FINANCIAL ENGINEERING

TOMORROW'S INVESTMENT NEWS ALREADY TODAY

13 April 2023

Research Report - Issue #7

thyssenkrupp

A camouflaged special situation



source: pixabay.com

TODAY, THYSSENKRUPP IS A SHADOW OF ITS FORMER SELF.

Once a proud member of the German DAX index and certainly one of the most respected industrial businesses over here, it fell into a decade-long decay.

However, we've now reached a valuation where things are getting absurd.

My investment thesis is built on lifting hidden values that are camouflaged and discounted by a heavily cyclical business inside of a holding structure.

It took some time to stop denying reality and to face the truth. After a change in the management and the forced sale of its crown jewel, only to escape a looming bankruptcy, thyssenkrupp started a massive transformation.

In addition to cost savings, management reviewed all divisions with the aim of separating from problematic business units. Even the largest unit, its soul and tradition, is no longer a taboo.

Should management now proceed like publicly unveiled, thyssenkrupp's stock is valued so ridiculously low that a sale of only one of its two units under stricter review **could lead to a negative enterprise value** – a free lunch?

Topics of this report

About simplicity	p. 2
Foreword	p. 3
The investment case in a nutshell	p. 4
Brief overview of the stock	p. 5
The business model	p. 6
Leadership & capital management	p. 7
The financials	p. 8
Valuation and what to expect	p. 9
Investment risks	p. 10
Sources	p. 11
Disclaimer	n. 12



About simplicity

To the point - from proven successful people

"Behind every stock is a company. Find out what it's doing."

&

"All the math you need in the stock market you get in the fourth grade."

&

"If you're prepared to invest in a company, then you ought to be able to explain why in simple language that a fifth grader could understand, and quickly enough so the fifth grader won't get bored."

(Peter Lynch)

"That's been one of my mantras – focus and simplicity. Simple can be harder than complex: You have to work hard to get your thinking clean to make it simple. But it's worth it in the end because once you get there, you can move mountains."

(Steve Jobs)

"I am suspicious of thick and overly detailed reports. What is good is usually also quite simple, so lengthy explanations should not be necessary."

(Marc Faber)

"I don't look to jump over 7-foot bars: I look around for 1-foot bars that I can step over."

(Warren Buffett)

"Simplicity is the ultimate sophistication"

(Leonardo da Vinci)

Why do I write short reports and not long, extensive ones?

Short answer: It's about simplicity, comprehension and your time in todays information overloaded world.

<u>Long answer:</u> For me the big goal (and challenge) is to be clear and on point with my investment theses. For every aspect I look at, the aim is to write down the main points cleanly on a single page.

The research I am doing beforehand is not reduced, however, quite the opposite. My research process is extensive. I am spending several hours of time to crush together what is necessary into an easily comprehensive and digestive format for you.

It is a service from me and also my philosophy to be spot on.

Because I value your time!



Foreword

Management is lifting hidden values – shares are cheap

HIS IS MY FIRST REPORT ABOUT A SPECIAL SITUATION WHERE THE UNDERLYING CASE IS PURELY EVENT-DRIVEN.

Just to make it clear from the beginning: I am not convinced of a successful long-term buy and hold case here. It's solely about a – from my view – massively misprized stock that should pretty likely jump, should certain events unfold.

thyssenkrupp was once a proud member of the German DAX index and certainly one of the most respected industrial businesses over here. It is also one of the oldest of the big German companies, with its roots even reaching into the beginning of the 19th century (starting as Krupp). The marriage with Thyssen occurred in 1998.

After the Financial Crisis of 2008–2009, thyssenkrupp fell into a decade-long decay due to costly misinvestments which nearly bankrupted it. Its stock is down by around 85% from its pre-crisis highs! After moving sideways between 2012–2018, the next step down occurred, falling from over 20 EUR a share into single-digits. That's where we still are today.

However, we've now reached a valuation where things are getting

pretty absurd, as you'll see. It seems as if barely anyone is believing in thyssenkrupp anymore. Maybe because it isn't listed in the DAX anymore? Anyway, less spotlight is a situation I clearly prefer, as this story is not mainstream, yet.

My investment thesis is built on lifting hidden values in a targeted way by the management that are camouflaged and discounted by a heavily cyclical business inside of a holding structure.

What sounds complicated, indeed takes some time to browse through.

As it unfolds sometimes, it took time for thyssenkrupp to stop denying reality by only kicking the can down the road and to finally face the truth. After a change in the management and the forced sale of its crown jewel, only to escape a looming bankruptcy, thyssenkrupp started a massive transformation.

In addition to vast cost savings, management reviewed all business units with the aim of separating from problematic divisions. Even the largest unit, the steel making business – its soul and tradition – is no longer a taboo.

thyssenkrupp without steel making – who could have imagined? But it is an option and certainly the one that would massively shake through the stock and lift it higher.



Should management proceed like publicly unveiled – and this is the key to the story – thyssenkrupp's stock is valued so ridiculously low that a sale of only one of its two units under stricter review (besides steel, the marine division could be sold) could lead to a negative enterprise value – a free lunch?

It sounds unbelievable, but these are the numbers, as I will show you in this report.

Luckily, management has no pressure, as thyssenkrupp is flush with cash from the sale of its elevator unit in 2020.

For me, clearly an interesting situation that I stumbled upon by coincidence.

I hope you enjoy this new report.

All the best,

Alan Gałecki

Founder of Financial-Engineering.net



The investment case in a nutshell

What you need to know on one page - because I value your time

THIS REPORT IS ABOUT A NEARLY FORGOTTEN COMPANY WITH A SPECIAL SITUATION UNDER THE RADAR.

thyssenkrupp is a household name of the old industrial era of Germany. The company is one of the oldest and best known, Germany has. Unfortunately, due to overoptimism, together with heavy misinvestments, thyssenkrupp suffered massively, especially during and after the Financial Crisis of 2008–2009, of which it could never recoup, again.

A few years ago, it also dropped out of the DAX – likely the reason why this special situation is here.

The stock is around 85% below its highs from 2007–2008.

However, with a big management change in 2019, a new wind started to blow. thyssenkrupp started a transformation that previously was rather not thought possible.

- it sold its crown jewel, the elevator unit, for 17 bn. EUR which strongly shored up the balance sheet and also saved the company
- Thousands of job cuts helped to get costs under better control
- First small divestures were done, further strengthening the balance sheet

Now, two unloved divisions shall be separated, too:

- the iconic steel businesses until recently unimaginable
- The highly politicized marine divisions that supplies militaries worldwide



source: Markus Winkler on Pexels

Both have their set of problems and risks. But they also require huge investments that management wants rather to escape from. Plus you have steel facing uncompetitive energy costs at their German plants.

As I show you in this report, this is a lucrative special situation to think about. My estimates are that both, the steel as well as the marine division, each could bring in on average 1 bn. EUR in additional cash into the company.

Maybe even some more.

At the time of the release of this report, the enterprise value of the whole thyssenkrupp is already just – you guessed it – a billion EUR!

Since the sale of its elevator business, thyssenkrupp is flush with cash. It even has total cash of 7.1 bn. EUR on the balance sheet—165% of its current market cap!

Net cash, after debt, is still 3.3 bn. EUR -77% of the current market capitalization.

Management is not under pressure to act, but can negotiate attractive deals. But they shouldn't wait too long, either...

Should management proceed as planned, the remaining thyssenkrupp could be valued with a negative enterprise value.

I see a value of at least a billion EUR remaining – without steel and the marine unit.

The pension deficit is huge, but with a sale of steel, it would halve. Altogether, higher interest rates help to reduce the hole further and they are not due immediately.

Read on for the whole story...



Brief overview of the stock

Key facts and longterm chart



thyssenkrupp		
ISIN / ticker	DE0007500001 / TKA	
Home bourse	Frankfurt (Germany)	
Share price (as of 12 April 2023)	6.85 EUR	
Market Cap / enterprise value	4.3 bn. EUR / 1 bn. EUR	
Shares outstanding (basic / diluted)	622.5 mn. / 622.5 mn. shares	
Average 3 month daily volume	3.5 mn. shares / ~24 mn. EUR	



source: Chart from tikr.com



The business model

What is the company doing (and in this case also planning)?

T FIRST GLANCE, IT IS NOT SO TRIVIAL TO GRASP WHAT THE COMPANY IS DOING OVER ALL ITS DIVISIONS.

That is typical for a conglomerate, spanning over several divisions.

Let's get through all of them, step by step with some commentary.

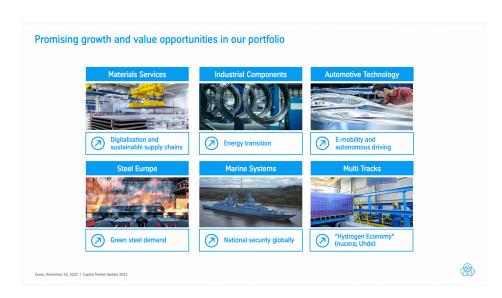
The two most important units are the following, as they generate most of the sales and operating earnings (EBIT; figures per last fiscal year):

- "Steel Europe" is the core and traditional steel production unit. thyssenkrupp is still Germany's number one (no. two in Europe). Steel is also the biggest segment by EBIT, responsible for 60% of total op. earnings. However, by revenue it is "only" second, with a 30% contribution.
- With revenue and EBIT shares of 40% each, comes "Material Services". This is a more low-margin distribution and trading business, however, one of those that management sees the future of thyssenkrupp in, due to not needing many investments.

Both units benefitted from higher materials prices last year. As prices came down, this year should also see way lower results. In the steel unit, thyssenkrupp, according to the last conference call, was able to lock in some longer term and higher margin bookings.

The rest is comparatively small, yet not unimportant (high materials prices depressed results, here):

- "Industrial Components" – in short "IC" – consists of two sub-units. They build parts and modules that enable circular movements, e.g. in wind turbines



Source: thyssenkrupp capital markets day 2022 presentation

or excavators. "IC" had a revenue share of 7%, but only less than a percent of EBIT.

- "Automotive Technology" produces parts for cars like suspensions, chassis or whole bodies. This unit had a sales share of 12% (EBIT of just 0.3%).
- "Marine Systems" is the most politically-dependent division, as submarines and naval technology are commonly bought and used by militaries worldwide. Sales were just 4% of total revenues, EBIT not even worth mentioning due to older, low-margin projects but they're running out.
- "Multi Tracks" is a collection of non-core, mostly unprofitable businesses where the fate is not sealed, yet. The "star" here is the hydrogen subdivision "nucera" that is planned to be floated via an IPO in the future.

What's the core message now?

First, management wants to get rid of Steel. Although it is important

with high revenue and EBIT shares, it also has by far the highest pension deficits and its German production plants are dying losing their competitiveness, especially due to high energy costs, as experienced last year. Plus, the "green steel" vision (of politicians) requires massive investments that will be tough to shoulder.

The other division under review is the marine unit. Its boss is pressuring to be released to "unlock value". It is a heavily politically influenced division with rather low margins, but world-class products. Management wants to split from them, too, due to the military / political connection.

With a sale of each, the "new thyssenkrupp" would be (much) smaller, but also more agile, having way less cost pressure and less investment requirements.

I will do guesses and calculations in the valuation section, to show what potential sales would mean for the remaining thyssenkrupp.



Leadership & capital management

What is the company doing with stockholders' money?

THE KEY IS EXECUTION BY THE MANAGEMENT.

The only big and strategic shareholder with ca. 21% of stock is the Alfried Krupp von Bohlen and

Halbach foundation – controlled by the family descendants.

Today's management aren't big shareholders. That's why their actions need to be monitored more closely than their words. Factually, the current management is turning around a nearly-dead dinosaur where prior leaderships made colossal mistakes, costing thyssenkrupp billions of EUR and even nearly its existence.

Current CEO Martina Merz prior had a career at another traditional German industrial company, Bosch, as well as a consultant. Since 2019, she first was the chairwoman of the board of directors for a few months, only to jump right into the CEO position of thyssenkrupp.

Her predecessor, Guido Kerkhoff, was only for about a year on the job, following Henrich Hiesinger, who was CEO from 2011–2018. Under his leadership, thyssenkrupp suffered losses resulting from decisions of his predecessor, Ekkehard Schulz (CEO from 1999–2011). Shortly before the crisis of 2008–2009, thyssenkrupp's management made two very costly investment mistakes.

They invested several billions in production plants in the USA and Brazil. Especially the latter was a miscalculated disappointment of grand scale. Both assets finally got sold for lower sums than previously invested. Billions were thrown out of the window and had to be written off, as costs were multiple times higher (!) than calculated.



Source: TIKR.com

The current CFO, to the contrary, has been with thyssenkrupp since the mid-1990s in various positions and divisions. So he should know the company well from within. He is CFO since 2019 (started together with CEO Ms. Merz in a big management change back then).

At the end of the fiscal year 2018/2019 per 30 September 2019, thyssenkrupp had net debt of 3.7 bn. EUR (plus big pension deficits) and was rather low on cash.

The company was producing losses in many years and burning cash nearly every year due to its capital intensity. Shareholder's equity at that time was melting down to only 1.7 bn. EUR, resulting in an equity ratio of only less than 5%.

The new management – under Ms. Merz – arranged under pressure from activist investors the sale of the then most valuable unit (elevators) by the summer of 2020, bringing in 17 bn. EUR of cash. Also, hidden values were lifted which increased the equity position on the balance sheet significantly. The chart above shows how the financial situation with this move improved dramatically.

Currently, the management is executing as follows:

- The balance sheet was stabilized.

- Around 10% of the workforce was fired to achieve cost savings.
 The initial program is nearly completed, now.
- Last year, the management sold three smaller businesses from its Multi Tracks division, generating sales of 800 mn. EUR, further strengthening the balance sheet.

Now, it's about getting rid of the problematic steel and marine units. Both need big investments and both have sort of their own individual political problems ("green production" and military).

The question is whether they will be sold for pure cash, put into joint ventures for some cash with remaining controlling stakes or only spun-off – the latter would also relieve thyssenkrupp of required gigantic investments and pension liabilities. However, it would not bring in more cash which I am mainly banking on with my investment thesis.

Every separation should make the company more transparent and push the share price higher, as ballast would be thrown off. We'll have to wait and see.

Although no buyback program is active, management has the board's authorization to repurchase up to 10% of outstanding stock.



The financials

Cash flow statement, balance sheet, income statement

ODAY, AFTER MANY DIFFICULT YEARS, THE COMPANY STANDS ON A PRETTY SOLID FOOTING.

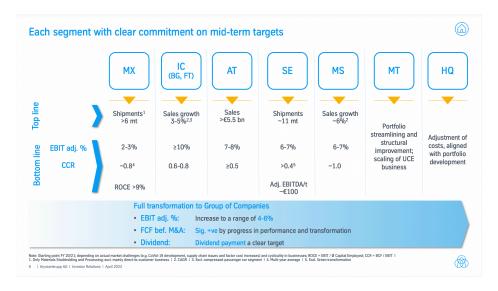
As per 31 December 2022 (thyssenkrupp's Q1), the company has a big net cash position of 3.3 bn. EUR and an equity ratio of 40%. Unthinkable some years ago, but comfortable in the current environment. Hence, no liquidity or balance sheet problems here.

This is especially important as interest rates are now massively higher. Better not to be dependent on the markets for financing whether via debt or equity.

Last year was phenomenal for thyssenkrupp, as high metals prices lifted margins and results, leading to a total EBIT of 2 bn. EUR. The steel and Material Services units produced strong results and lifted the whole company. EBIT margins were depressed, however, with about 4%. Free cash flow after investments and sales of some units was also positive with around 400 mn. EUR – that is pretty much for this company.

Such results are unlikely repeatable again this year. Management guides for lower sales, margins and results. The outlook was confirmed again with the release of the Q1 results – the Q1 figures were even slightly above expectations, especially concerning the free cash flow.

Note: There's sort of a seasonal pattern where cash flows are lower in thyssenkrupp's first half until March, due to higher inventory requirements, while the following release massively pushes up cash flows. Better look at the numbers for the whole year, not quarterwise for a more accurate picture.



Source: Q1 conference call presentation

Management expects earnings and free cash flow to be positive from now on. That's already good news.

The question to be answered, how positive? The good thing is, for as long as thyssenkrupp will not produce any losses and not burn any cash, this is even secondary for this investment case with its special situation. It would be of importance for a more long-term valuation.

Above, you see management's midterm targets. The key information to take home here is that EBIT margins with time shall be higher than even during the good year 2021/2022. If management delivers, EBIT margins of 5–6% for the whole company could be achievable – for a more long-term planning. But this is something I seriously would spend time on rather later, because the asset play here is centerstage.

Important for me is that:

- the balance sheet is strong - which is the case.

- The company doesn't burn cash anymore.
- Enough liquidity at hand and management not under pressure to act
- No silly investments are done; this also doesn't seem to be the case as management is focussed on cleaning up and reorganizing the company, currently.

In case of a serious economical downturn, of course, this case would have to be reviewed again.

Due to higher interest rates, pension liabilities could be reduced from more than 7 bn. EUR to 5.7 bn. EUR. This is still much, but with a sale of the steel division, around half of that number would be slashed, too.

The 3.3 bn. EUR in net cash stand against a market cap of only 4.3 bn. EUR – here it gets interesting, as the next section will show where we will dive deeper into the valuation and outlook.



Valuation and what to expect

Valuation always matters!

A S YOU NOW KNOW, THIS CASE IS ALL ABOUT POTENTIAL SALES OF AT LEAST ONE BUSINESS UNIT.

I am convinced that there's a lot of hidden value to be lifted, in case management does the right things. Here's what I am expecting after my research.

The steel and marine divisions are not fitting into management's long-term vision of a holding company that's controlling lean and agile businesses. Besides required high investments as well as unfavorable energy costs in Germany, there are also the political issues and uncertainties.

Let's start with **Marine Systems**. Now could be a good time to offload this highly politicized, but world-leading business, as military spending worldwide unfortunately is increasing. Last year, this unit had sales of less than 2 bn. EUR, but new orders of more than 4 bn. EUR. Margins were ultra-low due to older low-margin projects. This shall change, soon, with mid-term targets of 6–7% for EBIT-margins.

In case of a complete sale (the most probable option currently), I would count conservatively:

2 bn. EUR sales * 5% EBIT margin * a multiple of 10x

which results in a potential value of 1 bn. EUR. It's up to you to adjust the figures as you wish. But a billion EUR is where I see the value. It could be more (the more the better, of course). For comparison, last year the sold Multi Tracks businesses generated 800 mn. EUR with also a sales multiple of 0.5x – these businesses were neither more profitable, nor of strategic, political importance.



Source: thyssenkrupp capital markets day 2022 presentation

You see, there's a good chance that this sale alone would already cover the current enterprise (*EV*) value of 1 bn. EUR! Maybe even more.

Next, a potential sale of **Steel Europe** which is harder. Normally, I would do the same math:

10 bn. EUR sales * 5% EBIT margin * a multiple of 5x

to achieve a potential price of 2.5 bn. EUR. Here, I assume that sales drop massively from last year's 13 bn. EUR and the multiple for this highly cyclical and energy intensive business has to be way lower. But the 2.5 bn. EUR are still too much, because an estimated 2.5–3 bn. EUR of pension deficits is attached to this package. That's why nobody was willing to buy this division until now. Reuters reported (*here and here*) that there are rumors of a new attempt to sell Steel Europe for a price of 1–1.5 bn. EUR.

Anyway, I think that **even 1 bn. EUR would be great** to get rid of the problems and risks this division

has, especially as pension deficits would halve for the whole company. Here again, the sum would cover – at least – the current EV of the whole company!

There are also chances that further sales from Multi Tracks occur. The favorite as of now is an IPO of the hydrogen business nucera. It certainly would bring in some cash, however, I cannot make a precise guess. That's why I would leave this whole unit as a bonus.

thyssenkrupp is flush with cash. It has 7.1 bn. EUR in pure cash — enough to buy back 165% (!) of outstanding stock (which won't happen, but a small buyback could already move the needle). Net cash is 3.3 bn. EUR — 77% of the current market cap. To put this into persecutive: Do you know any other industrial company with 77% of its market capitalization in net cash?

And of course the remaining businesses have some value. I estimate at least a billion, should they reach their margin targets.



Investment risks

Important to think about – what could go wrong?

ERE ARE THE RISKS TO CONSIDER.

We have to distinguish between operational risks and those in connection with the special situation:

- a massive economic downturn could push thyssenkrupp into red numbers, causing cash burn and a reduction of net cash (which would increase the valuation, as the remaining debt stays)
- No sales anymore of any division
- Sales way below my estimates, not lifting enough hidden value
- Instead of sales, thyssenkrupp could due to difficulties with finding a buyer, especially for the steel division, decide to spin-off either one or all units, in question. The spin-offs would be like dividends to the existing shareholders and the freed businesses could perform poorly, not generating any value for the remaining thyssenkrupp (or below estimates)
- A sudden spike in energy prices, mainly affecting the steel unit
- Difficulties with the strong union
- Political vetoes, forcing thyssenkrupp to keep the units and to keep on investing in them
 this could lead to further financing needs in the future, depending on energy prices and politics
- thyssenkrupp still has in its current form 5.7 bn. EUR in pension deficits that it must cover. But they are not due immediately. Higher interest rates are also helpful here.



source: Drew Rae on Pexels

These risks should not be underestimated!

It will be interesting to see what the company announces and guides with their half year results in May.



Sources

- $•\ https://d2zo35mdb530wx.cloudfront.net/_binary/UCPthyssenkruppAG/e9f547a1-34a1-45b4-b4db-1dfb6f88f814/221125-Gesamtprasentation-CMU-22-FINAL\ internet.pdf$
- https://www.thyssenkrupp.com/en/newsroom/press-releases/pressdetailpage/thyssenkrupp-shows-resilience-in-a-challenging-environment--significant-improvement-in-key-financial-indicators-and-further-progress-with-the-transformation-in-fiscal-year-2021-2022-159793
- $\ \underline{https://d2zo35mdb530wx.cloudfront.net/_binary/UCPthyssenkruppAG/en/investors/reporting-and-publications/link-thyssenkrupp-GB-2019-2020-ENG-Web.pdf \\$
- https://d2zo35mdb530wx.cloudfront.net/ https://d2zo35mdb530wx.cloudfront.net/ binary/UCPthyssenkruppAG/a6f9d5ed-1610-402e-97d3-325f3c35f3fb/Annual-report-2021 2022-thyssenkrupp-AG.pdf
- https://d2zo35mdb53owx.cloudfront.net/_binary/UCPthyssenkruppAG/7a596775-96b7-41fe-be2b-392c7a3db50d/230404 Charts-Q1 FY 22 23 Facts-and-Figures-April FINAL.pdf
- https://d2zo35mdb530wx.cloudfront.net/_binary/UCPthyssenkruppAG/70e923c8-738f-45e7-8f27-9b0e7cfd783f/ thyssenkrupp Q1 2022 2023 EN web.pdf
- https://www.thyssenkrupp.com/en/company/management
- https://www.reuters.com/markets/europe/thyssenkrupp-talks-with-german-government-over-future-defence-division-2023-02-03/
- $\bullet \underline{ https://news.bloomberglaw.com/mergers-and-acquisitions/thyssenkrupp-revives-sale-of-submarine-marine-systems-unit-ft} \\$
- https://www.reuters.com/markets/europe/thyssenkrupp-union-says-no-board-plans-steel-business-yet-2023-03-31/
- https://www.n-tv.de/wirtschaft/Thyssenkrupp-Marine-Systems-Chef-dringt-auf-Ausgliederung-article24042233.html
- https://www.reuters.com/markets/deals/thyssenkrupp-puts-elevator-deal-architect-charge-planned-steel-sale-sources-2023-03-29/
- https://www.reuters.com/markets/commodities/thyssenkrupp-odds-over-steel-business-cvc-interested-handelsblatt-2023-03-21/



Disclaimer

Risk warning and terms of usage

Before using the report, please study carefully the following key points:

- My Site is a personal blog and not a regulated financial, tax or legal advisory service aimed at giving you specific advice with regards to buying, selling or holding financial instruments of any kind. You may use my Site to access my opinion and other information I provide. None of it constitutes financial, legal or tax advice. Where I make paid-for products available (like with this report), these are solely offered to contribute to the operating costs of my research.
- All material published on my Site is solely for information and entertainment purposes. It is not a replacement for you receiving financial, tax or legal advice from your personal, regulated financial or legal advisor. Neither is it a replacement for doing your own research and due diligence.
- My Site is only provided for your general information and use. It is not intended to cater for your particular requirements for financial, tax or legal advice. The author does not accept any liability for any loss suffered by any reader or user of the Site as a result of any decision. It is a condition of me allowing you access to my Site that you assume full responsibility for using the Site, and that you accept that I will not be liable for any action you take in reliance on information on the Site or procured through the Site.

All the contents and materials published on my website are part of a personal blog. Some of the discussed investments on this blog or separate published reports like this on my blog could be part of the personal portfolio of the author. However, the author is never responsible for publishing or updating detailed information about his private transactions. Anyway, the author is not issuing any transaction recommendations, neither buy nor hold nor sell in his blog posts or other published materials including the paid for content.

All information contained on my website or separately published reports like this on this blog are for information purposes only and only contain the opinion und assumptions of the author which in themselves can all be wrong. The reference to the analyzed companies on this blog is neither an offer nor a request to subscribe to shares of this company. The provided opinions and assumptions are for information purposes only and are not considered as recommendations for investments.

Information from external sources are indicated appropriately. The author does not assume any responsibility or liability for the accuracy, correctness and completeness of those information, even though he deems them to be. Before making any use of the contents you must extensively research and assess on your own, if the published information are suitable for you own purpose and are compatible with your individual situation and goals.

The presented opinions and assumptions are those of the author only at the time of publication and may not agree with information provided at a later time. From time to time, the author may publish updates to his past writings, but is never responsible or liable for doing so. It is only a voluntary service.

This blog and all its articles, research reports, media appearances and any related content serve purely to inform and inspire readers to look out for new investment opportunities and research themselves — as a starting point for or additional individual opinion as part of an investment research process. The reader is self-responsible to do own extensive research and use a variety of other sources and never base any investment decisions solely on this website or the content published there.

Any valuations of stocks or companies given on this website and its publications are highly subjective and theoretical results of studies of a range of possible outcomes, which do not to have come this way anytime in the future. The author is not forecasting any outcomes or likely share prices. The performance of the past is no indicator for future performance and does not provide necessarily any indication of future performance. The value of investments and their possible returns are not guaranteed and may increase as well as decrease and thus cause substantial losses for the investor.

Potential investors or interested persons are strongly advised to consult their personal professional advisor for the evaluation of the investment risk and the investment strategy in order to determine the appropriateness of an investment bases on their individual situation.

The author is not paid, sponsored or otherwise compensated by any of the companies discussed in these reports.

Using any of the information contained on this blog $\underline{financial}$ -engineering.net or published material are at the reader's own risk. There is no advisory relationship between the reader / user and the author.

It is prohibited to re-publish the content f this website without the express written permission of the author.

© Alan Gałecki, Financial-Engineering.net