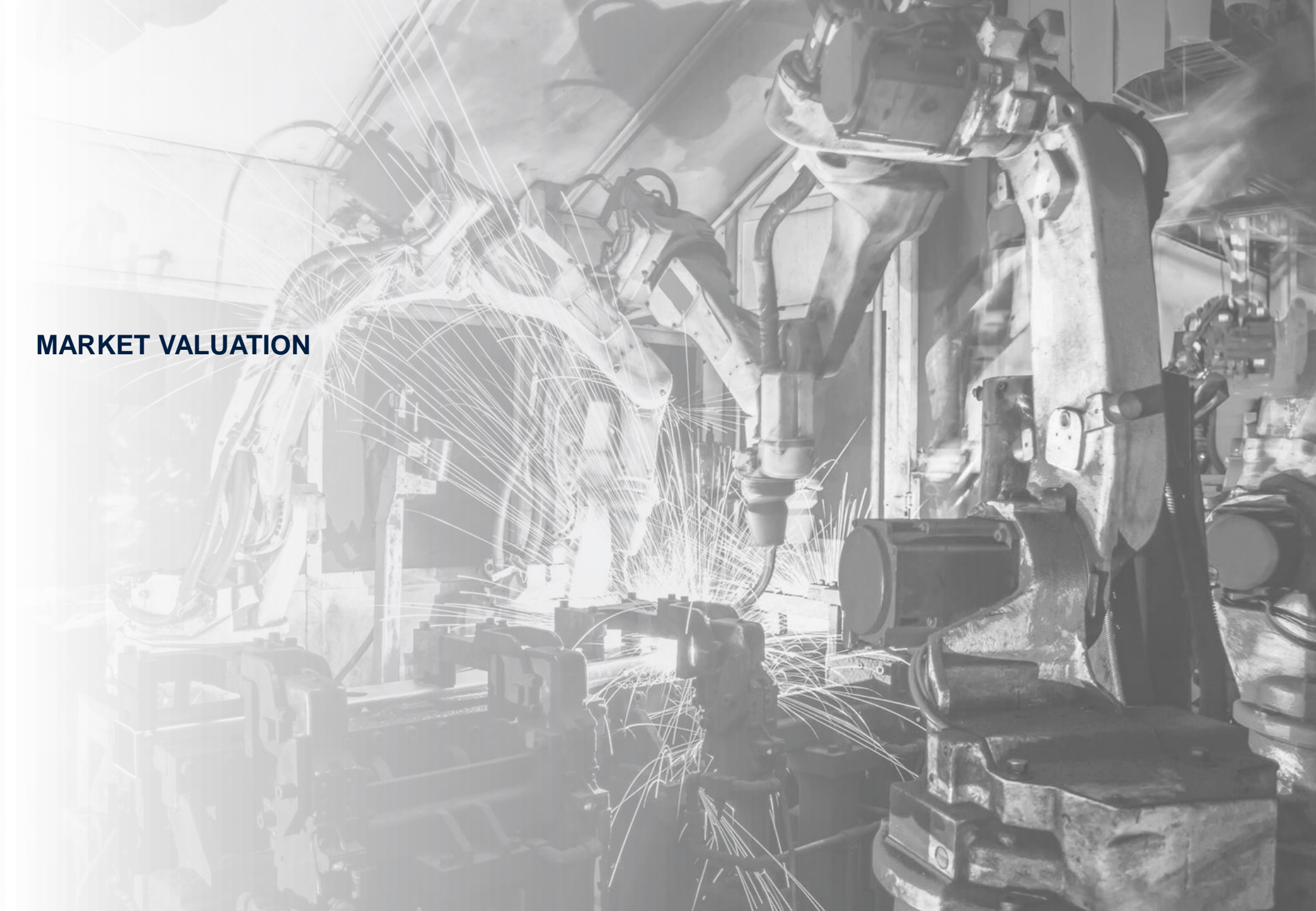
EBITDA Margin (Mean '13 – '25)



EBIT Margin (Mean '13 – '25)



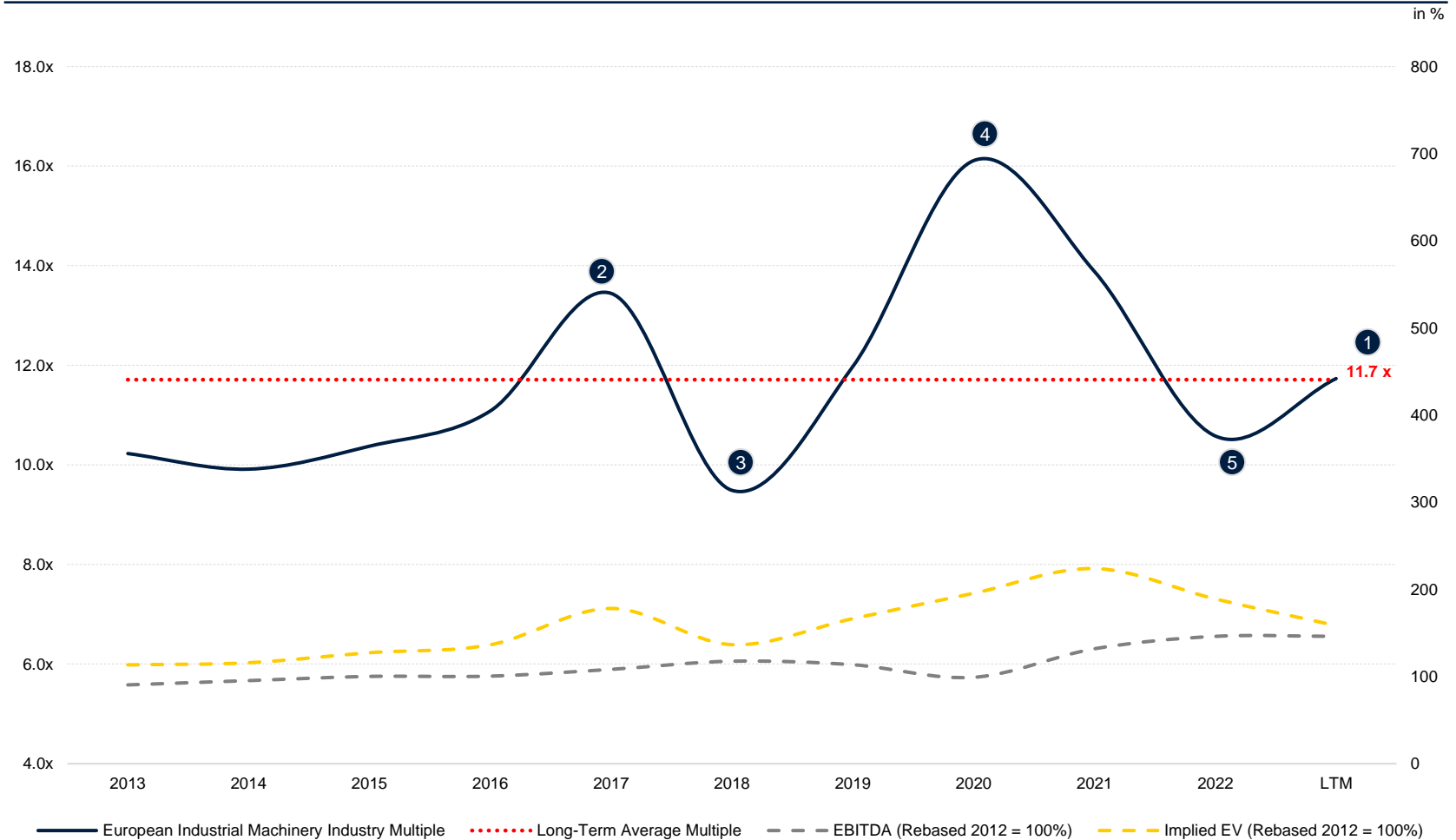
MARKET VALUATION



Market Valuation

Historical EV / EBITDA Development

EV / EBITDA Multiple (Median '13 – LTM)



- 1 The long-term ('13 – '22) average EV / EBITDA multiple is 11.7x
- 2 The average EV / EBITDA multiple of the industrial machinery producers has shown a moderate upward development until '17
- 3 The downward trend in the average EV / EBITDA multiple in '18 is largely driven by a shift in investor sentiment within the general economy
- 4 The declining EBITDA and increasing market capitalization in '19 and '20 led to a sharp increase of the EV / EBITDA multiple to new record highs
- 5 Rapidly increasing EBITDA resulted in a sharp multiple decrease in '21 and '22

- 1 The long-term ('13 – '22) average EV / EBIT multiple is 15.9x
- 2 The average EV / EBIT multiple of the industrial machinery producers has shown a moderate upward development until '17
- 3 The downward trend in the average EV / EBIT multiple in '18 is largely driven by a shift in investor sentiment within the general economy
- 4 The declining EBIT and increasing market capitalization in '19 and '20 led to a sharp increase of the EV / EBIT multiple to new record highs
- 5 Rapidly increasing EBIT resulted in a sharp multiple decrease in '21 and '22

EV / EBIT Multiple (Median '13 – LTM)

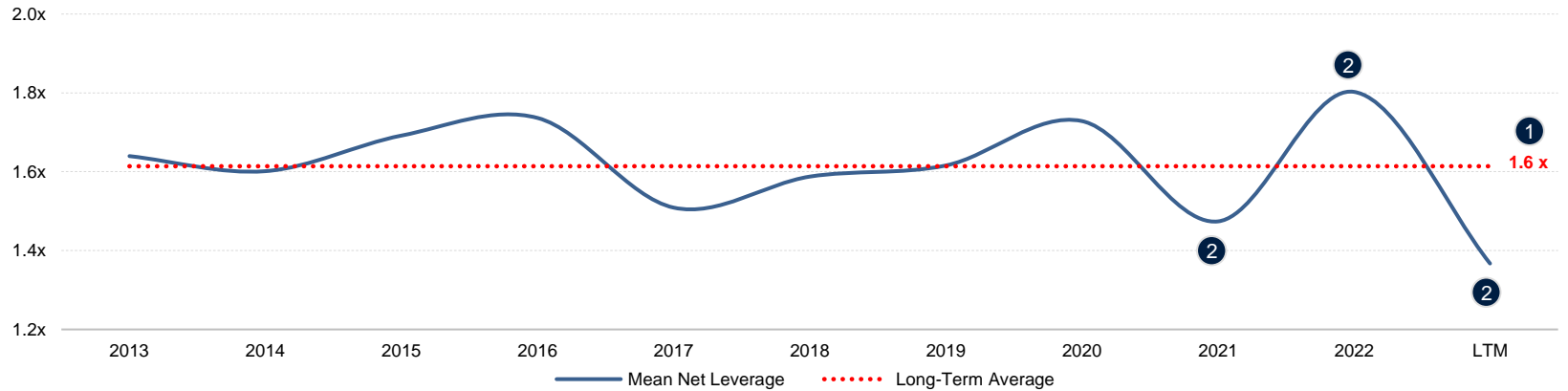


CREDIT STATISTICS

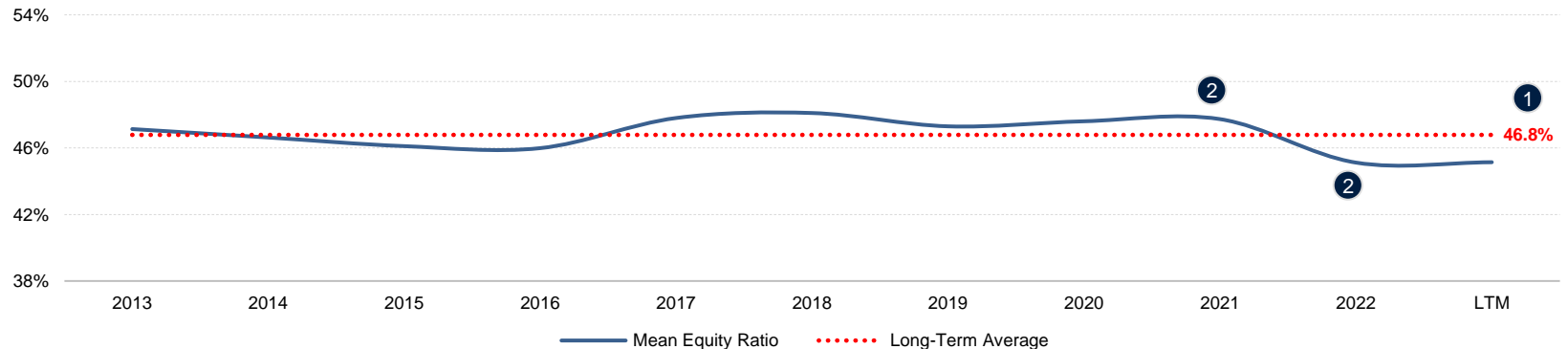


Due to the cyclical nature of the industrial machinery market, firms are financed somewhat conservatively, with a net leverage below 2.0x

Net Leverage (Mean '13 – LTM)



Equity Ratio (Mean '13 – LTM)



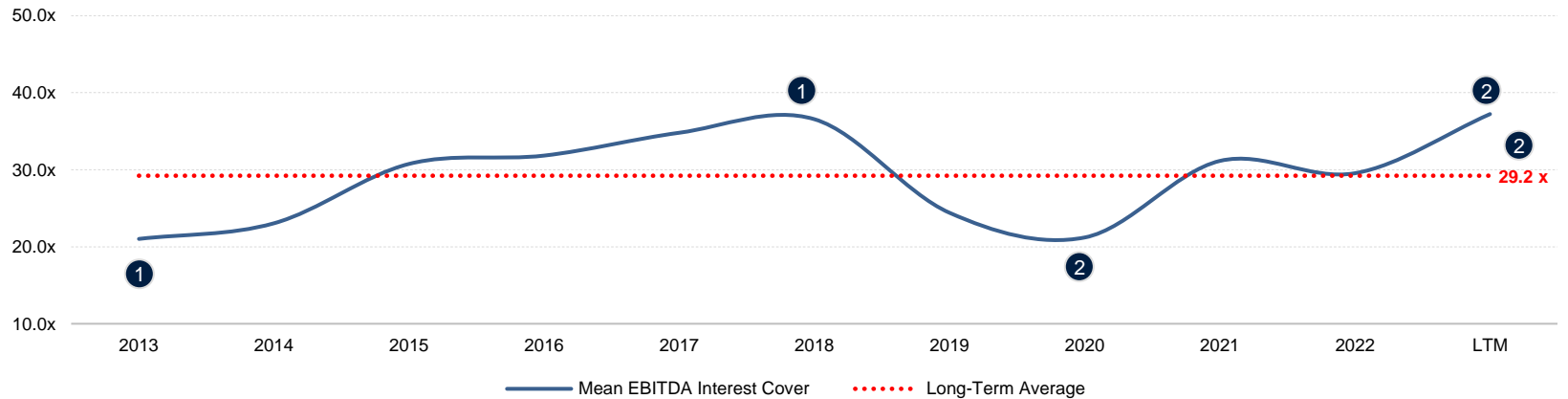
1 Net leverage and equity ratio have been slightly volatile from '13 to '22 with long-term net leverage and equity ratio averages of around 1.6x EBITDA and 46.8%

2 Net leverage increased in '22, crossing the long-term average, but has recently decreased again due to increasing EBITDAs. Equity ratio decreased in the same period but still solidly lies – together with net leverage ratio – at investment grade levels

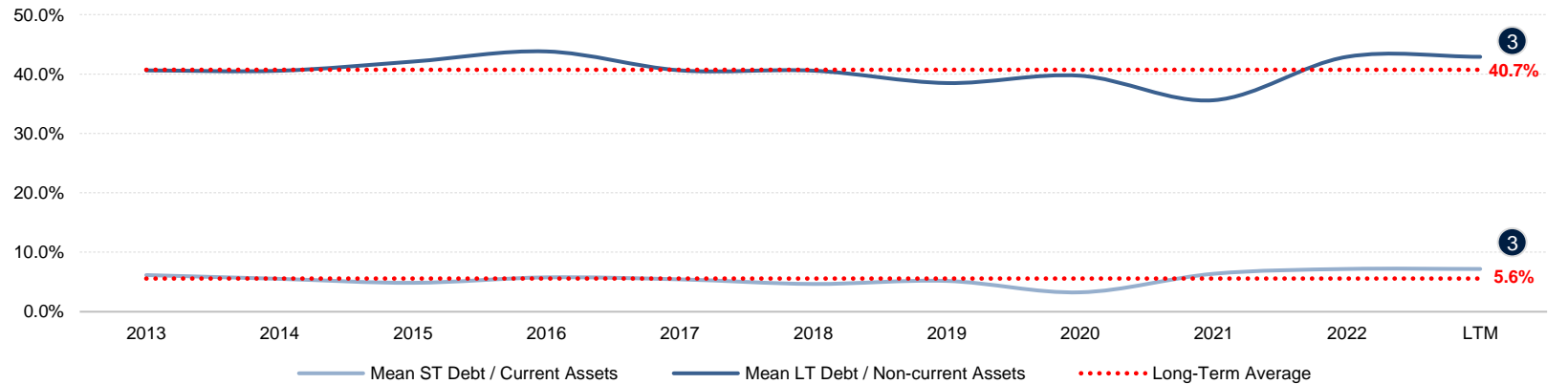
Credit Statistics

Historical EBITDA interest Cover Ratio / Loan-to-Value Ratios Development

EBITDA Interest Cover Ratio (Mean '13 – LTM)



Loan-to-Value Ratios (LTV) (Mean '13 – LTM)



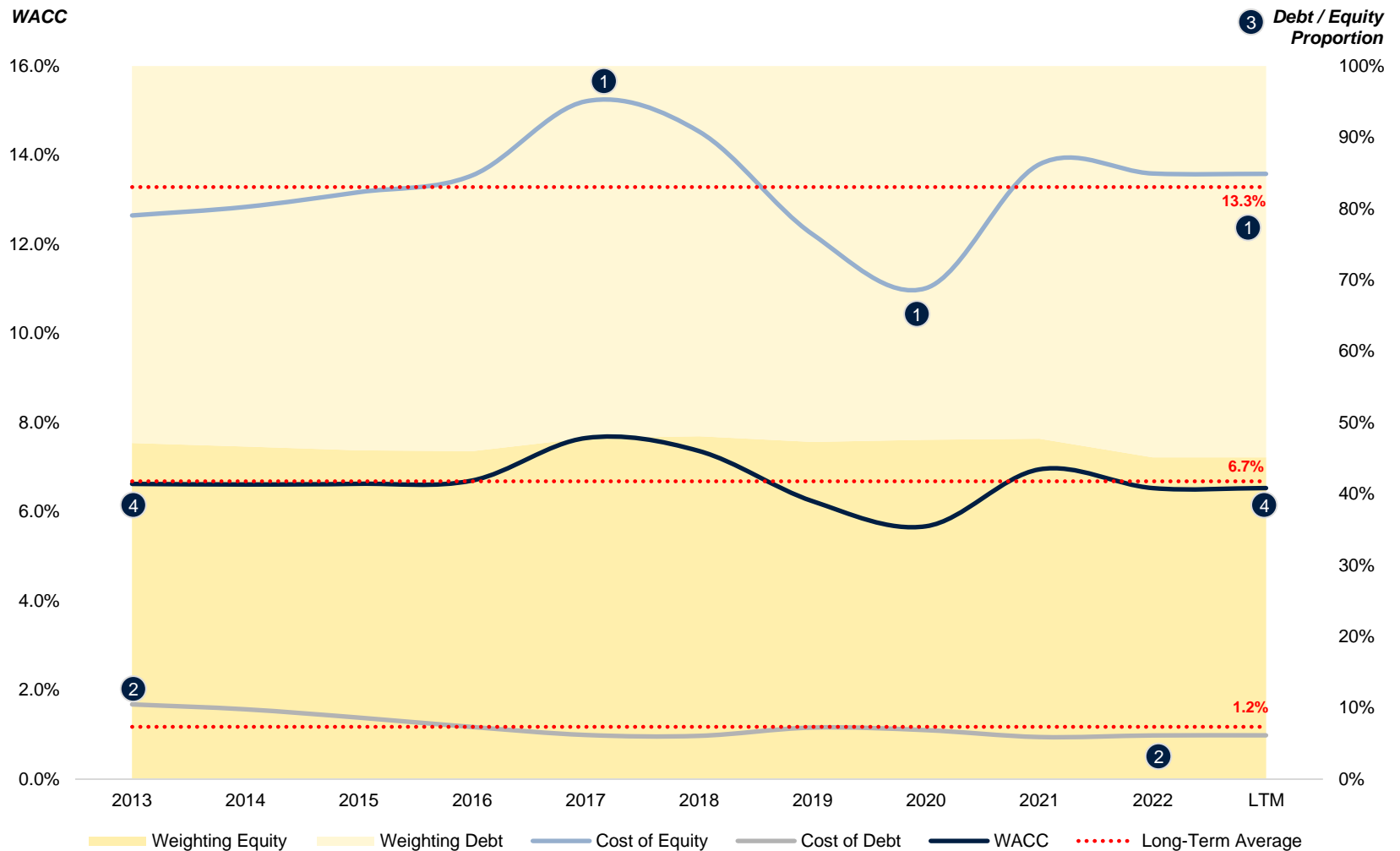
Loan-to-Value: Short- / Long-term debt as a percent of Current / Non-current Assets (explains how well Short- / Long-term debt is covered or can be repaid by Current / Non-current Assets)

- 1 Due to the decreasing ECB's base rate and an increasing EBITDA within the industrial machinery market, the EBITDA interest cover ratio increased between '13 and '18
- 2 After an EBITDA interest cover ratio record high in '18, the ratio has fallen in '20 due to a sharp decrease in EBITDA and crossed the long-term average of 29.2x. Since '20, the ratio increased again due to the increasing EBITDA and lies at very strong investment grade levels
- 3 Loan-to-value ratios have been relatively stable at conservative levels, implying solid collateralization for banks (also due to the asset heavy business)

Credit Statistics

Historical Implied Cost of Capital / WACC Analysis

- 1 The implied cost of equity (ROE) declined from '17 to '20, reaching a record low of 11.0% in '20. Since then, it rebounded to the long-term average of around 13.3%
- 2 The implied cost of debt has decreased from 1.7% in '13 to 1.0% in '22, following the decreasing ECB's base rate
- 3 The debt / equity proportion has been fairly stable ('13 – '22) around 45% equity, implying a solid investment grade capital structure
- 4 The weighted average cost of capital (WACC) is strongly correlated with the implied cost of equity



Source: S&P Capital IQ as of 19/04/2023

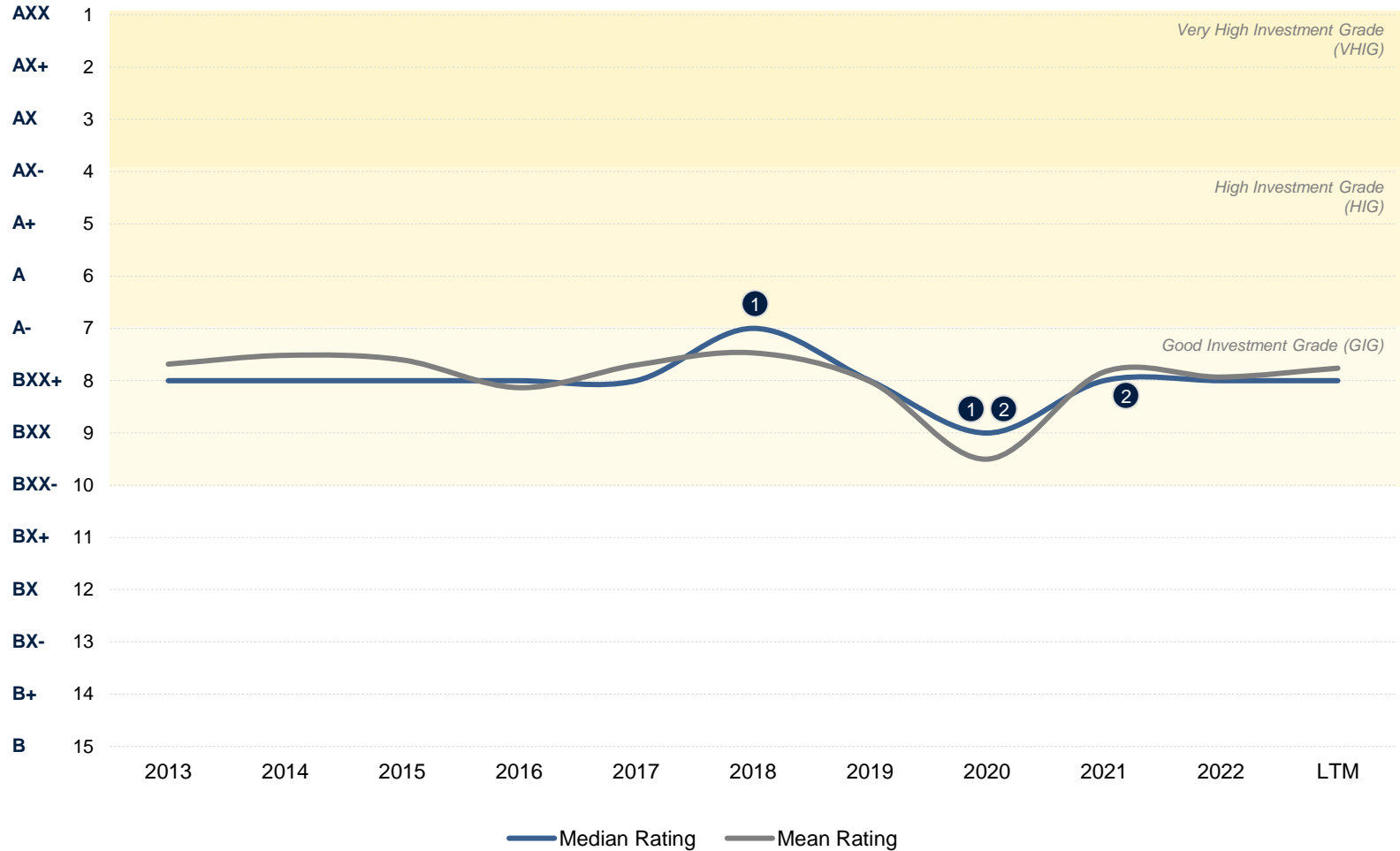
Note: Implied cost of equity based on annual return on equity values (the actual cost of equity to the firm); implied cost of debt based on annual interest expenses as reported (including financial lease expenses and other components of interest expenses) as a proportion of total liabilities (implied interest rate)

Rating Analysis

Historical Rating Development

Historically, the publicly listed industrial machinery producers (rated by large rating agencies, e.g. Fitch, Moody's, S&P) overall are rated as good investment grade

- 1 The median rating of the industrial machinery producers has been quite stable ('13 - '22), lying in the FCF rating corridor of A- to BXX (corresponding to S&P's rating scale of A- to BBB)
- 2 The median rating has started to decrease from '18 on to a rating of BXX in '20 (corresponding to S&P's BBB). Alongside the general recovery, ratings improved to BXX+ (BBB+) levels in '22



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