

Hold EUR 2.30 Price EUR 1.75 Upside 31.3 %	Value Indicators: EUR DCF: 2.28	Warburg ESG Risk Score: n.a. ESG Score (MSCI based): n.a. Balance Sheet Score: n.a. Market Liquidity Score: n.a.	Description: NAGA is a multi-asset social investing platform operating at an international scale
	Market Snapshot: EUR m Market cap: 94.7 No. of shares (m): 54.0 EV: 88.4 Freefloat MC: 39.4 Ø Trad. Vol. (30d): 77.80 th	Shareholders: Freefloat 41.62 % Naga Management 12.15 % Fosun Fintech Holdings Ltd. 33.94 % Apeiron Investments Ltd. 12.61 % BIT Capital 7.00 %	Key Figures (WRe): 2022e Beta: 1.9 Price / Book: 0.7 x Equity Ratio: 90 %

CFD brokerage at a discount; Initiation with Hold

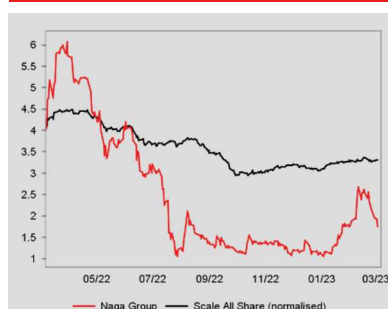
Naga Group (NAGA) is a provider of CFD (contract for difference) brokerage services, which are enhanced by a social trading platform that also includes payment services for customers. As usual for CFD brokers, Naga generates revenues by providing the counterpart to its customers' trades. Hence, the company earns its revenues on the spread provided but also on the losses generated by customers - about 87.36% of private customers at Naga actually lose money trading in those instruments. However, this also results in extraordinarily high churn rates of about one-third of the total customer base per year. To compensate for this, Naga spends a significant amount of its sales on marketing which results in an increasing number of active customer accounts. Whilst the core product remains classical CFD brokerage, the range of products is intended to be extended further. As well as CFDs, the platform allows its users to invest in crypto currencies and shares. The number of active customers grew dynamically from about 8k in 2019 to nearly 14k in 2020 and to about 28k in 2021. However, with the disillusionment in the capital markets in 2022, the company should have experienced some headwinds. A key differentiating aspect of Naga is the social trading feature. The company provides an online platform for users to interact, exchange trading ideas and track the investment activities of others. Furthermore, users may automatically replicate the transactions of others. For this purpose, users are ranked and transactions are made transparent to other users, giving them the chance to replicate the trading behaviour of successful traders. Users who are followed by others are given the advantage of a profit share, which offers an additional income stream.

Our financial model is based on the following assumptions:

- An increase in the active customer base from currently 28k to more than 37k by 2024e.
- Revenue per trade should increase from currently EUR 4.2 to about EUR 5 whilst transactions per customer should decrease, leading to a revenue CAGR of 12.2% in 2021-24e.
- Besides marketing costs, which are expected to remain high, the other cost positions should show some economies of scale which should result in constant margin expansion until a long-term EBITDA margin of 26% is reached.

Based on these assumptions, we derive a DCF-based PT of EUR 2.30 which offers only limited upside to the current share-price level. Higher-than-expected customer acquisition costs or churn rates are the major risk factors to our financial model and could lead to a continuation of the loss-making track record of the past. Another risk lies in the potential for stricter regulation to increase customer protection in light of the losses generated by the majority of customers trading CFDs.

In January 2023, the company announced that it was negotiating with a multinational brokerage company to pursue a strategic transaction. This has the potential to affect our investment case significantly and will be assessed once more information is available. Given the limited upside potential and the mentioned risk factors, we initiate coverage with a Hold rating.

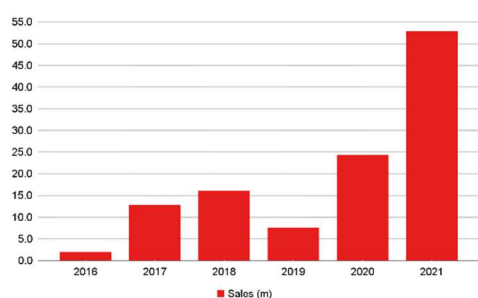


Rel. Performance vs Scale All	
1 month:	-10.6 %
6 months:	40.9 %
Year to date:	44.8 %
Trailing 12 months:	-39.4 %

Company events:	

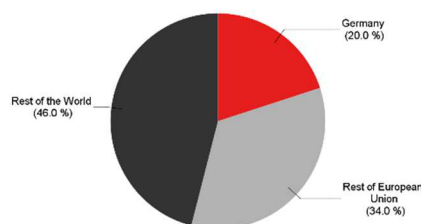
FY End: 31.12. in EUR m	CAGR (21-24e)	2018	2019	2020	2021	2022e	2023e	2024e
Sales	12.2 %	16.1	7.6	24.4	52.9	52.0	64.3	74.7
Change Sales yoy		25.5 %	-52.7 %	219.6 %	117.1 %	-1.6 %	23.6 %	16.1 %
Gross profit margin		103.3 %	74.3 %	93.8 %	89.3 %	89.5 %	89.4 %	90.4 %
EBITDA	-	0.0	-9.2	4.5	-4.2	-7.9	5.0	11.6
Margin		-0.2 %	-120.3 %	18.5 %	-7.9 %	-15.2 %	7.7 %	15.5 %
EBIT	-	-5.1	-12.2	0.9	-9.5	-29.1	-0.5	6.0
Margin		-31.7 %	-159.9 %	3.9 %	-18.0 %	-56.0 %	-0.8 %	8.0 %
Net income	-	-4.3	-12.0	-0.6	-10.1	-30.1	-1.5	4.5
EPS	-	-4.34	0.00	-0.01	-0.19	-0.56	-0.03	0.08
EPS adj.	-	-4.34	0.00	-0.01	-0.19	-0.56	-0.03	0.08
DPS	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Dividend Yield		n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
FCFPS		-0.17	-9.29	-0.08	-0.51	-0.58	0.06	0.13
FCF / Market cap		-3.8 %	0.0 %	-3.9 %	-8.0 %	-33.2 %	3.3 %	7.3 %
EV / Sales		n.a.	n.a.	3.7 x	6.3 x	1.8 x	1.4 x	1.1 x
EV / EBITDA		n.a.	n.a.	19.9 x	n.a.	n.a.	17.9 x	7.0 x
EV / EBIT		n.a.	n.a.	94.9 x	n.a.	n.a.	n.a.	13.6 x
P / E		n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	21.9 x
P / E adj.		n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	21.9 x
FCF Potential Yield		-38.9 %	0.0 %	4.9 %	-1.1 %	-8.1 %	6.2 %	14.2 %
Net Debt		-6.7	0.6	0.3	-8.6	-3.2	-6.3	-13.2
ROCE (NOPAT)		n.a.	n.a.	0.5 %	n.a.	n.a.	n.a.	4.8 %
Guidance:	Strongly increasing revenues at an improving yet negative EBITDA							

Sales development in EUR m



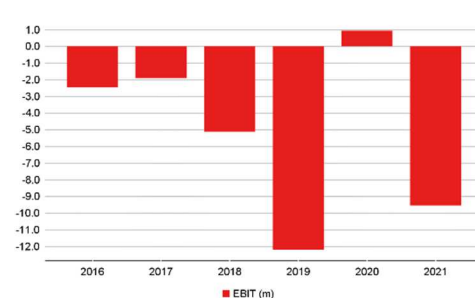
Source: Warburg Research

Sales by regions 2021; in %



Source: Warburg Research

EBIT development in EUR m



Source: Warburg Research

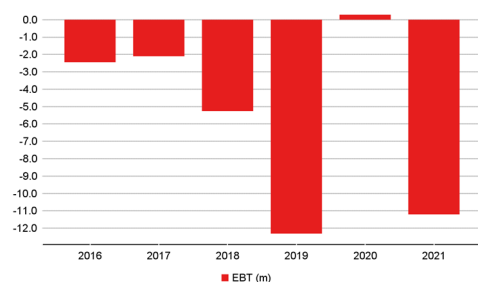
Company Background

- Naga offers a financial platform that includes CFD brokerage, crypto trading and payment solutions
- The group is located in Cyprus and operates under the regulation of Cyprus Securities and Exchange Commission
- Besides the brokerage services, Naga provides a social platform for users to interact, share trading ideas and observe the trading behaviour of others

Competitive Quality

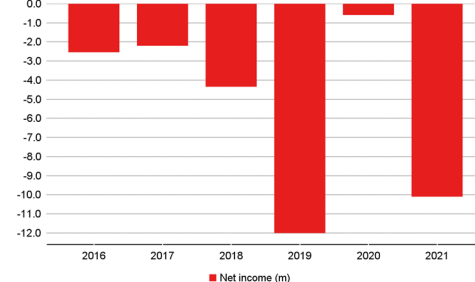
- The key differentiator is the combination of classical CFD brokerage services and users' social interaction online
- The so-called "autocopy" function allows Naga's customers to automatically replicate transactions of others which is rather unique and ensures high customer activity
- As usual for CFD brokers, Naga shows a rather high yearly churn rate of about one-third of its customer base, making constant marketing expenditures necessary

EBT development in EUR m



Source: Warburg Research

Net income development in EUR m



Source: Warburg Research

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Summary of Investment Case

Investment triggers

- Following a boom phase for brokerage during the pandemic, Naga now focuses on its core business and counts on its social trading aspect for sustainable customer and transaction growth.
- After reaching its high in 2021, the stock is currently trading close to its all-time lows.
- Even though the company faces constantly high churn rates and therefore high marketing expenses to maintain its customer base, the business model offers some economies of scale which should result in a positive EBITDA from 2023e onwards.
- Main risks for the investment case include higher-than-expected churn rates or customer acquisition costs as well as the possibility of stricter regulation of CFD brokerage. Furthermore, the company has yet to prove its ability to turn the company profitable.

Valuation

- Our PT of EUR 2.30 is based on a DCF model.
- After two successful capital increases in 2021 totalling EUR 64m, the company is sufficiently capitalized and is currently trading at 0.65x P/B. Liquid assets per H1 2022 stood at EUR 6.3m.
- A peer group comparison appears of little significance for now, because the business is still loss-making.

Growth

- To ensure further customer and transaction growth, Naga will continue to face high marketing investment to compensate for the high churn rates of the CFD brokerage business.
- As a CFD broker, Naga takes the counterpart of the trading position of its customers and generates the main part of its revenues on the losses of CFD customers. The majority actually lose money trading the respective products.
- The social trading aspect of the platform should help to increase customer lifetime and attract further customers.
- Our model reflects an increasing customer base of currently about 28k to more than 37k by 2024e.
- At relatively stable revenues per trade, we anticipate a 2021-24e sales CAGR of +12.2%.
- Whilst EBITDA is expected to remain negative in 2022, economies of scale should lead to breakeven in 2023e. A long-term EBITDA margin of 26% is the basis of our valuation.
- However, following a track record of loss-making years on net income level since the IPO in 2017, the company has yet to prove that it is able to operate the business profitably on a sustainable basis.

Competitive quality

- Naga is active in the niche market of CFD brokerage and is developing the business further towards a broader financial platform, including crypto trading and payment solutions.
- The social trading aspect, that connects customers and allows traders to interact and automatically replicate the transaction behaviour of others, differentiates Naga from other brokers and constitutes a unique feature.

Warburg versus consensus

- The consensus currently consists of only one other research provider and those estimates are about 25% above ours.

Company Overview



NAGA is a fintech company with a core business of providing online brokerage and financial services

	2018	2019	2020	2021
Revenue in EUR m	16.1	7.6	24.4	52.9
EBIT in EUR m	-5.1	-12.2	0.9	-9.5

Segments	NAGA Trader	NAGAX	NAGA Pay
Products	<p>1000+ tradable assets Copy trading</p> <p>Investing</p> <p>Native Web & Mobile apps</p>	<p>Crypto wallet Crypto exchange NAGAX</p> <p>Crypto</p> <p>Cold & hot storage</p>	<p>IBAN & VISA Debit card</p> <p>Payments</p> <p>Mobile Banking app</p>

Main
Competitors

TRADE
REPUBLIC
LYNX

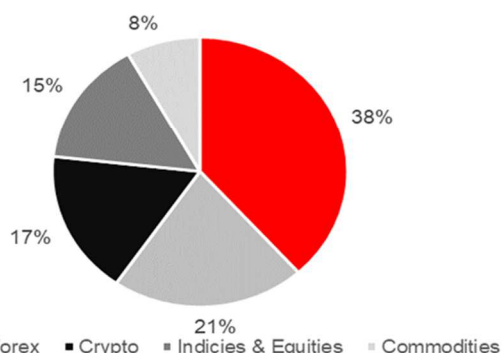
eToro
justTRADE
Ein Service der Sutor Bank

flatex DEGIRO
scalable
CAPITAL

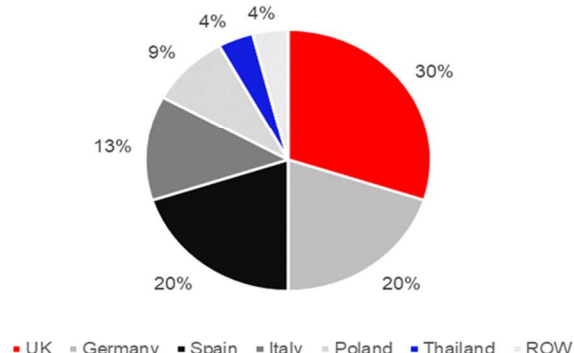
Smartbroker
xtb
online trading

Key markets Germany, Spain, Italy, Mexico, Cyprus, Poland, Netherland, Hungary, Portugal, Mexico, Brazil, Nigeria, Australia and China

Market Segments



Regional Split



Source: Warburg Research

Competitive Quality

- Innovative fintech with a core business of providing **online brokerage**.
- **One single app** for brokerage, crypto and payment
- Combination of **social network** with **trading platform** is what differentiates the Naga Group from others.
- Platform for professional traders to **influence** trading community with **Naga's trading tools** and **webinar system**.

Social trading platform as key differentiator

Social trading platform with holistic financial services approach

Naga's core product consists of brokerage services for consumers in the area of CFD brokerage, with a strong and growing social trading offering. With a single app and state-of-the-art online brokerage platform, Naga provides access to investments in several markets.

However, a key differentiator to other online brokers is the social network component. Naga's users are provided with several tools and services similar to a social media platform. Users can communicate, share investment ideas and interact with the broad intelligence of the community. Customers can create their own profiles, follow and subscribe to others' profiles and upload.

Furthermore, Naga differentiates itself from competitors by providing additional financial services to its customers. These include a crypto wallet and its own crypto exchange (NAGAX) as well as NAGA Pay, a digital payment platform which includes the issuance of Visa debit cards to customers.

Three core products of Naga

Naga allows its customers to use all three enhanced products on one app and with a single account. Mobile user experience and digital onboarding of a user creates a unique and powerful customer experience.

- **Brokerage:** Naga offers about **1000 tradable assets** in a fully licensed market with an in-built messenger and proprietary **copy trading tool (NAGA Trader)**
- **Crypto:** Naga provides its users with their own crypto wallet with all crypto currency-related transactions occurring on its own crypto exchange, NAGAX.
- **Payments:** The **NAGA Pay** payment platform offers a fully digital account opening process and easier integration with other products. Besides, customers are offered Visa debit cards for daily use.

Additional services (crypto and payments) to increase customer lifetime

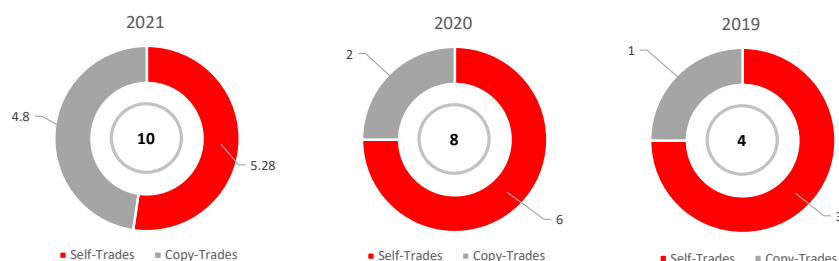
The majority of revenues is still generated by classical CFD brokerage. As usual for CFD brokerage, customers that start trading actively show very high activity. However, CFD brokers also experience high churn rates in its customer base, which also holds true for Naga. We expect the average lifetime of an active customer to be currently at around three years. However, as Naga develops from being a pure CFD broker towards a holistic financial service company with a multiple product offering, the average customer lifetime should increase over time.

Copy trading to ensure high customer activity

Besides the social aspect of the copy trading tool, it makes the company's revenues less dependent on the volatility of capital markets and leads to persistently high trading activity by the customer base.

With the so-called “autocopy” technology, customers can decide to automatically and instantly replicate the trading decisions of other traders. Copiers pay a flat fee of EUR 0.99 per trade and a performance-related fee of 5% of the profit in cases of successful trades that yielded more than EUR 10 profit after closing. Overall, copy trading has turned out to be a key driver of transactions and revenue for Naga. In 2019, about 33% of trades were copy trades. The proportion increased to nearly 50% in 2021.

Composition of executed transactions (in m)



Source: The Naga Group, Warburg Research

Successful traders that are followed by other traders receive a fee per copied trade, which is determined by the member status of the trader. For most asset classes, the pay-out per trade starts at USD 0.12 and can go up to USD 0.32 per copied trade. For FX trades, the fee can amount to as much as USD 1.20 per trade. The higher the number of followers a trader has, the higher the additional earnings potential. Therefore, successful traders with a strong following are highly incentivized to continue showing high trading activity, even in times of low market volatility or in bear markets. This is likely to have been the main reason behind the continuation of high customer activity in 2022 (at the end of April, the company had already exceeded the revenues of H1 2021). While conventional brokerage competitors were experiencing significantly lower customer activity.

Full compliance with regulatory framework

To provide CFD brokerage services to its clients in the different regions of operation, Naga is required to hold official licenses and to ensure that certain customer protection processes are in place. In 2018, the European Securities and Markets Authority (ESMA) introduced new restrictions in order to ensure higher customer protection in the CFD market. These include:

- Leverage limits depending on the underlying asset (3.33% for major FX pairs, 20% for single stocks)
- Exclusion of subsequent contributions above and beyond the initial capital for a specific trade
- Any monetary and some non-monetary incentives for customers to trade CFDs were prohibited
- Clear customer warnings about the risks associated with trading CFDs and that the majority of customers lose money doing so

Furthermore, CFD brokers have to ensure that their clients are sufficiently financially versed and have a thorough understanding of financial products before allowing them to trade in CFDs. Against this backdrop, Naga performs a comprehensive questionnaire in its KYC (know your customer) process, making sure the customer is sufficiently financially versed to trade in CFDs. However, this rather complex onboarding process reduces the already quite low ratio of registered accounts to active trading accounts even further.

Given that the majority of customers still lose money while trading CFDs, it cannot be ruled out that further regulation could restrict the business further. Be it stricter access to CFDs to ensure that only experienced investors trade in these products, a limitation of offered spreads by the providers or a complete ban on CFDs for private investors (as seen with

binary options), any further regulation would be more likely to impede the business than facilitate it.

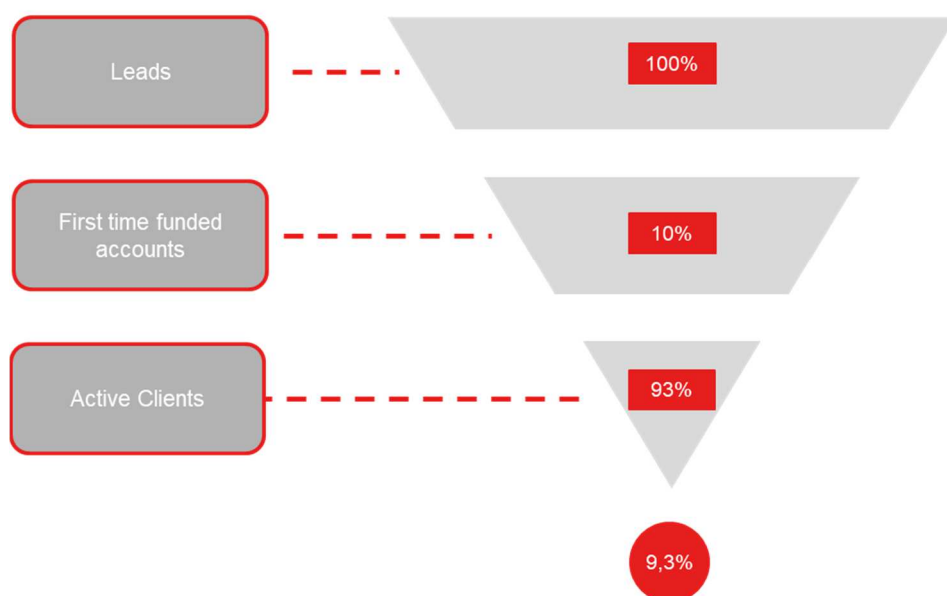
High churn and low customer conversion

As already mentioned, the average lifetime of Naga's customers is rather short. However, winning new customers is not an easy task for the company either. Acquisition channels are predominantly online.

- Search engine marketing directly addresses potential customers seeking e.g. CFD brokerage or copytrading.
- Affiliate marketing on other websites, especially those that specialize in related topics.
- Referral marketing is of specific importance for Naga. Traders that enjoy a large following are usually active on other social media platforms as well. Those traders can earn additional income for the successful referral of new customers, and besides, more followers increase the trading income further.

Generally, performance marketing is the most important marketing channel for the company. Although Naga was the main sponsor of Spanish football club FC Sevilla in the 2021/22 season, the majority of customers are acquired online.

Customer conversion funnel



Source: The Naga Group, Warburg Research

Before committing to opening an account and transferring money, customers usually open a test account. Thereafter, some customers start transferring money, which results in the cohort of first-time funded accounts. The conversion rate of leads to first-time funded accounts stands at a rate of roughly 10%. Of those, some 93% become active trading customers which means that only 9.3% of the acquired leads eventually become paying customers.

Growth / Financials

- With its focus on CFD brokerage, Naga serves a niche group of highly active trading customers.
- The entry of social brokerage with the company's "autocopy" function allows customers to replicate the transaction activity of successful traders, which should ensure customer and transaction growth in the years to come.
- Despite high churn rates of about one-third of the customer base per year, the active customer base is expected to grow from about 28k currently to more than 37k by 2024e as a result of ongoing marketing efforts and an ever-increasing product offering.
- Assuming relatively stable development in revenue per trade, sales are expected to grow at a CAGR of +12.2% from 2021-24e
- Marketing expenses should remain the main cost driver to compensate for the high churn rates. Nevertheless, economies of scale and improved cost discipline should lead to a positive EBITDA margin in 2023e, which should then expand to 26% in the long run.
- Major risks to our investment case could arise from higher-than-expected customer acquisition costs, higher churn rates, or potential limitations on the business from increasing regulation

Structural growth should mainly stem from the further expansion of the social trading business

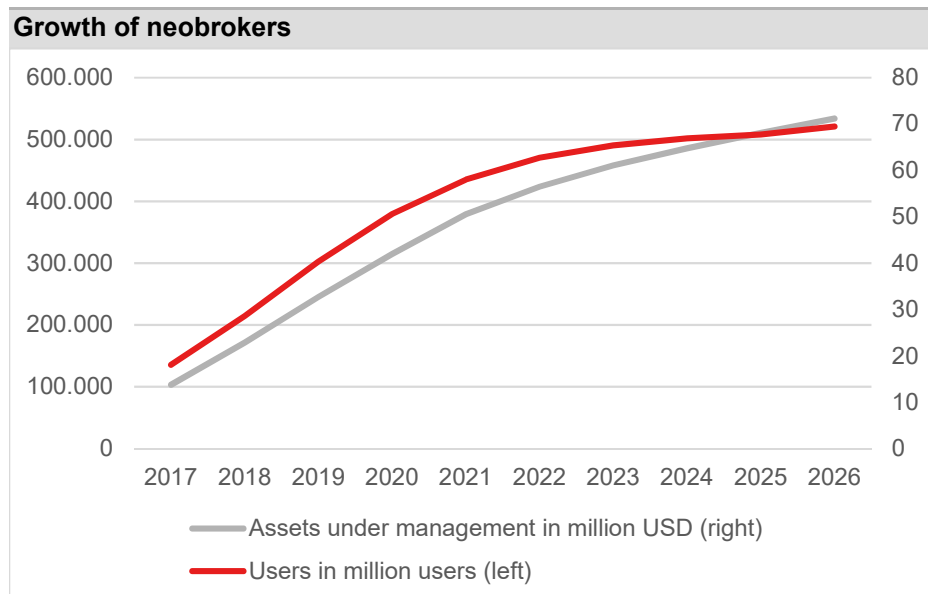
Growth supported by capital market turbulence during the pandemic

The lockdowns and movement restrictions implemented by national and state governments resulted in a **significant surge in retail investing** and trading. This was also seen in the sharp rise in the volatility index and the price slump in the market caused by the sudden economic shock triggered by the coronavirus and the initiation of the lockdown in mainland China. The revenue stream of Naga mainly depends on the trading activities of its customers who quickly try to benefit from the gap between the price fluctuations. As volatility rises in the capital market, online brokerage is usually faced with an increase in the volume of orders put to them by their customers.

Development of VDAX in year Jan. 2019 – Mar. 2022

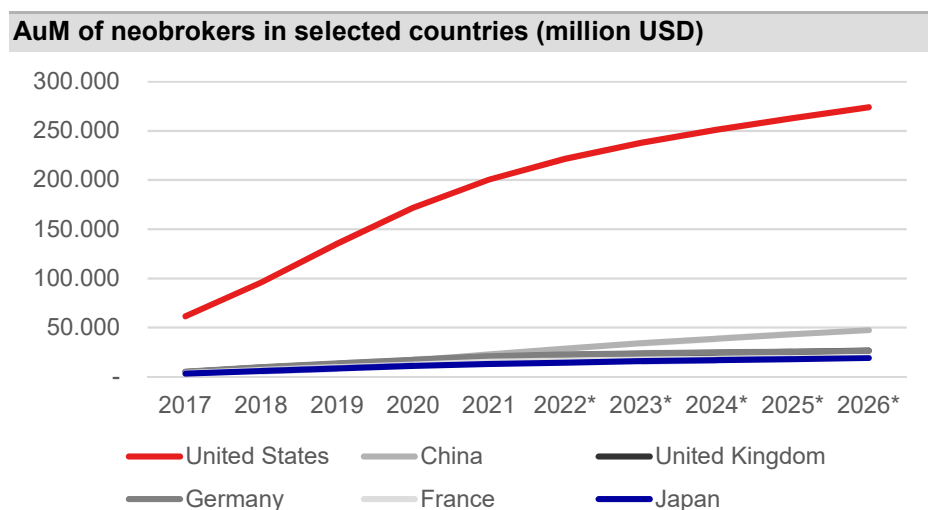


Neobrokers



Source: Statista, Warburg Research

Neobrokers are financial companies that operate exclusively in the digital space. They usually position themselves as online brokers, trading platforms, social-trading platforms or investment platforms for private clients. They include companies such as Trade Republic, eToro, Robinhood and Bitpanda. The focus is on young new private investors, user-friendliness and the opportunity to invest in a wide range of asset classes. The number of users of these neobrokers has risen sharply worldwide. From 2017 to 2021, the number of users tripled from 18 million to 58 million. While the pace of growth is expected to weaken, the number of users should nevertheless increase again to more than 65 million users by 2025. At the same time, assets under management also increased from USD 103 billion in 2017 to almost USD 380 billion in 2021. By 2025, assets under management could rise to around half a trillion dollars.



Source: Statista, Warburg Research

The most important and largest market by far is the USA. With currently more than USD 200bn in assets under management, the assets under management are about double the

cumulative five next-largest markets China, UK, Germany, France and Japan. Nevertheless, there is a strong need for neobrokers in Europe especially in the UK, Germany, and France where the market is growing rapidly, with around EUR 60 billion in assets under management in these three countries alone.

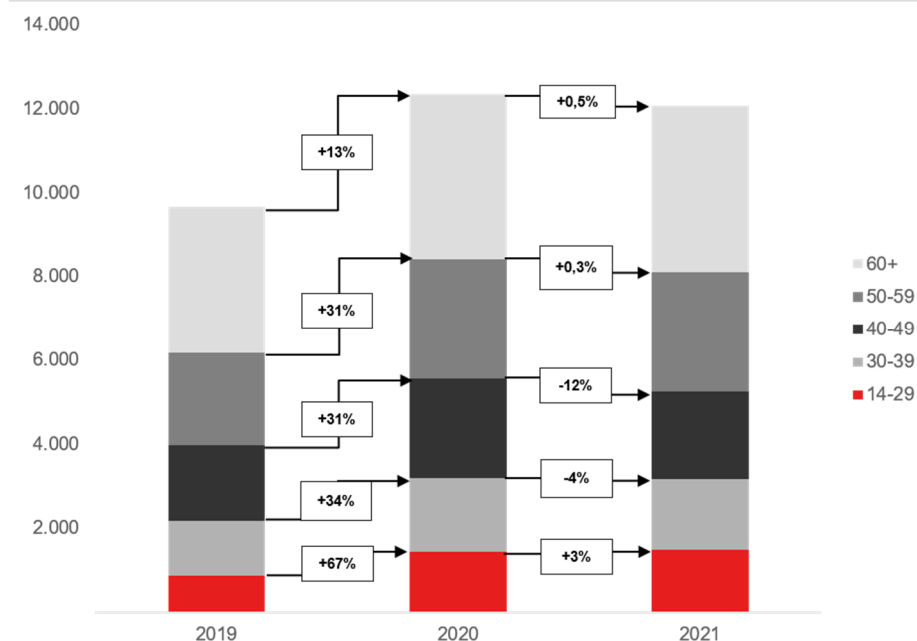
Millenials - a significant growth driver

The digitalization of the stock market and the corona crisis has influenced many younger people, especially the so-called “Millenials” to invest their savings. This generation, also called “Gen Y”, was born between 1980-1999 and is considered to be particularly technology-savvy. This age-group is showing increasing interest in products from fintech companies. The user-friendly and appealing smartphone apps from low-commission brokers such as Naga, enables this generation to open and manage an investment portfolio with just a few clicks. The high social-media affinity of the youngest generation, Gen Z, serves as a reinforcing effect and, in the last years, an increasing number of posts on the topic of investment have been shared by influencers and on internet forums.

As a result, the number of people in the two youngest generations (14-39) that have invested in shares, ETFs, and funds has risen by 45% from 2,166,000 to 3,159,000 in the last two years.

Part of the increase was pandemic-driven, but as the target group are young people between 18 and 35, who presumably do not feel addressed by the classic offering from online brokers, Naga can benefit from the momentum and the rising interest of Gen-Y in financial independence in the next years.

Age structure of German population invested in equity (in k)



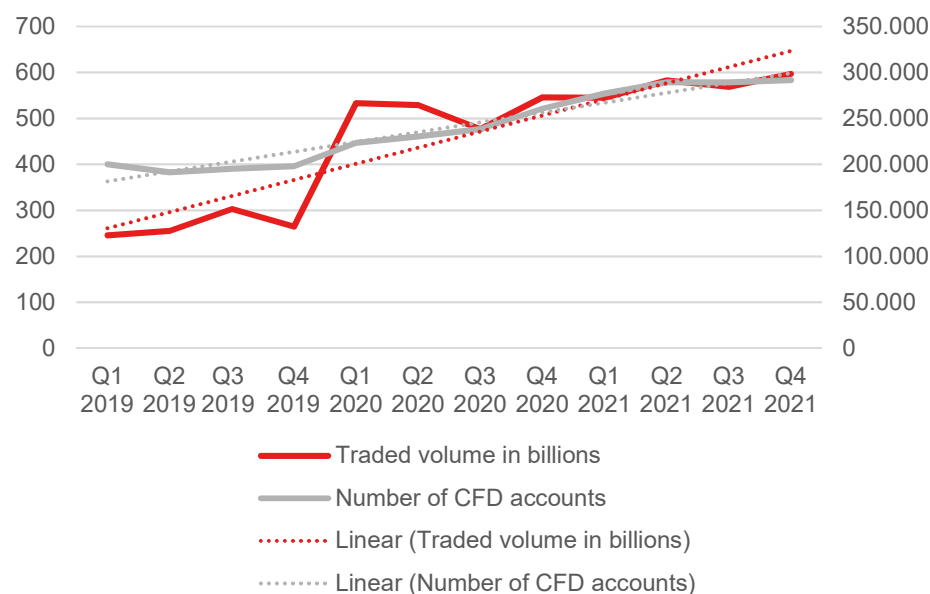
Source: Deutsches Aktieninstitut, Warburg Research

As mentioned above, the target group for Naga are young investors from 14-29.

Positive effects also on CFD market

The contracts for difference or CFDs have declined since 2015 due to stricter regulation on European level. Moreover, it has been prohibited to combine different financial products for private investors to generate additional contributions. Therefore, the CFD trading volume was in a downward spiral until the exceptional year of 2020.

CFD trading volume and number of accounts in Germany



Source: Factset, Warburg Research

The crash in equities caused by the pandemic reversed the CFD trading trend significantly, as seen in the surge in the number CFD trading accounts in comparison to the years before.

The CFD market in Germany has enjoyed strong growth in recent quarters. From Q1 2019 until Q4 2021, the traded volume increased from EUR 246bn to EUR 597bn, which is an increase of 143%. The number of CFD accounts increased by 46% from 200k to 292k. This boom in the CFD market coincides with increasing interest among German investors and especially young investors in various asset classes.

Customer growth driven by ongoing marketing efforts

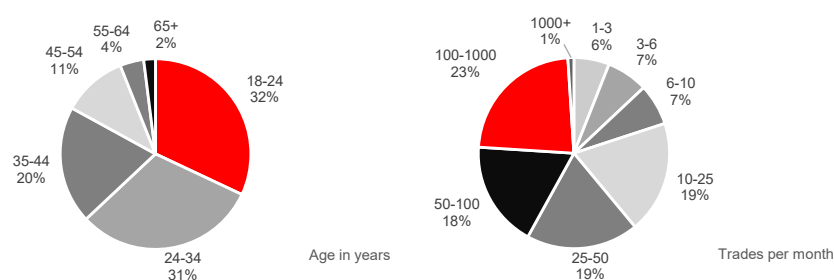
Naga is already operating on a global basis in more than 100 countries in Europe, Asia, Africa and Australia. Therefore, further customer growth is based less on regional expansion but rather on stronger market penetration.

Nonetheless, one important exception has to be made for the UK market, which is the largest CFD market in Europe. Naga had to cease operations in the UK after Brexit as it does not hold a licence from the British regulator FCA. Re-entering the market would result in attractive customer growth prospects but as the process of obtaining a licence is rather complex and lengthy, the acquisition of a smaller, local and already licensed competitor appears more likely.

As already mentioned, Naga gains the majority of its customers online. Looking at the profile of the average CFD customer, the strategy appears to make perfect sense. The average customer of Naga

- is male and has an average annual income of EUR 60k
- is between 25 and 35 years old and is rather risk-tolerant
- has an intensive digital footprint, is tech-driven and active on social networks

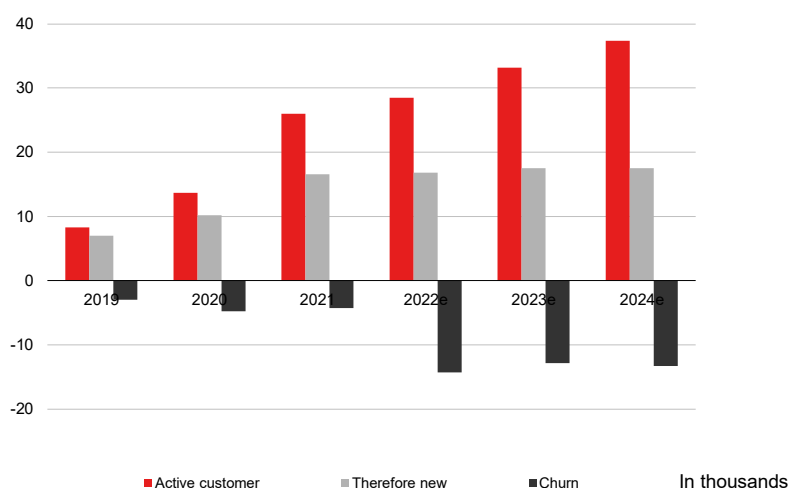
Customer characteristics (age and trading activity)



Source: The Naga Group, Warburg Research

Based on this customer structure, online marketing activities should be most effective, especially on social networks and using financial influencers. However, as already mentioned, Naga has a relatively high churn rate within its customer base, making high marketing spend necessary to increase the active customer base.

Increasing active customers despite high churn (in k)



Source: The Naga Group, Warburg Research

As displayed above, we expect Naga to steadily expand its active customer base with ongoing marketing efforts. Following the relatively high churn rate of about 30% in 2021, the average customer lifetime should be at around three years. Hence, the company needs to replace the three-year-old customer base every year just to maintain a stable customer base. However, churn rates should decline slightly going forward for the following reasons:

- The inclusion of actual stocks as an asset class apart from CFDs should attract more sustainable business
- Access to NAGAX and the respective wallet for crypto assets included in a single user surface should also help to keep the customers on the platform.
- Finally, further products in a financial context such as NAGA Pay should help to diversify the customer base and should lead to higher customer loyalty in the long run.

As a result of the mentioned development, we expect churn rates to decrease gradually, which should help to increase the customer base over time. Therefore, we expect Naga to increase its active customer base from nearly 28k in 2021 to more than 37k in 2024.

Nonetheless, churn rates remain relatively high because the majority of customers tend to lose money trading CFDs. Thus, the more Naga relies on its traditional CFD brokerage, the higher the probable churn going forward. This would then result in higher marketing costs in order to continue increasing the number of active customers.

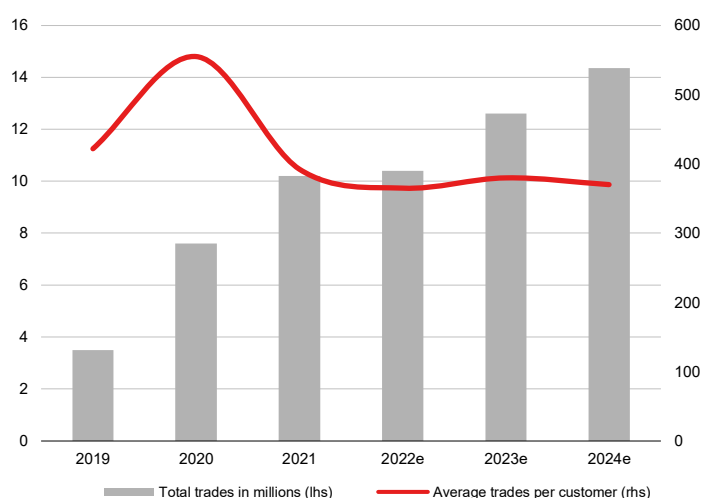
Customer activity likely to remain on a rather high level

During the past years, Naga's customers showed very high trading activity. The number of executed transactions per user increased from 421 in 2019 to more than 554 in 2020 and came down again to 357 in 2021. This development is somewhat comparable to the normal online brokerage market as all brokers showed outstanding trading KPIs in 2020. Therefore, we assume a normalization of the trading behaviour which is likely to result in decreasing trades per customer, yet still significantly higher than conventional online brokers.

Whilst conventional online brokers like flatexDEGIRO record around 30-50 transactions per user and year, Naga's customers perform the same number of trades in a single month. However, there are several reasons for such a high number of trades per customer:

- CFD customers are usually very short-term oriented. Traders often bet on short-term price changes and quickly realize gains and losses. The leverage of up to 30x adds to this behaviour as even small changes in the underlying asset could result in significant profit or loss.
- The invested capital is often very limited, also at Naga, as there are restrictions on the amount that can be invested in a single CFD.
- Finally, holding CFDs overnight usually results in an interest fee, increasing the costs per trade the longer a customer's position remains open.
- Naga's autocopy function promotes high trading activity as well. As the followed trader receives up to USD 0.32 per followed trade, a high number of trades would generate additional income.

Development of transactions



Source: The Naga Group, Warburg Research

High losses lead to high churn

Investing in CFDs comes with high risk. According to Naga's risk disclaimer, 84.69% of retail investors lose money when trading in CFDs. We deem this to be the main reason for the high churn rates. With the leverage effect and high risk-tolerance, retail customers tend not to be successful in CFD trading, which holds true for all providers in the industry.

However, Naga intends to attract customers by offering the autocopy function which enables customers to automatically copy the trades of successful traders and thus make comparable profits. Integrating this function into an interactive online community leads to

a gamification of investment. Nonetheless, retail investors face substantial risks, even when following successful traders, which could result in substantial losses:

- A lower level of margin is problematic when several positions remain open simultaneously. In case of temporary losses, the followed trader would probably keep the positions open as he has sufficient margin. However, in case of a margin level of below 50%, Naga starts to liquidate customers' positions, starting with the least profitable. This could lead to substantial losses even if the trade were ultimately profitable for the followed trader, simply because he obtains a higher margin level and can keep the trade open for longer.
- Furthermore, spreads and autocopy fees could result in losses for following retail customers, even if the original trade is profitable. Depending on the "VIP" level, highly active and followed traders face narrower trading spreads than ordinary customers which affects the performance. Furthermore, looking at the traders with the strongest following, it becomes obvious that many trades are closed with e.g. a profit of a single-digit USD amount. Given that followers autocopy these trades at e.g. 10% exposure (due to a lower margin level), the profit would then be less than USD 1. However, as autocopy trading fees amount to USD 0.99, the respective trade would then effectively be loss-making.

Overall, the high-risk nature of CFD trading would appear to persist, which prevents churn from coming down to levels of more conventional online brokerage companies. Even though it appears that autocopy could reduce the average losses of customers, it still requires customers to have a high level of financial knowledge and profound understanding of the nature of CFD trading. While we assume that churn rates will improve slightly, they will remain relatively high at levels above 25%.

Counterpart to CFD position generates majority of revenue

Besides the number of customers and the trading activity, revenue per trade is an important KPI for brokerage companies. At Naga, there are different sources of revenue that are generated by trading.

- Autocopy fees of USD 0.99 per trade are charged for every copied trade. However, Naga keeps between 68% and 88% of these fees.
- Interest rates are generated whenever customers maintain open positions overnight which is charged with an interest rate to provide the respective margin.
- Trading result is realized as Naga acts as the market maker for the offered CFDs. This means that the company basically reflects the counter-position of the customers, making profit whenever customers close trades at a loss. As this is the case for the majority of customers, the overall business generates revenues. This also includes the spread which is provided by Naga to the customers.

Even though autocopy is becoming increasingly important for Naga, the majority of revenues is still realized by its trading result. This implies that Naga's revenues, as usual for CFD brokers, significantly depend on the majority of customers actually losing money trading these instruments.

Top-line growth driven by continued customer growth

Key estimates

	2018	yoy	2019	yoy	2020	yoy	2021	yoy	2022e	yoy	2023e	yoy	2024e	yoy
Active customers (m)	0.004		0.008	93%	0.014	65%	0.026	90%	0.029	10%	0.033	16%	0.039	17%
Av. Trades per customer	n/a		421.6	n/a	554.7	32%	392.3	-29%	365.0	-7%	380.0	4%	370.0	-3%
Total Trades (m)	n/a		3.5	n/a	7.6	117%	10.2	34%	10.4	2%	12.6	21%	14.4	14%
Revenue per Trade (EUR)	n/a		2.2	n/a	3.2	47%	4.2	31%	5.0	19%	5.1	0%	5.2	0%
Total Revenue (EURm)	16.1		7.6	-53%	24.4	220%	52.9	117%	52.0	-2%	64.3	24%	74.7	16%

Source: The Naga Group, Warburg Research

- As described earlier, active customers are expected to increase as the company gains more new clients than it loses.
- The number of average trades per customer is expected to decline further. 2020 marked an absolute record year for online trading which is not expected to reoccur on a comparable level. Furthermore, Naga introduced trading in stocks apart from CFDs which should attract some customers that are less active than the usual CFD customer.
- Revenues per trade are expected to increase slightly. With an increasing share of copy trading, revenue per trade showed an increasing trend over the past years which is expected to continue as copy trading becomes more important. An increasing number of transactions in stocks should prevent revenues per trade from increasing further. However, revenue per trade is subject to the general trading result and therefore, depends on the success or failure of Naga's customers.
- Pressure on revenues per trade could potentially arise from stricter regulation with regards to spread limitation. In such a case, spreads would likely have to narrow at the cost of profitability per trade. However, there is no indication of the introduction of any such measures for now.
- Total revenue was enriched by licensing fees in 2018 and 2019 and by revenues from cryptocurrencies in 2021.

Operating leverage to become visible with increasing sales

The business model as an online brokerage provider should naturally constitute significant high operating leverage. However, for the scalability of the business model to become visible, Naga needs to sustainably grow its sales. Based on the previously discussed assumptions, we expect revenues to grow at a 2021-24e CAGR of 12.2%.

Consolidated P&L							
in EUR m	2018	2019	2020	2021	2022e	2023e	2024e
Sales	16.1	7.6	24.4	52.9	52.0	64.3	74.7
Own work capitalised	1.6	0.8	2.0	2.8	3.1	3.2	3.6
Total sales	17.7	8.4	26.3	55.7	55.1	67.5	78.2
Material Expenses	1.1	2.7	3.5	8.5	8.5	10.1	10.8
Gross profit	16.6	5.7	22.8	47.2	46.6	57.5	67.5
Personnel expenses	6.8	4.6	4.1	8.0	8.9	9.0	9.6
Other operating income	4.7	0.2	1.5	1.0	0.0	0.0	0.0
Other operating expenses	14.6	10.4	15.7	44.4	45.6	43.5	46.3
Unfrequent items	0.0	0.0	0.0	0.0	0.0	0.0	0.0
EBITDA	0.0	-9.2	4.5	-4.2	-7.9	5.0	11.6

Source: The Naga Group, Warburg Research

Material expenses include direct trading costs, hedging costs but also pay-outs of copy fees to the followed traders. As higher trading volumes would presumably result in higher direct trading and hedging costs, we expect this position to remain at about 13% of sales, again depending on the success of the traders.

Personnel expenses increased significantly in 2021, driven by a higher number of employees which is expected to continue, but at a slower pace. The company increased its headcount from 75 in 2019 to 112 in 2020 to 147 in 2021. However, further trading volumes do not require a respective increase in personnel and the majority of new staff is expected to be hired for development purposes. In relation to sales, the ratio of personnel expenses improved from over 60% in 2019 to merely 15% in 2021 and is expected to decrease further to levels below 15% which is one source of scalability.

The largest cost position is subsumed in **other operating expenses**, of which **marketing and advertising expenses** constitute the lion's share, followed by development costs, legal and consulting fees and other operating expenses. While most cost positions should show some economies of scale, marketing expenses are expected to remain a significant cost driver. Depending on the desired growth of customers, Naga needs to invest heavily in customer acquisition. While the company reinvested 61% of its sales in marketing in 2021, we expect a reinvestment of around one-third of sales in marketing on a sustainable

basis, which would constitute a natural boundary for further economies of scale. Therefore, we assume that an **EBITDA ratio of 26% should be reached** from 2028e onwards.

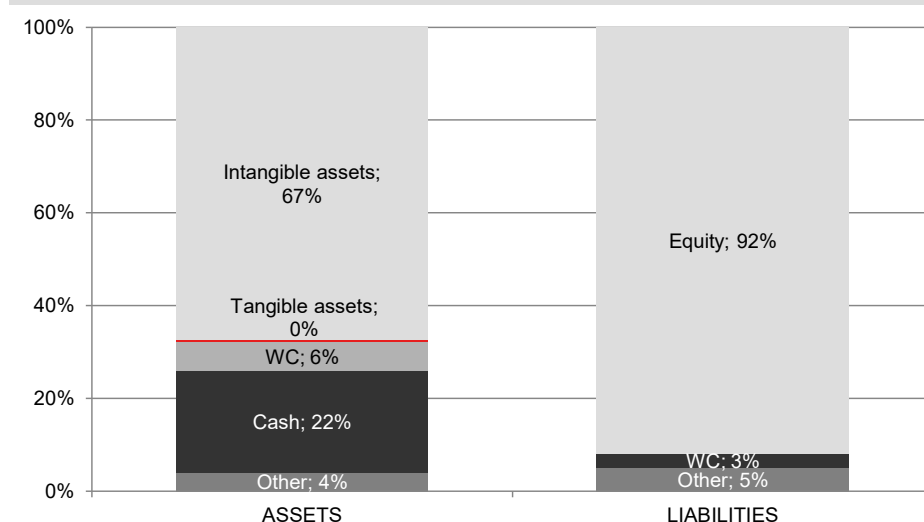
However, Naga has a rather poor track record when it comes to profitability. The only years so far with positive EBITDA contributions were 2017 and 2020 but, on net income level, the company has not yet reported a positive year. The net loss since 2016 was in a range of between EUR -0.6m (2020) and -12m (2019). For 2022e, we expect Naga to report a record negative net income of EUR -24.1m, also due to an extraordinary depreciation on Naga's own coin amounting to EUR 12m. In Q4 2021, the company decided to purchase the coins, which resulted in a significant depreciation shortly after as the market value plummeted. However, the remaining value of the NAGA coin in the company's balance sheet stood at EUR 3.3m.

Even though the company revised its marketing strategy after H1 2022 and implemented a cost-savings strategy, it remains to be seen whether the lower marketing budget is sufficient to gain enough customers to offset the high churn rates.

Balance sheet characterized by acquisitions and trading activity

Naga's business activity is usually accompanied by low capital intensity as revenues are generated by services. However, to provide its customers with the CFD offering and to act as a counterpart to the customers, Naga has to boast a minimum amount of equity, which is required by regulation, but also a relatively high level of cash in case of higher pay-outs.

Balance sheet structure as of FY 2021



Source: The Naga Group, Warburg Research

Intangible assets consist mainly of goodwill (about 70% of intangibles), which is primarily driven by two companies that were brought into Naga by contribution in kind. These companies were HBS AG and Swipy Technologie that build the backbone of the trading activity. Furthermore, Software (16%), customer relationships (7%) and own work capitalized (6%) contribute to this position.

Working capital arises primarily from the operating trading business. The position is primarily driven by receivables and liabilities from derivatives. Therefore, the net position of the working capital could be seen as pending earnings or losses from the operating business as it reflects the open trading positions of customers and the respective results.

The **cash** position results primarily from two capital increases in 2021 that generated gross proceeds totalling EUR 56.7m. Furthermore, some EUR 27m are deposited at liquidity

providers to serve as margin for customer transactions that are hedged at other market makers. However, due to the loss-making business in 2021 and the first half of 2022, the cash position should have decreased to a mid to high single-digit million.

Finally, the strong **equity ratio** of 92% is the result of the two contributions in kind and the mentioned equity increases.

Valuation

DCF points to PT of EUR 2.30

The valuation of the Naga Group shares is based on a Discounted Cash Flow (DCF) model which is supported by a peer group comparison. Our DCF model is based on the following assumptions:

- For the detailed forecast period we refer to the assumptions previously described.
- From 2025e onwards, we expect degressively declining growth rates that start in the high single-digit area and approximate to a terminal growth rate of 1.5%. This reflects the strong competition in a relatively small market of CFD brokerage which should remain the main contributor of top-line growth.
- A peak EBIT margin of 20% should be reached in 2028e and is regarded to remain a sustainable level for long-term profitability.

In light of the high risks of the business model, the high churn rates, the low liquidity of the shares and regulators that are following the CFD markets closely, we apply a relatively high beta of 1.92. With a risk-free rate of 2.75%, a WACC of 13.3% is derived.

DCF model Naga Group

Figures in EUR m	Detailed forecast period			Transitional period										Term. Value
	2022e	2023e	2024e	2025e	2026e	2027e	2028e	2029e	2030e	2031e	2032e	2033e	2034e	
Sales	52.0	64.3	74.7	85.1	96.2	106.8	116.9	126.3	135.1	143.2	150.4	156.4	159.5	1.5%
Sales change	-1.6 %	23.6 %	16.1 %	14.0 %	13.0 %	11.0 %	9.5 %	8.0 %	7.0 %	6.0 %	5.0 %	4.0 %	2.0 %	
EBIT	-29.1	-0.5	6.0	7.7	13.5	19.2	23.4	25.3	27.0	28.6	30.1	31.3	31.9	
EBIT-margin	-56.0 %	-0.8 %	8.0 %	9.0 %	14.0 %	18.0 %	20.0 %	20.0 %	20.0 %	20.0 %	20.0 %	20.0 %	20.0 %	
Tax rate (EBT)	1.6 %	24.9 %	0.0 %	5.0 %	10.0 %	15.0 %	25.0 %	30.0 %	30.0 %	30.0 %	30.0 %	30.0 %	30.0 %	
NOPAT	-28.7	-0.4	6.0	7.3	12.1	16.3	17.5	17.7	18.9	20.0	21.0	21.9	22.3	
Depreciation	21.3	5.5	5.6	5.1	5.8	6.4	7.0	7.6	8.1	8.6	9.0	9.4	9.6	
in % of Sales	40.9 %	8.5 %	7.5 %	6.0 %	6.0 %	6.0 %	6.0 %	6.0 %	6.0 %	6.0 %	6.0 %	6.0 %	6.0 %	
Change in provisions	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Change in liquidity from														
- Working Capital	2.0	0.1	-0.9	1.6	1.1	1.1	1.0	0.9	0.9	0.8	0.7	0.6	0.3	
- Capex	16.6	3.7	4.1	5.1	5.8	6.4	7.0	7.6	8.1	8.6	9.0	9.4	9.6	
Capex in % of Sales	31.9 %	5.8 %	5.5 %	6.0 %	6.0 %	6.0 %	6.0 %	6.0 %	6.0 %	6.0 %	6.0 %	6.0 %	6.0 %	
Other	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Free Cash Flow (WACC-model)	-26.0	1.2	8.4	5.7	11.0	15.3	16.5	16.7	18.0	19.2	20.3	21.3	22.0	
PV of FCF	-26.0	1.1	6.6	3.9	6.7	8.2	7.8	7.0	6.6	6.2	5.8	5.4	4.9	42.4
share of PVs	-21.2%			72.2%										48.9%

Model parameter

Derivation of WACC:		Derivation of Beta:	
Debt ratio	0.0%	Financial Strength	2.10
Cost of debt	6.0%	Liquidity	1.90
Market return	8.3%	Cyclicality	1.90
Risk free rate	2.8%	Transparency	2.00
Risk premium	5.5%	Others	1.70
Cost of equity	13.3%		
WACC	13.31%	Beta	1.92

Valuation (m)

Present values until 2034e	44.2	No. of shares (m)	54.0
Terminal Value	42.4		
Financial liabilities	0.0	Value per share (EUR)	2.28
Pension liabilities	0.0		
Hybrid capital	0.0		
Minority interest	-1.0		
Market val. of investments	27.1		
Liquidity	8.6		
Equity Value	123.3		

Sensitivity Value per share (EUR)

Beta	(WACC)	Terminal Growth							Delta EBIT-margin					0.0	1.50 pp	3.00 pp	5.00 pp
		0.75%	1.00%	1.25%	1.50%	1.75%	2.00%	2.25%	-5.00 pp	-3.00 pp	-1.50 pp						
2.47	(16.3 %)	1.72	1.73	1.74	1.75	1.75	1.76	1.77	1.19	1.42	1.58	1.75	1.91	2.08	2.30		
2.28	(15.3 %)	1.87	1.88	1.89	1.90	1.91	1.92	1.93	1.30	1.54	1.72	1.90	2.07	2.25	2.49		
2.10	(14.3 %)	2.04	2.05	2.06	2.07	2.09	2.10	2.11	1.43	1.69	1.88	2.07	2.26	2.46	2.71		
1.92	(13.3 %)	2.23	2.25	2.26	2.28	2.30	2.32	2.33	1.59	1.86	2.07	2.28	2.49	2.70	2.98		
1.74	(12.3 %)	2.47	2.49	2.51	2.53	2.55	2.58	2.60	1.77	2.07	2.30	2.53	2.76	2.99	3.29		
1.56	(11.3 %)	2.75	2.78	2.81	2.83	2.86	2.90	2.93	1.99	2.33	2.58	2.83	3.09	3.34	3.68		
1.37	(10.3 %)	3.10	3.13	3.17	3.21	3.25	3.30	3.35	2.27	2.65	2.93	3.21	3.49	3.77	4.15		

Source: Warburg Research

Peer group comparison of little significance

Whilst our target price remains DCF-driven, a peer group comparison is of little significance due to the poor profitability of the company. The only multiples that lead to significant positive upside potential are revenue-based. However, due to the volatile and high cost basis, we do not deem revenue multiples as suitable in this case. As a result of the loss-making business, the remaining multiples indicate downside potential if meaningful at all. The peer group includes regular online brokerage companies like flatexDEGIRO, Avanza and Bourse Direct but also CFD brokers like Plus500, CMC Markets and IG Group.

Peer group comparison Naga Group

Naga Group AG	LC	Price in LC	MC in LC m	EV in LC m	P / E			Price / Sales			EV / EBITDA			EV / EBIT		
					22e	23e	24e	22e	23e	24e	22e	23e	24e	22e	23e	24e
flatexDEGIRO AG	EUR	8.09	889.5	589.5	11.7 x	9.9 x	7.5 x	2.3 x	2.2 x	2.0 x	3.7 x	3.6 x	3.1 x	4.6 x	4.5 x	3.8 x
Avanza Bank Holding AB	SEK	238.60	37,369.3	30,908.2	23.1 x	19.6 x	19.0 x	12.7 x	10.9 x	10.4 x	15.5 x	13.8 x	13.6 x	16.4 x	13.5 x	12.9 x
Plus500 Ltd	EUR	20.80	1,938.9	1,021.9	6.0 x	9.6 x	8.6 x	2.5 x	3.4 x	3.2 x	2.5 x	4.0 x	3.7 x	2.5 x	4.1 x	3.8 x
Bourse Direct	EUR	3.42	189.8	179.8	36.8 x	11.9 x	10.9 x	4.6 x	3.4 x	3.2 x	17.4 x	7.8 x	7.0 x	22.9 x	8.7 x	7.7 x
CMC Markets PLC	EUR	2.64	738.7	572.3	10.7 x	12.0 x	10.1 x	2.4 x	2.0 x	1.8 x	5.1 x	5.7 x	4.7 x	5.6 x	6.9 x	5.6 x
IG Group Holdings PLC	GBP	780.00	3,241.0	2,296.6	8.6 x	8.5 x	8.3 x	3.4 x	3.2 x	3.0 x	4.5 x	4.5 x	4.1 x	4.7 x	4.7 x	4.5 x
Average					16.1 x	11.9 x	10.7 x	4.7 x	4.2 x	3.9 x	8.1 x	6.6 x	6.0 x	9.4 x	7.1 x	6.4 x
Median					11.2 x	10.9 x	9.3 x	3.0 x	3.3 x	3.1 x	4.8 x	5.1 x	4.4 x	5.1 x	5.8 x	5.0 x
Naga Group AG/The	EUR	1.76	74.2	69.3	neg.	neg.	58.8 x	1.3 x	1.2 x	1.0 x	neg.	31.5 x	8.2 x	neg.	neg.	23.1 x
Valuation difference to Average					n.a.	n.a.	-82%	249%	261%	281%	n.a.	-79%	-27%	n.a.	n.a.	-72%
Fair value per share based on Average					n.a.	n.a.	0.32	6.16	6.37	6.72	n.a.	0.46	1.32	n.a.	n.a.	0.57

Source: Bloomberg, Warburg Research

CMC Markets is a British trading platform that has become one of the world's leading CFD trading providers since its launch in 1989. The aim is to offer tight spreads regardless of market volatility, keeping pricing competitive and reliable. At the same time, CMC clients have the opportunity to build a diversified portfolio and take full advantage of their own trading experience.

IG Group is an internationally active financial services provider, based in London. It was founded in 1974, making IG Group a pioneer in the field of CFD trading. In addition to active trading, users can access an extensive range of market data, live charts and news. Furthermore, there are individual solutions for institutional investors and trading webinars, where experts share their knowledge about the financial markets.

flatexDEGIRO is an execution-only online broker with its own banking licence, created by the acquisition of the Dutch provider DEGIRO by the German flatex AG. The focus is on the European market for retail investors. flatexDEGIRO is represented in more than 18 European countries and handles an annual volume of more than EUR 350bn in over 91 million transactions. The vision is to welcome 2% of the European population as customers of flatexDEGIRO.

Plus500 is a Contracts for Difference (CFD) trading platform founded in 2008. In addition to shares and commodities, trading is offered in currencies, cryptocurrencies, ETFs, options and indices. As a global provider, Plus500 is active in more than 50 countries and has offices worldwide. Since 2013, the company has been listed on the London Stock Exchange, while its headquarters are located in Haifa (Israel).

Bourse direct was founded in Paris in 1996 and has since become a major player in the French financial technology industry. Its three main business pillars include online brokerage, savings and business and financial information. The offering is primarily aimed at investors from France, the French overseas territories and French-speaking Switzerland.

Avanza was founded in 1999 and is today considered Sweden's largest online broker. Investors are offered a wide range of investment opportunities, supported by extensive market data to help them make decisions. More than 1.7 million customers use the platform, Avanza returns the fund fees to everyone who has not exceeded SEK 50,000 in total savings.

DCF model

Figures in EUR m	Detailed forecast period			Transitional period										Term. Value
	2022e	2023e	2024e	2025e	2026e	2027e	2028e	2029e	2030e	2031e	2032e	2033e	2034e	
Sales	52.0	64.3	74.7	85.1	96.2	106.8	116.9	126.3	135.1	143.2	150.4	156.4	159.5	1.5 %
Sales change	-1.6 %	23.6 %	16.1 %	14.0 %	13.0 %	11.0 %	9.5 %	8.0 %	7.0 %	6.0 %	5.0 %	4.0 %	2.0 %	
EBIT	-29.1	-0.5	6.0	7.7	13.5	19.2	23.4	25.3	27.0	28.6	30.1	31.3	31.9	20.0 %
EBIT-margin	-56.0 %	-0.8 %	8.0 %	9.0 %	14.0 %	18.0 %	20.0 %	20.0 %	20.0 %	20.0 %	20.0 %	20.0 %	20.0 %	
Tax rate (EBT)	1.6 %	24.9 %	0.0 %	5.0 %	10.0 %	15.0 %	25.0 %	30.0 %	30.0 %	30.0 %	30.0 %	30.0 %	30.0 %	20.0 %
NOPAT	-28.7	-0.4	6.0	7.3	12.1	16.3	17.5	17.7	18.9	20.0	21.0	21.9	22.3	
Depreciation	21.3	5.5	5.6	5.1	5.8	6.4	7.0	7.6	8.1	8.6	9.0	9.4	9.6	6.0 %
in % of Sales	40.9 %	8.5 %	7.5 %	6.0 %	6.0 %	6.0 %	6.0 %	6.0 %	6.0 %	6.0 %	6.0 %	6.0 %	6.0 %	
Changes in provisions	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Change in Liquidity from														
- Working Capital	2.0	0.1	-0.9	1.6	1.1	1.1	1.0	0.9	0.9	0.8	0.7	0.6	0.3	0.3
- Capex	16.6	3.7	4.1	5.1	5.8	6.4	7.0	7.6	8.1	8.6	9.0	9.4	9.6	
Capex in % of Sales	31.9 %	5.8 %	5.5 %	6.0 %	6.0 %	6.0 %	6.0 %	6.0 %	6.0 %	6.0 %	6.0 %	6.0 %	6.0 %	6.0 %
- Other	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Free Cash Flow (WACC Model)	-26.0	1.2	8.4	5.7	11.0	15.3	16.5	16.7	18.0	19.2	20.3	21.3	22.0	22
PV of FCF	-26.0	1.1	6.6	3.9	6.7	8.2	7.8	7.0	6.6	6.2	5.8	5.4	4.9	42
share of PVs	-21.17 %			72.22 %										48.94 %

Model parameter

Derivation of WACC:		Derivation of Beta:	
Debt ratio	0.00 %	Financial Strength	2.10
Cost of debt (after tax)	4.2 %	Liquidity (share)	1.90
Market return	8.25 %	Cyclicality	1.90
Risk free rate	2.75 %	Transparency	2.00
		Others	1.70
WACC	13.31 %	Beta	1.92

Valuation (m)

Present values 2034e	44		
Terminal Value	42		
Financial liabilities	0		
Pension liabilities	0		
Hybrid capital	0		
Minority interest	-1		
Market val. of investments	27		
Liquidity	9	No. of shares (m)	54.0
Equity Value	123	Value per share (EUR)	2.28

Sensitivity Value per Share (EUR)

Beta WACC		Terminal Growth							Beta WACC		Delta EBIT-margin						
		0.75 %	1.00 %	1.25 %	1.50 %	1.75 %	2.00 %	2.25 %			-5.0 pp	-3.0 pp	-1.5 pp	+0.0 pp	+1.5 pp	+3.0 pp	+5.0 pp
2.47	16.3 %	1.72	1.73	1.74	1.75	1.75	1.76	1.77	2.47	16.3 %	1.19	1.42	1.58	1.75	1.91	2.08	2.30
2.28	15.3 %	1.87	1.88	1.89	1.90	1.91	1.92	1.93	2.28	15.3 %	1.30	1.54	1.72	1.90	2.07	2.25	2.49
2.10	14.3 %	2.04	2.05	2.06	2.07	2.09	2.10	2.11	2.10	14.3 %	1.43	1.69	1.88	2.07	2.26	2.46	2.71
1.92	13.3 %	2.23	2.25	2.26	2.28	2.30	2.32	2.33	1.92	13.3 %	1.59	1.86	2.07	2.28	2.49	2.70	2.98
1.74	12.3 %	2.47	2.49	2.51	2.53	2.55	2.58	2.60	1.74	12.3 %	1.77	2.07	2.30	2.53	2.76	2.99	3.29
1.56	11.3 %	2.75	2.78	2.81	2.83	2.86	2.90	2.93	1.56	11.3 %	1.99	2.33	2.58	2.83	3.09	3.34	3.68
1.37	10.3 %	3.10	3.13	3.17	3.21	3.25	3.30	3.35	1.37	10.3 %	2.27	2.65	2.93	3.21	3.49	3.77	4.15

■ ...

Company & Products

Company profile

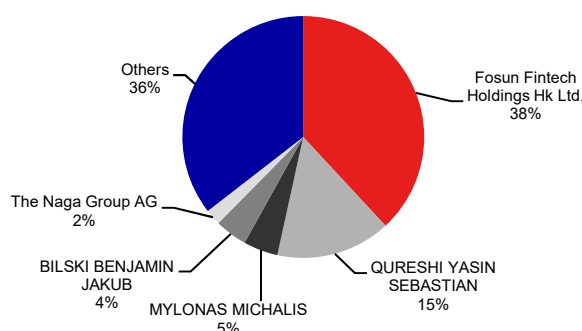
Naga is a German-based fintech company and a part of non-organized stock exchange segment, Scale. Its core business is the provision of online-brokerage. Moreover, Naga also offers online trading services from its own platform, NAGA Trader, which was developed in house. Naga has diversified its business model by investing in its subsidiaries which now range from offering financial technology services to blockchain technology.

The primary focus of the Naga group lies in the financial platform, NAGA Trader. The unique selling point of NAGA Trader is its capability to combine trading functionalities with a social networking platform. Like other social platforms, users can easily communicate to discuss their trading patterns or strategies. Users can manually build a bigger network and can view the trading track-records of other traders and copy transactions of successful members.

Naga aims to create and offer easy access to financial markets to everyone and the opportunity to trade more complex products such as contracts for difference, securities and cryptocurrencies.

Shareholder structure

Ownership structure



Source: Factset, Warburg Research

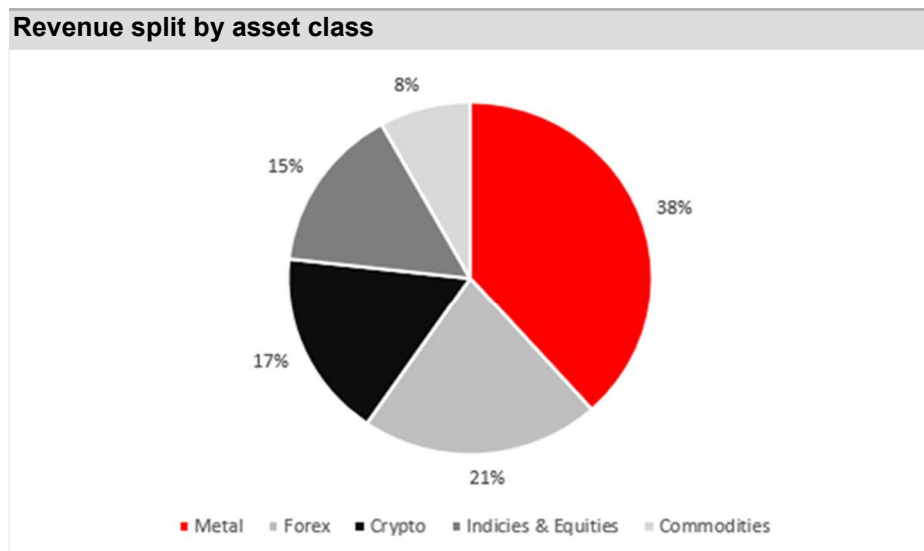
Naga Group's largest shareholder is the Chinese investment company Fosun Fintech, which now holds 38% of the group. In addition, it should be noted that a convertible bond amounting to EUR 2m was issued in 2020 and is held solely by Fosun. The next largest single shareholder is Qureshi Yasin Sebastian. The co-founder and former managing director gave up his post as part of a restructuring. With a 15% stake, he has significant influence on the company. Mylonas Michalis also holds a significant stake of 5%. Mr. Mylonas Michalis currently holds a position on the Management Board. The next major individual shareholder is co-founder and acting CEO Benjamin Bilski. Most recently, the Naga Group held 2% in treasury shares. 36% are in free float.

Company history

2015	Naga is founded by Benjamin Bilski.
2016	Naga executed its first ever transaction on its NAGA Trader.
2017	Naga launched auto-copy feature in NAGA Trader, allowing users to copy trades of professional traders.
2017	Naga went public. IPO on the Frankfurt Stock Exchange in June 2017.
2018	Crypto Exchange and Crypto wallet added to the product list of NAGA App.
2020	Naga published record-breaking profitability report.
2021	Naga crossed one million registered accounts target and reached more than one million trades per month.
2021	Naga relaunched NAGA-Pay in October 2021.
2022	NagaX was launched in March

Market segments

Currently, the Naga Group is mainly participating in its brokerage business with its trading platform NAGA Trader, over which derivatives, shares, commodities, foreign exchange and cryptocurrencies can be traded. In 2020, the asset class “metal” alone accounted for 38% of total revenue. forex was next at about 21% of total sales. Naga has been able to generate 17% of its revenue from crypto-trading which was higher than revenue accumulated by indices and equities together, which accounted for 15% of total revenue. Commodities earned the least revenue accounting for only 8% of total revenue earned.



Source: Naga, Warburg Research

Commodities

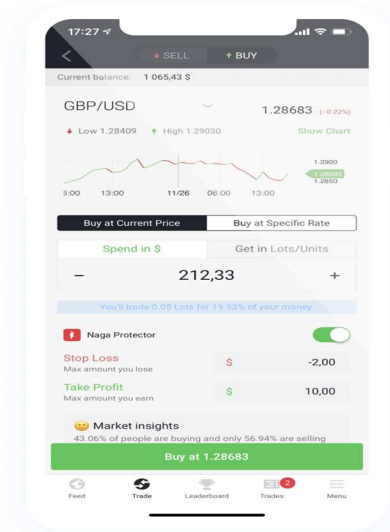
Accounting revenue stream from metal and commodities together represents about half of the revenue generated by Naga over NAGA Trader. NAGA Trader offers popular commodities like gold, silver, crude oil, metals and many others at low fees and tight

spreads. High leverage options on commodities could also be assumed as the primary reason for professional traders to select commodities as their prime trades.

Forex

Naga has been able to generate about 21% of its revenue from forex with spreads and other fees. Like other trading platforms, most of its trading occurs on currency pairs like EUR/USD, EUR/GBR, GBP/USD. As forex is much more complex than other trading options, Naga provides learning material specifically focused on forex trading for beginners to provide a more thorough understanding of the market.

NAGA Trader app



Source: Naga, Warburg Research

Stocks

Stocks and indices together make up 15% of total revenue earned by the Naga Group. Besides popular stock such as Tesla, Amazon and Apple, investors have a vast pool of securities at their disposal to invest in. With real-time data update on stocks, Naga always provides first-hand information to its stock investors. Also, easy-to-understand user interface of the app makes it easier for members to understand all kinds of features. Within the NAGA Trader app, customers can also use the news section to keep up to date with news affecting the capital markets.

Indices

Users, who prefer to diversify their risk, can use different indices available in NAGA Trader app. Within NAGA, users are offered access to all the important indices such as the DAX, S&P500 and NASDAQ100. Index investing, which comes with a low fee structure, is mainly preferred by Naga's passive investors. Moreover, new members can first participate in the NADA Academy to learn the basics of index investing or follow other professional traders and replicate their decisions.

Crypto

Crypto was the centre point of the short-term trading frenzy in 2020. As a result, Naga generated 17% of its total revenue from crypto with brokerage fees. At Naga, all major cryptocurrencies like Bitcoin, Ethereum etc are available for traders. The unique selling

point in crypto is its crypto-wallet for members to save their cryptocurrency. Furthermore, traders use Naga's own crypto-exchange for trading which enhances stability in trade execution and offers transparency.

Naga's trading tools

Currently, customers can choose any trading platform from the pool of different applications available. However, the reason why traders prefer Naga is its competitive advantage in trading tools and other features which are not widely available in other investing platforms.

Apart from smartphone applications, users can choose different platforms to trade on. For instance, MT4, MT5 and NAGA Web App

- **MetaTrader 4:** this platform offers all the basics necessary to trade. It consists of a news feed, pre-programmed analytical tools, multiple charting and analysis options, real-time account summary, a floating P&L and the account equity. The platform supports multiple languages and is designed with an easy-to-use interface. This trading tool can be downloaded for PC, MAC, IOS and Android.
- **MetaTrader 5:** this trading platform is the advanced version of the MetaTrader 4 with more features such as an economic calendar, a stronger e-mailing system, a community chat and an advanced strategy tester. Additionally, MetaTrader 5 can process six pending orders, offers 38 technical indicators, more graphics to identify trends and more timeframes than the prior version.
- **NAGA Web App:** Web app is a PC version of the smartphone application but it has more features and tools than the smartphone app. The web app is slightly different in that it has a bigger user interface with a greater variety of graphs.

Fee structure

NAGA fee structure		
Asset/ Service	Fee	Example: Opening trade: €1.000 Profit: €500
Forex	-	-
Crypto	-	-
CFDs on Indices	-	-
Stock CFDs	€2,5 in/out transaction	Opening trade: €2,5 Closing trade: €2,5 = €5
Real Stocks	€0,99 in/out transaction	Opening trade: €0,99 Closing trade: €0,99 = €1,98€
CFDs on Commodities	-	-
CFDs on Futures	-	-
CFDs on ETFs	0,1% of volume in/out transaction	Opening trade: €100 Closing trade: €150 = €250
NAGA Copytrading	Fix fee per copy: €0,99 + Profit > €10: 5% of profit	Copytrade: €0,99 Closing trade: €25 = €25,99

Source: Naga, Warburg Research

There are no explicit trading fees for forex, cryptos, indices, commodities and futures. The trading fee is 0.1% for ETFs and 0.2% for stocks.

One of Naga's features as a social trading platform is the option to copy trades from a different user/trader. This innovative feature is called **Autocopy** and Naga charges a fixed fee of EUR 0.99 for each trade. If the profit on a trade is more than EUR 10, then there is a variable copy fee of 5% of the profit.

Furthermore, **deposits** are free of charge but the minimum deposit is USD 250. The **withdrawals** depend on the currency but require a minimum of EUR 50 with a fee of EUR 0-5 depending on the "VIP level", a status determined by various factors such as deposit amount and trading aspects. Withdrawals made in cryptos are subject to a fee of up to 12%.

Moreover, Naga also offers margin accounts for traders to expand trading volume. The initial margin for ETFs and stocks is fixed at 20% but for indices, forex and commodities, it deviates between 5-10%. Futures have lowest required initial margin of 0.05% while crypto has the highest required margin of 50%.

Regulation and licenses

Naga claims to be one of the safest financial system on the market with regards to personal data as well as trading funds as it continuously strives to eliminate any security concerns and its accounts have optional MultiFactor Authentication for increased security.

NAGA Markets is a member of the Investor Compensation Fund, which covers claims of clients against members of the fund and compensates covered clients for any claims arising from the failure of a member of fund to fulfil its obligation. The obligation could arise from legislation, the client agreement or wrongdoing on the part of the member of the fund.

All Naga client funds are kept separate from the firm's own accounts and are held within major regulated EU banks to offer the highest level of security for client funds. Customers can see which banks are used in the relevant country on the Deposit Method website page.

NAGA Markets is regulated and licensed by Cyprus Securities and Exchange Commission (CySEC). NAGA Markets holds a cross-border CySEC license which authorizes Naga to provide investment and ancillary services. NAGA Markets Europe Ltd is authorised and regulated by the Financial Conduct Authority. All products and services of Naga have to comply with EU and local regulation such as European Markets in Financial Instruments Directive II ('MiFID II') and Cyprus Investment Services and Activities and Regulated Market Law of 2017.

Management



Benjamin Bilski (Chief executive officer, Founder)

Benjamin Bilski is founder and CEO of the Naga Group. He is an entrepreneur with a Master's degree in business administration from the European Business School Oestrich-Winkel and he graduated in 2014. Before he started Naga in 2015, he was a co-founder of Angelplatz an e-commerce shop for fishing & outdoor products and founded SwipeStox a social trading platform for FX, CFDs and indices. Mr. Bilski was named as a "30-under-30" member by Forbes



Michael Mylonas (Executive Director, CEO NAGA Markets)

Michael Milonas is the executive director of the Naga Group. Before joining in 2016 and building the company with Mr. Bilski, he was the co-founder and CEO of Parparinos Milonas Corporate and Legal Consultants. He studied mechanical engineering at the Higher Technical Institute and law at Middlesex University.



Andreas Luecke (Executive Director)

Andreas Luecke is a member of the board at Naga Group. Moreover, he is head of Legal and Tax, which is in line with his prior experience as a lawyer and tax consultant. Before joining Naga in 2017 he worked at Arthur Andersen, EY and T2C Steuerberatungsgesellschaft / Luecke und Partner.

Supervisory Board



Harald Patt (Chief Digital Officer, Managing Director)

Harald Patt is the chairman of supervisory board of Naga Group AG. He took his role in August 2019. Previously, he was CEO and founder of Panthera Capital AG and CeFDex AG. He also worked as sales manager in the Deutsche Börse Group.



Alan Liu (Head of Supervisory Board)

Alan Liu is the head of the supervisory board of NAGA Group. He is also vice-president of Fosun Technology and Financial Group. Prior to joining NAGA, he was a senior audit consultant at PWC and vice-president at Ping An Trust.



Robert Sprogies (Co-Managing Director)

Robert Sprogies is the co-managing director at Naga Group. He is also currently serving as managing finance director at Hauck & Aufhaeuser Privatbank.



Hans-Jochen Lorenzen (Member)

Hans Jochen Lorenzen is a member of the Supervisory Board. In addition to his work at the Naga Group, he is an auditor and tax consultant.

DCF model

Figures in EUR m	Detailed forecast period			Transitional period										Term. Value
	2022e	2023e	2024e	2025e	2026e	2027e	2028e	2029e	2030e	2031e	2032e	2033e	2034e	
Sales	52.0	64.3	74.7	85.1	96.2	106.8	116.9	126.3	135.1	143.2	150.4	156.4	159.5	1.5 %
Sales change	-1.6 %	23.6 %	16.1 %	14.0 %	13.0 %	11.0 %	9.5 %	8.0 %	7.0 %	6.0 %	5.0 %	4.0 %	2.0 %	
EBIT	-29.1	-0.5	6.0	7.7	13.5	19.2	23.4	25.3	27.0	28.6	30.1	31.3	31.9	20.0 %
EBIT-margin	-56.0 %	-0.8 %	8.0 %	9.0 %	14.0 %	18.0 %	20.0 %	20.0 %	20.0 %	20.0 %	20.0 %	20.0 %	20.0 %	
Tax rate (EBT)	1.6 %	24.9 %	0.0 %	5.0 %	10.0 %	15.0 %	25.0 %	30.0 %	30.0 %	30.0 %	30.0 %	30.0 %	30.0 %	20.0 %
NOPAT	-28.7	-0.4	6.0	7.3	12.1	16.3	17.5	17.7	18.9	20.0	21.0	21.9	22.3	
Depreciation	21.3	5.5	5.6	5.1	5.8	6.4	7.0	7.6	8.1	8.6	9.0	9.4	9.6	6.0 %
in % of Sales	40.9 %	8.5 %	7.5 %	6.0 %	6.0 %	6.0 %	6.0 %	6.0 %	6.0 %	6.0 %	6.0 %	6.0 %	6.0 %	
Changes in provisions	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Change in Liquidity from														
- Working Capital	2.0	0.1	-0.9	1.6	1.1	1.1	1.0	0.9	0.9	0.8	0.7	0.6	0.3	0.3
- Capex	16.6	3.7	4.1	5.1	5.8	6.4	7.0	7.6	8.1	8.6	9.0	9.4	9.6	
Capex in % of Sales	31.9 %	5.8 %	5.5 %	6.0 %	6.0 %	6.0 %	6.0 %	6.0 %	6.0 %	6.0 %	6.0 %	6.0 %	6.0 %	6.0 %
- Other	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Free Cash Flow (WACC Model)	-26.0	1.2	8.4	5.7	11.0	15.3	16.5	16.7	18.0	19.2	20.3	21.3	22.0	22
PV of FCF	-26.0	1.1	6.6	3.9	6.7	8.2	7.8	7.0	6.6	6.2	5.8	5.4	4.9	42
share of PVs	-21.17 %			72.22 %										48.94 %

Model parameter

Derivation of WACC:		Derivation of Beta:	
Debt ratio	0.00 %	Financial Strength	2.10
Cost of debt (after tax)	4.2 %	Liquidity (share)	1.90
Market return	8.25 %	Cyclicality	1.90
Risk free rate	2.75 %	Transparency	2.00
		Others	1.70
WACC	13.31 %	Beta	1.92

Valuation (m)

Present values 2034e	44		
Terminal Value	42		
Financial liabilities	0		
Pension liabilities	0		
Hybrid capital	0		
Minority interest	-1		
Market val. of investments	27		
Liquidity	9	No. of shares (m)	54.0
Equity Value	123	Value per share (EUR)	2.28

Sensitivity Value per Share (EUR)

Beta WACC		Terminal Growth							Beta WACC		Delta EBIT-margin						
		0.75 %	1.00 %	1.25 %	1.50 %	1.75 %	2.00 %	2.25 %			-5.0 pp	-3.0 pp	-1.5 pp	+0.0 pp	+1.5 pp	+3.0 pp	+5.0 pp
2.47	16.3 %	1.72	1.73	1.74	1.75	1.75	1.76	1.77	2.47	16.3 %	1.19	1.42	1.58	1.75	1.91	2.08	2.30
2.28	15.3 %	1.87	1.88	1.89	1.90	1.91	1.92	1.93	2.28	15.3 %	1.30	1.54	1.72	1.90	2.07	2.25	2.49
2.10	14.3 %	2.04	2.05	2.06	2.07	2.09	2.10	2.11	2.10	14.3 %	1.43	1.69	1.88	2.07	2.26	2.46	2.71
1.92	13.3 %	2.23	2.25	2.26	2.28	2.30	2.32	2.33	1.92	13.3 %	1.59	1.86	2.07	2.28	2.49	2.70	2.98
1.74	12.3 %	2.47	2.49	2.51	2.53	2.55	2.58	2.60	1.74	12.3 %	1.77	2.07	2.30	2.53	2.76	2.99	3.29
1.56	11.3 %	2.75	2.78	2.81	2.83	2.86	2.90	2.93	1.56	11.3 %	1.99	2.33	2.58	2.83	3.09	3.34	3.68
1.37	10.3 %	3.10	3.13	3.17	3.21	3.25	3.30	3.35	1.37	10.3 %	2.27	2.65	2.93	3.21	3.49	3.77	4.15

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Valuation	2018	2019	2020	2021	2022e	2023e	2024e
Price / Book	0.0 x	460.1 x	0.8 x	2.1 x	0.7 x	0.7 x	0.7 x
Book value per share ex intangibles	14.01	-2.55	0.00	0.82	0.36	0.36	0.48
EV / Sales	n.a.	n.a.	3.7 x	6.3 x	1.8 x	1.4 x	1.1 x
EV / EBITDA	n.a.	n.a.	19.9 x	n.a.	n.a.	17.9 x	7.0 x
EV / EBIT	n.a.	n.a.	94.9 x	n.a.	n.a.	n.a.	13.6 x
EV / EBIT adj.*	n.a.	n.a.	94.9 x	n.a.	n.a.	n.a.	13.6 x
P / FCF	n.a.	n.a.	n.a.	n.a.	n.a.	30.5 x	13.7 x
P / E	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	21.9 x
P / E adj.*	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	21.9 x
Dividend Yield	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
FCF Potential Yield (on market EV)	-38.9 %	0.0 %	4.9 %	-1.1 %	-8.1 %	6.2 %	14.2 %
*Adjustments made for: -							

Consolidated profit & loss

In EUR m	2018	2019	2020	2021	2022e	2023e	2024e
Sales	16.1	7.6	24.4	52.9	52.0	64.3	74.7
Change Sales yoy	25.5 %	-52.7 %	219.6 %	117.1 %	-1.6 %	23.6 %	16.1 %
Increase / decrease in inventory	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Own work capitalised	1.6	0.8	2.0	2.8	3.1	3.2	3.6
Total Sales	17.7	8.4	26.3	55.7	55.1	67.5	78.2
Material expenses	1.1	2.7	3.5	8.5	8.5	10.1	10.8
Gross profit	16.6	5.7	22.8	47.2	46.6	57.5	67.5
Gross profit margin	103.3 %	74.3 %	93.8 %	89.3 %	89.5 %	89.4 %	90.4 %
Personnel expenses	6.8	4.6	4.1	8.0	8.9	9.0	9.6
Other operating income	4.7	0.2	1.5	1.0	0.0	0.0	0.0
Other operating expenses	14.6	10.4	15.7	44.4	45.6	43.5	46.3
Unfrequent items	0.0	0.0	0.0	0.0	0.0	0.0	0.0
EBITDA	0.0	-9.2	4.5	-4.2	-7.9	5.0	11.6
Margin	-0.2 %	-120.3 %	18.5 %	-7.9 %	-15.2 %	7.7 %	15.5 %
Depreciation of fixed assets	5.1	2.7	0.4	0.3	0.3	0.3	0.4
EBITA	-5.1	-11.9	4.1	-4.4	-8.1	4.6	11.2
Amortisation of intangible assets	0.0	0.0	3.0	5.1	21.0	5.1	5.2
Goodwill amortisation	0.0	0.3	0.2	0.0	0.0	0.0	0.0
EBIT	-5.1	-12.2	0.9	-9.5	-29.1	-0.5	6.0
Margin	-31.7 %	-159.9 %	3.9 %	-18.0 %	-56.0 %	-0.8 %	8.0 %
EBIT adj.	-5.1	-12.2	0.9	-9.5	-29.1	-0.5	6.0
Interest income	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Interest expenses	0.2	0.1	0.7	1.7	1.5	1.5	1.5
Other financial income (loss)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
EBT	-5.3	-12.3	0.3	-11.2	-30.6	-2.0	4.5
Margin	-32.6 %	-161.6 %	1.2 %	-21.2 %	-58.9 %	-3.1 %	6.0 %
Total taxes	-0.9	1.1	0.1	-0.5	-0.5	-0.5	0.0
Net income from continuing operations	-4.4	-13.4	0.2	-10.7	-30.1	-1.5	4.5
Income from discontinued operations (net of tax)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Net income before minorities	-4.4	-13.4	0.2	-10.8	-30.1	-1.5	4.5
Minority interest	-0.1	-1.4	0.8	-0.7	0.0	0.0	0.0
Net income	-4.3	-12.0	-0.6	-10.1	-30.1	-1.5	4.5
Margin	-26.9 %	-157.6 %	-2.4 %	-19.1 %	-57.9 %	-2.4 %	6.0 %
Number of shares, average	1.0	40,203.6	42.0	54.0	54.0	54.0	54.0
EPS	-4.34	0.00	-0.01	-0.19	-0.56	-0.03	0.08
EPS adj.	-4.34	0.00	-0.01	-0.19	-0.56	-0.03	0.08

*Adjustments made for:

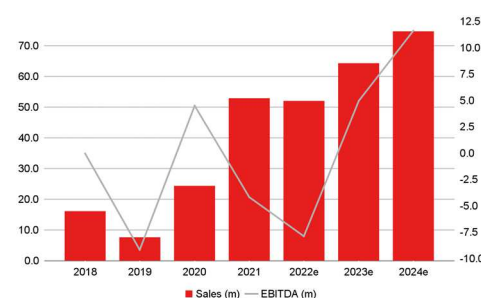
Guidance: Strongly increasing revenues at an improving yet negative EBITDA

Financial Ratios

	2018	2019	2020	2021	2022e	2023e	2024e
Total Operating Costs / Sales	110.1 %	230.6 %	89.6 %	113.2 %	121.1 %	97.3 %	89.2 %
Operating Leverage	6.6 x	-2.6 x	n.a.	n.a.	-125.7 x	-4.2 x	n.a.
EBITDA / Interest expenses	n.m.	n.m.	6.6 x	n.m.	n.m.	3.3 x	7.7 x
Tax rate (EBT)	16.3 %	-8.7 %	39.2 %	4.1 %	1.6 %	24.9 %	0.0 %
Dividend Payout Ratio	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %
Sales per Employee	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

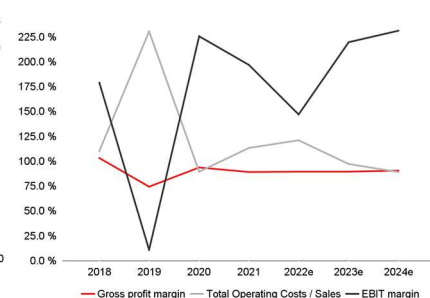
Sales, EBITDA

in EUR m

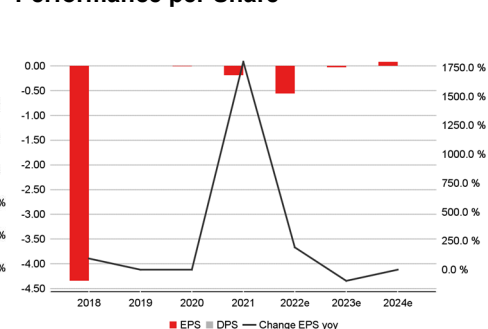


Operating Performance

in %



Performance per Share



Source: Warburg Research

Source: Warburg Research

Source: Warburg Research

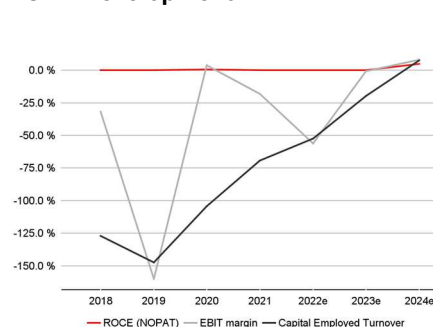
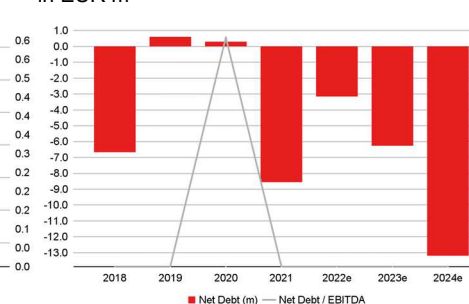
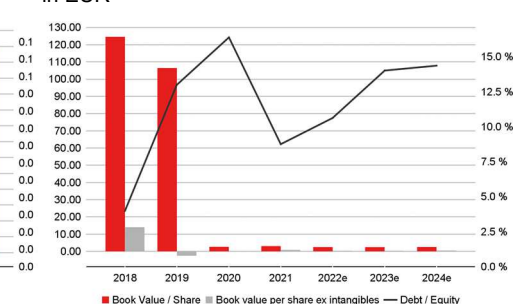
Consolidated balance sheet

In EUR m	2018	2019	2020	2021	2022e	2023e	2024e
Assets							
Goodwill and other intangible assets	110.5	109.0	110.5	119.6	114.7	112.8	111.2
thereof other intangible assets	110.5	109.0	110.5	119.6	114.7	112.8	111.2
thereof Goodwill	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Property, plant and equipment	0.2	0.2	0.5	0.6	0.8	1.0	1.1
Financial assets	0.3	0.2	0.1	0.2	0.2	0.2	0.2
Other long-term assets	1.3	0.3	0.5	0.0	0.0	0.0	0.0
Fixed assets	112.4	109.7	111.6	120.3	115.7	114.0	112.4
Inventories	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Accounts receivable	3.1	5.7	8.6	10.9	12.8	14.1	14.3
Liquid assets	6.7	3.2	5.3	8.6	3.2	6.3	13.2
Other short-term assets	2.1	0.4	2.6	37.5	15.5	15.5	15.5
Current assets	11.9	9.3	16.4	57.1	31.5	35.9	43.0
Total Assets	124.2	119.0	128.0	177.4	147.2	149.9	155.5
Liabilities and shareholders' equity							
Subscribed capital	40.2	40.2	42.1	54.0	54.0	54.0	54.0
Capital reserve	98.0	98.0	100.6	151.9	151.9	151.9	151.9
Retained earnings	-13.6	-26.2	-26.8	-41.9	-72.0	-73.5	-69.0
Other equity components	0.0	-5.5	-5.5	0.0	0.1	0.0	0.0
Shareholders' equity	124.6	106.4	110.3	164.1	134.1	132.5	137.0
Minority interest	-5.1	-1.1	-0.4	-1.0	-1.0	-1.0	-1.0
Total equity	119.5	105.3	110.0	163.1	133.1	131.5	136.0
Provisions	1.6	0.0	0.0	0.0	0.0	0.0	0.0
thereof provisions for pensions and similar obligations	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Financial liabilities (total)	0.1	3.8	5.6	0.0	0.0	0.0	0.0
Short-term financial liabilities	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Accounts payable	1.3	1.1	2.2	5.2	5.1	6.3	7.4
Other liabilities	1.8	8.8	10.2	9.0	9.0	12.1	12.1
Liabilities	4.8	13.7	18.0	14.3	14.2	18.4	19.5
Total liabilities and shareholders' equity	124.2	119.0	128.0	177.4	147.2	149.9	155.5

Financial Ratios

	2018	2019	2020	2021	2022e	2023e	2024e
Efficiency of Capital Employment							
Operating Assets Turnover	8.1 x	1.6 x	3.6 x	8.4 x	6.1 x	7.3 x	9.3 x
Capital Employed Turnover	0.1 x	0.1 x	0.2 x	0.3 x	0.4 x	0.5 x	0.6 x
ROA	-3.9 %	-10.9 %	-0.5 %	-8.4 %	-26.1 %	-1.3 %	4.0 %
Return on Capital							
ROCE (NOPAT)	n.a.	n.a.	0.5 %	n.a.	n.a.	n.a.	4.8 %
ROE	-6.0 %	-10.4 %	-0.5 %	-7.4 %	-20.2 %	-1.1 %	3.3 %
Adj. ROE	-6.0 %	-10.4 %	-0.5 %	-7.4 %	-20.2 %	-1.1 %	3.3 %
Balance sheet quality							
Net Debt	-6.7	0.6	0.3	-8.6	-3.2	-6.3	-13.2
Net Financial Debt	-6.7	0.6	0.3	-8.6	-3.2	-6.3	-13.2
Net Gearing	-5.6 %	0.6 %	0.3 %	-5.2 %	-2.4 %	-4.8 %	-9.7 %
Net Fin. Debt / EBITDA	n.a.	n.a.	6.6 %	n.a.	n.a.	n.a.	n.a.
Book Value / Share	124.6	106.4	2.6	3.0	2.5	2.5	2.5
Book value per share ex intangibles	14.0	-2.6	0.0	0.8	0.4	0.4	0.5

ROCE Development

Net debt
in EUR mBook Value per Share
in EUR

Source: Warburg Research

Source: Warburg Research

Source: Warburg Research

Consolidated cash flow statement

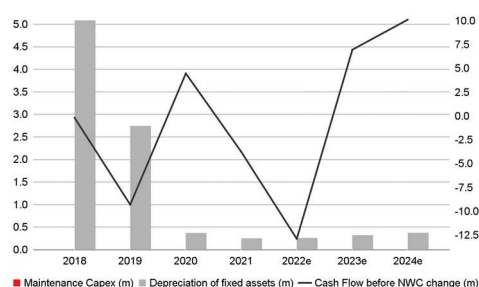
In EUR m	2018	2019	2020	2021	2022e	2023e	2024e
Net income	-5.3	-12.3	0.3	-11.2	-30.1	-1.5	4.5
Depreciation of fixed assets	5.1	2.7	0.4	0.3	0.3	0.3	0.4
Amortisation of goodwill	0.0	0.3	0.2	0.0	0.0	0.0	0.0
Amortisation of intangible assets	0.0	0.0	3.0	5.1	21.0	5.1	5.2
Increase/decrease in long-term provisions	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other non-cash income and expenses	0.0	0.0	0.6	2.1	-4.0	3.0	0.0
Cash Flow before NWC change	-0.2	-9.3	4.5	-3.8	-12.9	7.0	10.1
Increase / decrease in inventory	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Increase / decrease in accounts receivable	0.0	0.0	-0.1	-0.5	-1.9	-1.3	-0.2
Increase / decrease in accounts payable	0.0	0.0	2.6	2.6	-0.1	1.2	1.1
Increase / decrease in other working capital positions	0.0	0.0	-5.4	-11.3	0.0	0.0	0.0
Increase / decrease in working capital (total)	0.0	0.0	-2.8	-9.2	-2.0	-0.1	0.9
Net cash provided by operating activities [1]	-0.2	-9.3	1.6	-12.9	-14.9	6.9	11.0
Investments in intangible assets	0.0	0.0	0.0	-2.8	-16.1	-3.2	-3.6
Investments in property, plant and equipment	0.0	0.0	0.0	-0.5	-0.5	-0.5	-0.5
Payments for acquisitions	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Financial investments	0.0	0.0	-0.2	-27.1	0.0	0.0	0.0
Income from asset disposals	-2.1	0.0	0.1	0.0	0.0	0.0	0.0
Net cash provided by investing activities [2]	-2.1	0.0	-5.2	-41.6	-16.6	-3.7	-4.1
Change in financial liabilities	0.0	0.0	-0.1	-3.2	0.0	0.0	0.0
Dividends paid	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Purchase of own shares	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Capital measures	0.0	0.0	6.3	61.8	0.0	0.0	0.0
Other	0.0	0.0	-0.5	-0.7	26.1	0.0	0.0
Net cash provided by financing activities [3]	0.0	0.0	5.7	57.8	26.1	0.0	0.0
Change in liquid funds [1]+[2]+[3]	-2.3	-9.3	2.1	3.3	-5.4	3.1	6.9
Effects of exchange-rate changes on cash	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cash and cash equivalent at end of period	9.3	-2.6	5.3	8.6	3.2	6.3	13.2

Financial Ratios

	2018	2019	2020	2021	2022e	2023e	2024e
Cash Flow							
FCF	-0.2	-9.3	-3.5	-27.4	-31.5	3.1	6.9
Free Cash Flow / Sales	-1.1 %	-122.0 %	-14.4 %	-51.7 %	-60.5 %	4.8 %	9.3 %
Free Cash Flow Potential	0.8	-10.2	4.4	-3.7	-7.4	5.5	11.6
Free Cash Flow / Net Profit	4.0 %	77.4 %	593.4 %	270.9 %	104.4 %	-205.4 %	153.9 %
Interest Received / Avg. Cash	0.2 %	0.1 %	0.7 %	0.2 %	0.0 %	0.0 %	0.0 %
Interest Paid / Avg. Debt	50.9 %	6.9 %	14.7 %	60.0 %	3125.0 %	3125.0 %	3125.0 %
Management of Funds							
Investment ratio	0.0 %	0.0 %	0.0 %	6.2 %	31.9 %	5.8 %	5.5 %
Maint. Capex / Sales	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %
Capex / Dep	0.0 %	0.0 %	0.0 %	61.4 %	78.1 %	68.6 %	72.7 %
Avg. Working Capital / Sales	3.4 %	41.7 %	22.4 %	11.4 %	12.9 %	12.1 %	9.8 %
Trade Debtors / Trade Creditors	230.3 %	515.9 %	380.8 %	209.6 %	251.0 %	223.8 %	193.2 %
Inventory Turnover	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Receivables collection period (days)	70	273	128	75	90	80	70
Payables payment period (days)	458	147	236	225	218	228	251
Cash conversion cycle (Days)	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

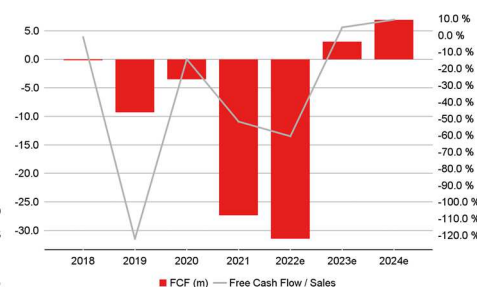
CAPEX and Cash Flow

in EUR m



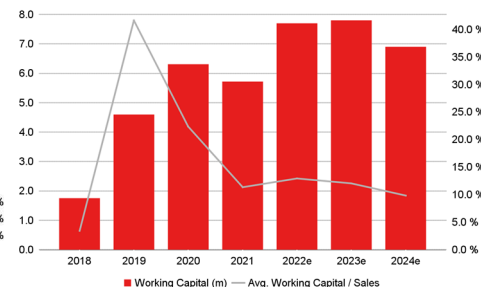
Source: Warburg Research

Free Cash Flow Generation



Source: Warburg Research

Working Capital



Source: Warburg Research

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This report has been made accessible to the company analysed.

Company	Disclosure	Link to the historical price targets and rating changes (last 12 months)
Naga Group	5	http://www.mmwarburg.com/disclaimer/disclaimer_en/DE000A161NR7.htm

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Investment recommendation: expected direction of the share price development of the financial instrument up to the given price target in the opinion of the analyst who covers this financial instrument.

-B-	Buy:	The price of the analysed financial instrument is expected to rise over the next 12 months.
-H-	Hold:	The price of the analysed financial instrument is expected to remain mostly flat over the next 12 months.
-S-	Sell:	The price of the analysed financial instrument is expected to fall over the next 12 months.
“-“	Rating suspended:	The available information currently does not permit an evaluation of the company.

WARBURG RESEARCH GMBH – ANALYSED RESEARCH UNIVERSE BY RATING

Rating	Number of stocks	% of Universe
Buy	161	75
Hold	43	20
Sell	7	3
Rating suspended	3	1
Total	214	100

WARBURG RESEARCH GMBH – ANALYSED RESEARCH UNIVERSE BY RATING ...

... taking into account only those companies which were provided with major investment services in the last twelve months.

Rating	Number of stocks	% of Universe
Buy	44	86
Hold	6	12
Sell	0	0
Rating suspended	1	2
Total	51	100

PRICE AND RATING HISTORY NAGA GROUP AS OF 06.03.2023



Markings in the chart show rating changes by Warburg Research GmbH in the last 12 months. Every marking details the date and closing price on the day of the rating change.

EQUITIES

Matthias Rode +49 40 3282-2678
Head of Equities mrode@mmwarburg.com

RESEARCH

Michael Heider +49 40 309537-280
Head of Research mheider@warburg-research.com

Henner Rüschemeyer +49 40 309537-270
Head of Research hrueschmeier@warburg-research.com

Stefan Augustin +49 40 309537-168
Cap. Goods, Engineering saugustin@warburg-research.com

Jan Bauer +49 40 309537-155
Renewables jbauer@warburg-research.com

Christian Cohrs +49 40 309537-175
Industrials & Transportation ccohrs@warburg-research.com

Dr. Christian Ehmann +49 40 309537-167
BioTech, Life Science cehmann@warburg-research.com

Felix Ellmann +49 40 309537-120
Software, IT fellmann@warburg-research.com

Jörg Philipp Frey +49 40 309537-258
Retail, Consumer Goods jfrey@warburg-research.com

Marius Fuhrberg +49 40 309537-185
Financial Services mfuhrberg@warburg-research.com

Mustafa Hidir +49 40 309537-230
Automobiles, Car Suppliers mhidir@warburg-research.com

Fabio Hölscher +49 40 309537-240
Automobiles, Car Suppliers fhoelscher@warburg-research.com

Philipp Kaiser +49 40 309537-260
Real Estate, Construction pkaiser@warburg-research.com

Thilo Kleibauer +49 40 309537-257
Retail, Consumer Goods tkleibauer@warburg-research.com

Hannes Müller +49 40 309537-255
Software, IT hmueller@warburg-research.com

Andreas Pläsier +49 40 309537-246
Banks, Financial Services aplaesier@warburg-research.com

Malte Schaumann +49 40 309537-170
Technology mschaumann@warburg-research.com

Oliver Schwarz +49 40 309537-250
Chemicals, Agriculture oschwarz@warburg-research.com

Simon Stippig +49 40 309537-265
Real Estate, Telco sstippig@warburg-research.com

Cansu Tatar +49 40 309537-248
Cap. Goods, Engineering ctatar@warburg-research.com

Marc-René Tonn +49 40 309537-259
Automobiles, Car Suppliers mtonn@warburg-research.com

Robert-Jan van der Horst +49 40 309537-290
Technology rvanderhorst@warburg-research.com

Andreas Wolf +49 40 309537-140
Software, IT awolf@warburg-research.com

INSTITUTIONAL EQUITY SALES

Marc Niemann +49 40 3282-2660
Head of Equity Sales, Germany mniemann@mmwarburg.com

Klaus Schilling +49 69 5050-7400
Head of Equity Sales, Germany kschilling@mmwarburg.com

Tim Beckmann +49 40 3282-2665
United Kingdom tbeckmann@mmwarburg.com

Lea Bogdanova +49 69 5050-7411
United Kingdom, Ireland lbogdanova@mmwarburg.com

Jens Buchmüller +49 69 5050-7415
Scandinavia, Austria jbuchmueller@mmwarburg.com

Matthias Fritsch +49 40 3282-2696
United Kingdom mfritsch@mmwarburg.com

Maximilian Martin +49 69 5050-7413
Austria, Poland mmartin@mmwarburg.com

Christopher Seedorf +49 40 3282-2695
Switzerland cseedorf@mmwarburg.com

Sophie Hauer +49 69 5050-7417
Roadshow/Marketing shauer@mmwarburg.com

Juliane Niemann +49 40 3282-2694
Roadshow/Marketing jniemann@mmwarburg.com

SALES TRADING

Oliver Merckel +49 40 3282-2634
Head of Sales Trading omerckel@mmwarburg.com

Elyaz Dust +49 40 3282-2702
Sales Trading edust@mmwarburg.com

Marcel Magiera +49 40 3282-2662
Sales Trading mmagiera@mmwarburg.com

Bastian Quast +49 40 3282-2701
Sales Trading bquast@mmwarburg.com

Jan-Philip Schmidt +49 40 3282-2682
Sales Trading jschmidt@mmwarburg.com

Sebastian Schulz +49 40 3282-2631
Sales Trading sschulz@mmwarburg.com

Jörg Treptow +49 40 3282-2658
Sales Trading jtreptow@mmwarburg.com

MACRO RESEARCH

Carsten Klude +49 40 3282-2572
Macro Research cklude@mmwarburg.com

Dr. Christian Jasperneite +49 40 3282-2439
Investment Strategy cjasperneite@mmwarburg.com

Our research can be found under:

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Refinitiv www.refinitiv.com

Capital IQ www.capitaliq.com

For access please contact:

Andrea Schaper +49 40 3282-2632
Sales Assistance aschaper@mmwarburg.com

Kerstin Muthig +49 40 3282-2703
Sales Assistance kmuthig@mmwarburg.com