

Initiation of coverage

ADVERTLY AB

Advertly offers a solution for game developers to generate revenue from its games through ads that are integrated into the game environment, so-called in-game ads.

CEO: Jonas Söderqvist
CoB: Joachim Roos
www.advertly.com

List: NGM Nordic SME
Last: 3,5 SEK
Market cap: 111 SEKm
Enterprise value: 103 SEKm

Bloomberg: ADVT:SS
Refinitiv Eikon: ADVT.ST

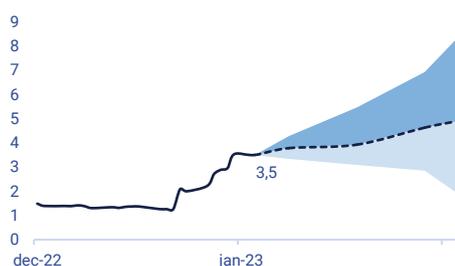
SHARE DEVELOPMENT



	12M	YTD	6M	1M
Development (%)	-16	171	27	154

Source: S&P Capital IQ

VALUATION INTERVAL



	BEAR	BAS	BULL
Fair value (SEK)	1.9	4.9	8.4
Up-/downside (%)	-47	40	140

Source: S&P Capital IQ and Carlsquare estimates

CARLSQUARE EQUITY RESEARCH

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Hidden values about to be revealed

Advertly has developed an in-game advertising solution for game developers. With a patented method for determining the visibility of ads in 3D games, the company is well-positioned when demand takes off. Carlsquare Equity Research initiates coverage on Advertly with a fair value of SEK 4.9 per share for the next 6-12 months.

In-game ads, an upcoming revenue source for game developers

Advertising is one of the most common revenue models for mobile games. Advertly's solution enables game developers to generate revenue from in-game ads for games mainly on mobile platforms, AR, VR and MR. In-game ads are integrated as part of the game environment, for example, via billboards in a sports game. Compared to traditional banners and interstitial ads, in-game ads are considered less disruptive to the gaming experience. This feature is beneficial for both advertisers and game developers.

Rising demand for in-game ads and a hidden value in technology

In parallel, the in-game ads market is still in its infancy but is expected to multiply in the coming years, given the large audience that exists in the gaming world. That has also made the company's market highly competitive. In our view, a prominent growth driver is the new guidelines for in-game ads in 3D games developed by the industry body Interactive Advertising Bureaus (IAB). This help to clarify the value of in-game ads. We believe this will drive demand, the market and the company's continued growth.

According to the IAB's guidelines, several criteria must be met for an ad to be classified as viewable, create value and thus trigger a payment from the advertiser. Advertly's method for measuring whether an in-game ad in 3D games is viewable (in line with the IAB guidelines) is patented - and could close out the competition. However, as an external part, it isn't easy to assess the strength of the patent. But patents are an asset that may take the company to a leading position in the market.

Low valuation, given growth and profitability potential

In 2022, the number of games on the platform almost doubled to around 250. For 2022, we anticipate revenues to increase by 195 per cent to SEK 14.1 million. We expect a continued rapid growth rate over the coming years - a CAGR, 2021-2025 of 146 per cent. In parallel, with a scalable platform, we expect gross margin to rise quickly and normalise at 40 per cent in 2025, the same year a positive EBITDA result is anticipated. Over time, we expect the EBITDA margin to increase to 14.4 per cent. If the strength and value of the patents can be made clear, a significant upside in our forecasts and valuation is created.

Combining a DCF model with multiple valuations, a fair value of SEK 4.9 per share is calculated for the next 6-12 months. Our valuation corresponds to an EV/Sales multiple of 2023 of 4.6x and a valuation multiple on expected sales, adjusted for revenue sharing (50 per cent) 2024, of 4.1x. The reference group, consisting of companies in Adtech, is currently trading at an EV/Sales multiple 2023 of 3.8x.

Key figures (MSEK)

	2019	2020	2021	2022E	2023E	2024E
Net sales	0.2	0.7	4.8	14.1	39.6	88.6
Gross profit	0.5	-1.4	-2.9	2.8	12.5	35.2
EBITDA	-10.9	-14.9	-21.8	-20.6	-15.9	-6.4
EBIT	-11.0	-15.1	-22.0	-24.6	-17.6	-8.1
EBT	-12.2	-15.1	-22.0	-24.6	-17.7	-8.1
EPS	-1.01	-0.74	-0.97	-0.77	-0.45	-0.19
Growth, revenue	307%	268%	593%	195%	181%	124%
Gross margin	22.9%	-76.0%	-54.1%	19.4%	31.3%	39.5%
EBITDA margin	-537%	-833%	-411%	-141%	-39.7%	-7.2%
EBIT-margin	-544%	-843%	-415%	-168%	-44.0%	-9.1%
EV/Sales	640.1x	405.6x	20.0x	2.8x	1.0x	0.4x
EV/EBITDA	NM	NM	NM	NM	NM	NM
EV/EBIT	NM	NM	NM	NM	NM	NM
P/E	NM	NM	NM	NM	NM	NM

Source: Company information and Carlsquare estimates

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Investment case

Adtech company Adverty has developed a solution for in-game ads – ads integrated into the environment of games on mobile platforms and PC. The underlying market is anticipated to grow at an average annual rate of 11.1 per cent over the next few years. A key component of the company’s solution is the patented method for measuring and assessing the visibility of ads in 3D games, in line with current guidelines. That creates an excellent opportunity for the company to grow significantly faster than the market. The company has left the starting blocks, and in a base case scenario, a fair value of SEK 4.9 per share is estimated for the next 6-12 months.

Growth and margin expansion create upside

In 2023, we expect growth of 181 per cent, which is somewhat below the company’s guidance. However, investors’ expectations are even lower, given the current market valuation. In a base case scenario, a fair value of SEK 4.9 per share is calculated, corresponding to an EV/Sales multiple in 2023 of 4.6x and 4.1x adjusted sales in 2024. That compares to the peer group, which trades at an EV/Sales 2023 of 3.8x.

The company’s net turnover equals the sum of the advertising revenues. Fifty per cent of the net turnover is shared with the customers as part of the business model. Adjusted sales thus represent the company’s share of net sales.

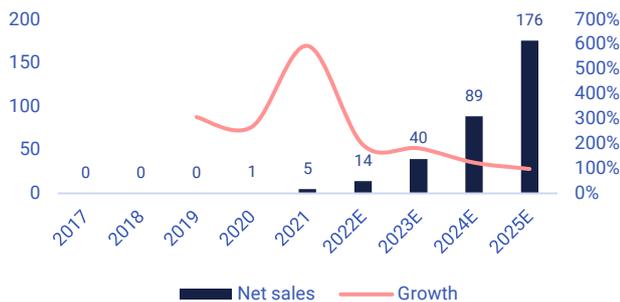
- **Benefits of in-game ads.** In-game ads is integrated into the game environment, for example, via billboards in the game’s background. As a natural part of the game, in-game ads are not perceived to interfere with the gaming experience to the same extent as traditional interstitial ads or banners. However, there is a drawback to in-game ads. It isn’t easy to measure its effectiveness with conversion metrics. Therefore, brand awareness and education are the main objectives of in-game ads.
- **The establishment of guidelines is expected to boost the market.** The market for in-game ads can be considered to be in its infancy. We believe that ambiguities around when an ad can be classified as visible, categorised as a view and trigger a payment largely explain this. The industry body IAB has recently published guidelines on what is required for an in-game ad in 3D games to be classified as visible and classified as an actual viewing (and thus trigger payment). We believe this could increase interest in in-game ads and drive the market and the company’s growth over the coming years.
- **Patented method/technology, a hidden value.** The company’s method for determining whether an object in a 3D environment is visible (in line with the IAB guidelines) is patented. Given that the patent is strong enough, it should provide a clear advantage as the market grows, with measurability as one of the drivers. The patent is an asset that is currently hard to value but could prove to be a hidden asset that takes the company to the top. When signs (for example, strong market share growth or a takeover bid) that such a scenario may become a reality, a clear upside is created in both forecasts and valuation.
- **Rapid growth, improved gross margin and scalability.** Although the value of the patent is still largely unproven, we expect strong growth in the coming years. Over the forecast period, 2022-2032, we expect an average annual growth rate of 51.7 per cent. With scalability and an improving gross margin, which in our scenario rises to 40 per cent, the company can reach profitability by 2025. Over time, we expect the EBITDA margin to increase to 14.4 per cent by 2032.

Assumptions and estimates

A strong market position creates good growth prospects

We expect a CAGR, 2021-2025, of a substantial 146 per cent. Over the entire forecast period, 2022-2032, we expect an average annual growth rate of 51.7 per cent. That is well above the market predicted to grow by an average of 11.1 per cent over the coming years. Advertly's strong anticipated growth is motivated by its position in a large market and relatively low starting values.

Net sales (SEKm) and growth (%)



Source: Company information and Carlsquare estimates

Gross profit (SEKm) and margin (%)



Gross profit = total revenue less raw materials and supplies and revenue sharing. Source: Company information and Carlsquare estimates

With good scalability in the company's ad server, we expect the gross margin to rise relatively quickly to 40 per cent. That is significantly lower than traditional software companies, which typically range between 60-90 per cent. The deviation is explained by the company's revenue-sharing model (50 per cent).

Profitability and facilitated cash flow

With an already relatively large cost base, we expect the company to achieve a positive EBITDA result in 2025 of SEK 13.1 million, corresponding to a margin of 7.4 per cent. By 2032, we expect the EBITDA margin to rise to 14.4 per cent. That compares to software companies that typically range between 20-25 per cent. A lower gross margin explains the difference.

EBITDA (SEKm) and margin (%)



Källa: Bolagsinformation and Carlsquare prognoser

Cash flow (SEKm)



Source: Company information and Carlsquare estimates

The ad money flows through the company to the customer (revenue sharing). That helps the company by tying up less working capital. However, we expect the company to raise new money in the beginning of 2023.

Valuation

Upside given growth and margin expansion

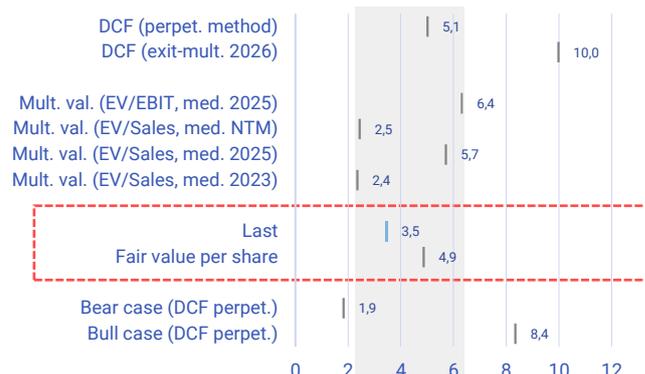
Combining a DCF valuation model with a multiple valuation model, a motive value per share of SEK 4.9 is calculated for the next 6-12 months in a base-case scenario. That corresponds to a potential upside of 40 per cent. The valuation is based on strong growth and a rapidly increasing gross margin.

Fair value, base case scenario

Currency, SEK		1.0
Mult. val. (EV/Sales, med. NTM)	SEK	2.5
Mult. val. (EV/Sales, med. 2025)	SEK	5.7
Mult. val. (EV/EBIT, med. 2025)	SEK	6.4
DCF valuation	SEK	5.1
Fair value per share	SEK	4.9
Potential up-/downside		40%
Shares outstanding, fully financed, and diluted	M	44
Equity value	SEKm	216
Cash (last rep. Q)	SEKm	9.3
Debt (last rep. Q)	SEKm	0.6
PV cash from equity financing	SEKm	25
EV	SEKm	182

Source: Carlsquare estimates

Fair value within a range (SEK/share)



Source: Carlsquare estimates

Implicita värderingsmultiplar, basscenario

	NTM	2021	2022	2023	2024	2025
EV/Sales	4.5x	20.0x	12.9x	4.6x	2.1x	1.0x
EV/Adj. sales	9.1x	76.2x	25.8x	9.2x	4.1x	2.1x
EV/EBITDA	NM	NM	NM	NM	NM	13.9x
EV/EBIT	NM	NM	NM	NM	NM	16.0x
P/E	NM	NM	NM	NM	NM	19.8x

* Adjusted sales refer to reported net sales reduced by 50 per cent, corresponding to the prevailing revenue sharing ratio. Source: Carlsquare estimates

Our base case valuation corresponds to an EV/Sales multiple of 4.6x in 2023 and an adjusted sales multiple of 4.1x in 2024. The latter compares to the benchmark group of Adtech companies which trade at an EV/Sales multiple in 2023 of 3.8x.

In a more optimistic Bull scenario, we model a CAGR, 2021-2032, of 57.1 per cent (base 51.7 per cent) and an EBITDA margin in 2032 of 16.6 per cent (base 14.4 per cent). The Bull scenario yields a calculated value per share using our DCF model at SEK 8.4.

In a more defensive Bear scenario, we model a CAGR, 2021-2032, of 44.6 per cent and an EBITDA margin in 2032 of 11.6 per cent. In the Bear scenario, our DCF model calculates a value per share of SEK 1.9.

Risks and challenges

Like any business, Advertly is exposed to risks and challenges. We believe the biggest challenge for the company right now is taking market shares in a highly competitive market.

Aggressive competition, the biggest challenge

Competition

Competition is significant, which also demonstrates the market potential. Until the first quarter of 2022, the company has reported a negative gross margin. That is large because the company paid customers (read game developers) to use Advertly's solution. The company has implemented a policy of no longer paying customers to use its solution. That is also reflected in the gross margin, which has been positive since the second quarter of 2022. However, to our knowledge, the competition continues to pay game developers to take market share.

Patented solutions

The company's method for assessing whether an in-game ad in 3D games is visible is patented for all screens. If the patents can keep competition out, the patents are a hidden asset that will take the company to the top. At the same time, the competitors also have patented solutions for determining visibility. It is difficult to assess the strength and value of patents in this industry. Thus, we do not expect the various players' patents to be the determining factor in gaining market shares.

Market in flux

Advertisers' ability to target digital advertising campaigns has changed. Among other things, third-party cookies and IDFA are being phased out. While new technologies have been developed to maintain the effectiveness of digital marketing, this can lead to squeezed margins for advertisers. That, in turn, may hamper the development of digital marketing, including the market for interest-based in-game ads.

Constrained finances and uncertainty in assumptions

Today, the company is making a negative result. We expect the company to break even/slightly positive EBITDA for the first time in the fourth quarter of 2024. That can be considered conservative compared to the company's view. At the end of the third quarter of 2022, Advertly had cash of SEK 9.3 million. We expect the company to raise new capital in the first quarter of 2023. Future capital needs are not secured. However, secured funding on favourable terms under 2023 is a trigger that reduces uncertainty.

Our assumptions regarding revenue and profitability development are associated with high uncertainty. However, this is almost always the case for growth companies. Many growth companies overshoot their targets, which we have considered in our scenario.

Introduction to the company

Advertly offers a solution for game developers to generate revenue from their games through in-game ads. This advertising format serves the purpose of creating brand awareness and has both advantages and disadvantages compared to more established formats. The patented technology may be a hidden asset that put Advertly in a leading position as the market takes off with new industry guidelines.

Introduction to Advertly

From VR to mobil- och PC-spel

Adtech company Advertly was founded in 2017 and was early to act on opportunities in in-game ads. Since its founding, the company has developed a technology solution that enables developers to create and populate ad spaces integrated into digital environments. Initially, the platform was designed for AR/VR and MR technologies. These technologies have not had the impact that many expected at the time. In light of this, Advertly quickly realigned its business and solution to focus on integrated ads in games for mobile platforms.

In-game ads – an ad format in games that is incorporated into the game environment.

The future is moving from clarity to clarity

In total, approximately SEK 140 million has been invested in Advertly. Over the last twelve months (LTM) basis, net sales amounted to SEK 11.0 million at the end of the third quarter of 2022. During the same period, an EBITDA result of minus SEK 21.6 million has been reported, and a free cash flow of minus SEK 30.4 million. At the end of the third quarter of 2022, cash and cash equivalents amounted to SEK 9.3 million.

The company's revenue model means that Advertly shares (50 per cent) the advertising revenue with the game developer.

Net sales (SEKm), LTM



LTM = last twelve months. Source: Company information and Carlsquare

Today, the company focuses on business development to connect with more game developers and advertisers (brands and media agencies). At the same time, the in-game ads market is still in its infancy: An in-game advertiser is billed per actual view. However, there is ambiguity about when an in-game ad is visible and can be classified as an actual view. That has hampered the in-game ad format. But leading industry associations recently formulated guidelines on how and when a view of an in-game ad should be classified as a view. That will provide a basis for clarifying the value of the ad format, setting the stage for strong growth. In parallel, the company has patented its proprietary technology for measuring views in line with the new guidelines. That could be the asset that takes the company to a leading market position.

DSP = Demand-side platform. A hub where the demand for online advertising space is gathered.

Ads in games

Advertising in games

A standard revenue model for game developers is to charge the user a fee at the download time – so-called premium games. An even more common revenue model is free-to-play games, where revenue is generated from advertisements, often in combination with so-called “in-app purchases”. The article “Ads, IAP and beyond: Supercharge your game”, published by Meta Audience Network in August 2022, shows that 93 per cent of all game developers use ads to generate revenue.

We divide in-game ads (or in-app ads) into three formats categories:

- Banners
- Interstitial ads
- In-game ads

Traditional banners and interstitial ads

One of the most commonly used advertising formats in games is banners. A banner covers a small part of the game screen during the game and often consists of a clickable still image with text. Another common advertising format in games is the so-called interstitial ad. An interstitial ad temporarily covers the entire game screen and appears at selected times (game breaks). Interstitial ads can also be optional – the player makes an active choice to watch an interstitial ad (often video) in exchange for benefits, such as the game’s currency.

Banners and interstitial ads interfere with the gaming experience. It carries the advantage of being clickable, and effectiveness can thus be measured.

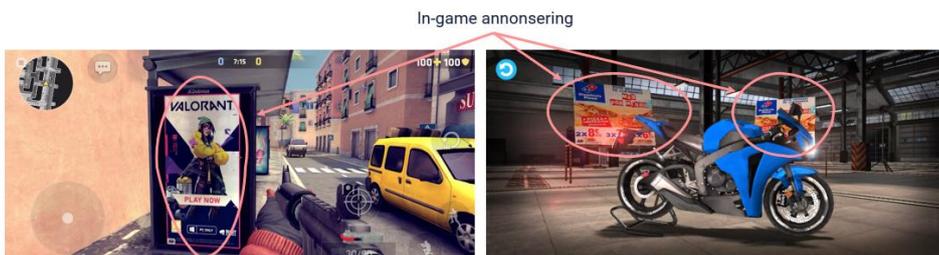
Both banners and interstitial ads have advantages from the advertisers’ perspective. That’s because these ad formats are clickable for redirection. That means that the effectiveness of the ad is measurable via KPIs such as CTR (click-through rate) and CPL (cost per lead). However, from a user’s perspective, both banners and interstitial ads are perceived as disruptive to the gaming experience – something that is also undesirable from the game developer’s perspective.

In-game ads are seamlessly integrated with the game environment

In-game ads (intrinsic in-gaming advertising, or what the company calls In-Play™ advertising) are incorporated via the game code into the game environment as part of the game experience rather than partially or temporarily covering the game with a layer of added graphics. Thus, in-game ads do not interfere with the actual gaming experience. In-gaming ads usually come in the form of billboards in the game’s background.

In-game ads are part of the gaming environment. They thus do not affect the gaming experience – possibly in a positive way as games of certain types can be perceived more realistically. The form of advertising is adapted to create brand awareness, for example.

Exempel, in-game annonsering med Advertys lösning



Source: Company information and Carlsquare

The competitor Anzu has surveyed 1,200 people. The study, conducted in early 2022, found that 70 per cent of the respondents were positive or neutral about in-game ads. In another study conducted by Advertly in collaboration with Dentsu, the following, among others, can be read:

- 50 per cent of respondents indicated that games were a preferred forum for advertising. The corresponding figure for news sites was 30 per cent.
- Around two-thirds of respondents indicated that in-game ads did not interfere with the gaming experience. 17 per cent told that in-game ads had a positive effect on the gaming experience – that is because it adds a degree of reality to the gaming experience. The corresponding percentage for the traditional banner was 13 per cent.

There are also disadvantages to in-game ads. As in-game ads are embedded in the game environment via code, they are not clickable. Thus, it is difficult to measure effectiveness through various conversion metrics. Instead, from the advertiser’s perspective, in-game ads fulfil the function of creating awareness.

Dynamic och static in-game ads

We divide in-game ads into two types; (i) static and (ii) dynamic in-game ads. Both have advantages and disadvantages, and the Advertly platform handles both types.

Static in-game ads mean that brands are built into the game layout. That implies that the ads cannot change. For example, static in-game ads can be integrated into so-called skins, such as clothes or accessories for the player’s avatar, and can thus be compared to product placement in a movie.

Dynamic in-game ads usually come on billboards integrated into the game environment, where the ads displayed can change and adapt in real time. This ad type is thus more suited for so-called programmatic advertising, where the demand for ad space is automatically matched with the supply of digital ad space.

Advertly works with so-called dynamic in-game ads.

Static in-game ad



Source: RapidFire

Dynamic in-game ads



Source: Advertly

Pricing models for advertising in games

Game developers are typically reimbursed for advertising in games on a performance-based model - remuneration thus varies with, for example, the number of views or clicks, which in turn is a function of the game's popularity in terms of the number of users/players. Some of the most common models for advertising in games are described below:

- **CPC/PPC (Cost per Click or Pay per Click)** means that the advertiser compensates the game developer per click on the ad. That is common for banners, for example.
- **CPA (Cost per Action or Cost per Acquisition)** means that the advertiser pays first on some kind of conversion. That is often the preferred model among advertisers but is also expensive as the publisher takes on a higher risk when set in relation to the other pricing models.
- **CPM (Cost per Mille or Cost per thousand impressions)** means that advertisers pay per thousand times an ad is shown. This model is typical for brand-building campaigns as they tend to be cheaper than CPC. This is also the model that is viable with in-game ads. For in-game ads, time may also be a variable that is considered. This is also the model used by programmatic commerce today.

Video strengthens offer and broadens the market

In collaboration with the Swedish company SeenThis, Advertly has launched a technology to allow in-game ads to be filled with streamed videos. According to the July 2022 press release, the company is the first to market with this technology and functionality.

According to information from Wyzowl, 86 per cent of advertisers use video as a marketing tool. Thus, we believe that this functionality could be valuable for the company. It should also be noted that video ads typically cost more for the advertiser and thus generate more money for the game developer and the company. However, it is not unreasonable that in-game ads with video pose a greater risk of disrupting game performance as they require heavier use of capacity.

CTV and streaming services, a new potential market for Advertly

The third quarterly 2022 report states that Advertly has the ambition to enter the CTV (or Connected TV) market. We see this venture as clearly interesting. However, given the early stage, we see this venture as an option to add to the potential rather than an immediate revenue stream.

CTV includes smart TVs, game consoles and other video streaming devices like AppleTV, Chromecast and Roku that stream video over the internet. Various video streaming services, such as Netflix, Disney+, prime video or YouTubeTV, fall under the umbrella term OTT services (or over-the-top streaming services). CTV and streaming services can be contrasted with linear TV, which refers to traditional TV that follows a set schedule and can be accessed via, for example, a TV antenna, cable or satellite.

Many streaming services come at a monthly fee. However, many are free of charge and financed through advertising revenues. There is also talk of, for example, Netflix and others offering a subscription plan wholly or partly funded through advertising. CTV advertising, like in-game ads, is mainly programmatic.

In parallel, households have started to switch from linear TV to streaming services – today, households frequently switch between streaming services and linear TV. Over time, streaming services are expected to take over. That is demonstrated, for example, by Tele2, which has released a new streaming package with linear channels.

Brand security is an essential part

In this context, brand safety refers to the ability to protect the reputation of brands when advertising online. For example, fraud and/or advertising in undesirable places online can damage a brand's reputation. The company works with several methods to ensure brand safety:

- Third-party verification: Game developers the company works with publish their games on established platforms such as Apple's App Store, Google Play, Meta Platform's Oculus and Steam. As a result, games have already undergone thorough checks by well-established third parties.
- The above platforms follow various established categorisation standards for games and apps regarding minimum recommended age and content. Advertisers can exclude undesirable categories.
- The games in the company's portfolio are all labelled with game categories, such as sports games, shooting games or puzzle games. The advertiser can therefore choose which game types for ad campaigns.

Certifieringar

Several organisations work on brand safety and certification companies like Advertly. For companies to obtain these certifications, they are required to confirm compliance with processes and procedures in line with security standards and guidelines. The company is currently certified by the IAB Sweden Gold Standard, TAG Brand Safety and IAB Europe's Transparency and Consent Framework.

Certifieringar för varumärkessäkerhet



Source: Company information and Carlsquare

The platform, a solution for game developers

SDK for Unity – the largest game developing platform

The company's tool consists of a number of key components that enable customers to integrate ads into the game code and populate them with ads. The first essential component of the advertising solution is its SDK (Software development kit).

The company's SDK can be seen as an add-on tool that enables game developers to easily add ad space as an integrated component of the game using ready-made templates and drag-and-drop functionality. Furthermore, the pre-programmed templates of the ad space can be customised in terms of size and shape. As an alternative to using pre-programmed templates, the game developer can create his own ad spaces.

Today, Adverty's SDK can be integrated as an add-on to Unity's (Unity Software Inc.) game development platform and game engine for mobile, PC (including online games), VR, AR and MR games.

Adverty i Unity



Källa: Carlsquare

Unity today, but more to come

Unity Software Inc. has developed one of the world's most popular game engines with an accompanied game development platform (Unity). The game engine is a so-called cross-platform, which means that games can be created for different gaming platforms, such as mobile phones, PCs, web platforms for online games (such as Steam), game consoles and VR platforms.

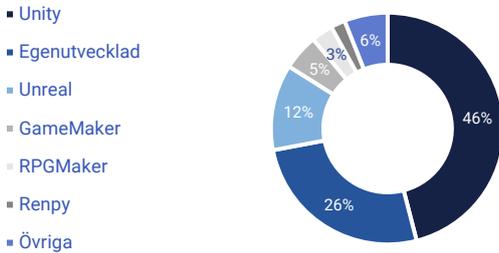
According to data from Game Data Crunch (March 2022), Unity is the largest game engine on Steam, with a share of 46 per cent. Of the games launched on Steam in 2021 with a price above USD 4.99 and at least 50 reviews, 53 per cent of them were built on Unity. Second is proprietary game engines, followed by Unreal (Epic Games).

As for mobile games, Unity's CEO, John Riccitiello, states that Unity has a market share of between 60-70 per cent.

Given Unity's position in the market, Unity can provide exposure to smaller game studios, which is also sufficient at the initial stage. However, the company intends to develop an SDK compatible with more major game engines. The group that may

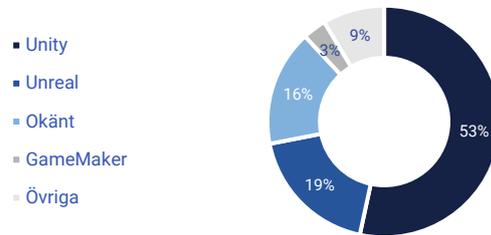
be difficult to reach is the group of game developers with proprietary game engines – mainly the big players.

Market shares game engines on Steam



Shares are calculated based on all games on Steam by March 2022. Source: Game Data Crunch and Carlsquare

Market share game engines on Steam, 2021



Includes games launched in 2021 with a price above 4.99 USD and at least 50 reviews. Source: Game Developer and Carlsquare

An ad network in a programmatic ecosystem

Creating and integrating ad spaces into the game code using the company’s solution (specifically the SDK) is the first key component of the company’s solution. A second key component is the technology and methods to fill the game developers’ ad spaces with ads. Like most ad networks, Advertly uses two different strategies/methods to fill ad spaces:

- Direct deals with brands and media agencies
- Programmatic advertising

In the case of direct deals/business with brands and media agencies, the aim is to build relationships and spread awareness of the advertising form and the company’s offer rather than to fill ad space. Working only with direct business would hamper both growth rate and scalability. Therefore, the primary approach to programmatic advertising is.

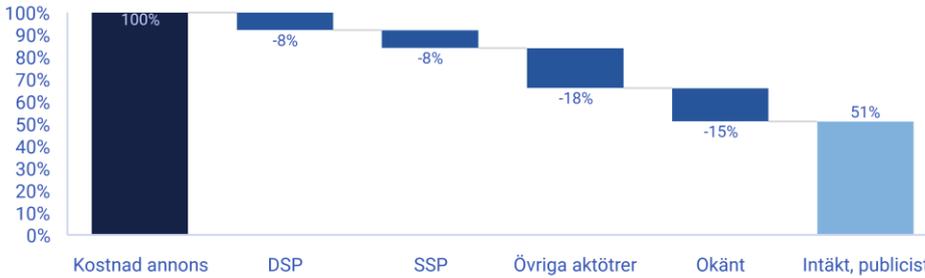
Programmatic advertising

Programmatic advertising refers to the automated matching of ad space demand with publishers’ ad space supply. Programmatic advertising thus represents a clear improvement in efficiency compared to the direct deal between buyers and sellers of advertising. Programmatic advertising is considered to improve the publisher’s ability to increase revenues by filling as many ad spaces as possible. It is also considered to improve the advertiser’s ability to gain more exposure to consumers by appearing in more relevant places.

There are also disadvantages to programmatic advertising: With more intermediaries in programmatic advertising, it is not unreasonable that advertising costs more for the advertiser. From the publisher’s perspective, ad revenue is likely to be lower. As shown in the chart on the next page, the game developer receives, on average, only about 51 per cent (in the range of 49-67 per cent) of the amount paid by the advertiser for advertising. The remaining, approximately 49 per cent, goes to other players in the ecosystem (ISBA programmatic supply chain transparency study, ISABA, AOP and PwC, 2020).

The figure below illustrates how players in the programmatic advertising ecosystem take shares of the advertiser's total spend. Other actors include verification tools, server costs and ad exchange fees. The "Unknown" item includes the share that could not be attributed to any parties typically considered part of the programmatic advertising ecosystem.

Breakdown of the advertiser's total advertising expenditure



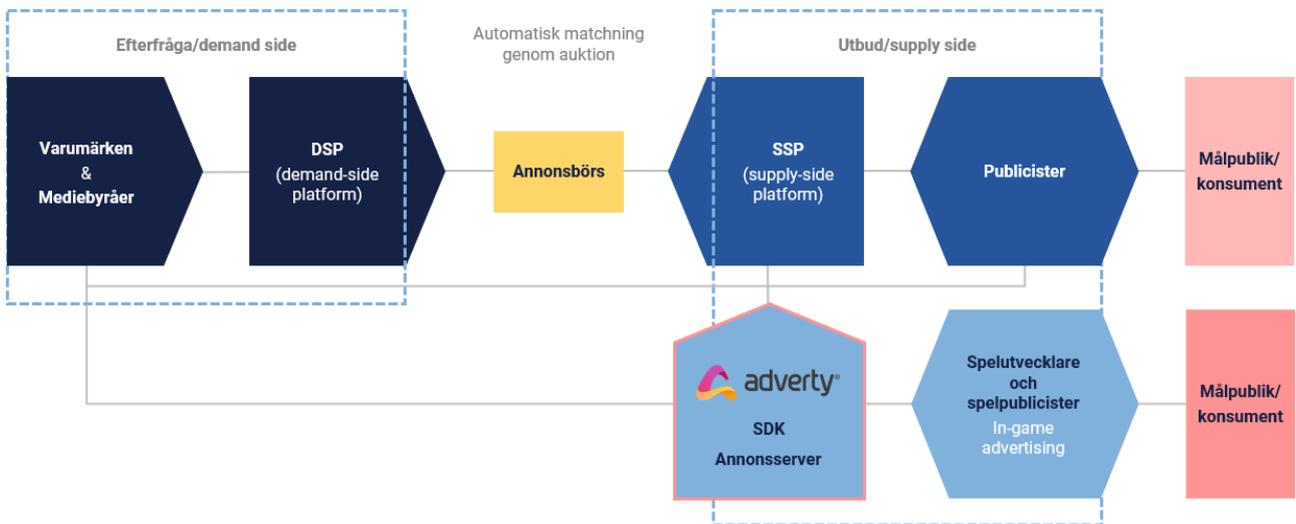
Unknown refers to a non-response that cannot be directly attributed to a specific part of the ecosystem. Source: ISBA, AOP, PwC and Carlsquare

Despite its drawbacks, programmatic advertising is by far the largest channel for advertisers and publishers to meet in business. The advantages in terms of efficiency and more thus outweigh the disadvantages. According to data from Statista, it is estimated that approximately 89 per cent of digital marketing in the US in 2021 was programmatic. Zenith estimates that the corresponding share was 72 per cent on a global level. In 2022, it was estimated that brands and media agencies will spend more than USD 490 billion on programmatic advertising.

SSP och DSP samlar utbud och efterfrågan för auto-matchning

Programmatic advertising, as mentioned above, involves a number of different actors and functions that create an ecosystem. The following illustrates the ecosystem and how Advertly as an advertising network connects to the ecosystem via so-called SSPs:

Programmatic advertising and Advertly's place in the ecosystem



Source: Carlsquare

Publishers of all kinds can connect to so-called SSPs (supply-side platforms) directly or via advertising networks. An SSP can thus be considered a data hub with content in the form of publishers' supply of empty online advertising space with specified characteristics. The characteristics of the ad space may relate to, for example, the demographics of the publisher's audience, web or app, game category, etcetera. On the major SSPs, thousands of publishers are connected.

On the other side, there is advertiser demand for ad space online. Demand/requests for ad space with different characteristics are gathered on so-called DSPs (demand-side platforms). Again, thousands of advertisers/brands, directly or via media agencies, may be connected to the larger DSPs.

Selection of DSPs



Source: Company information and Carlsquare

Selection of SSPs



Source: Company information and Carlsquare

A deal is made automatically if the specifications of the ad space provided by the buyer/advertiser match one (or more) ad space. The deal often takes place over a so-called ad exchange. When several advertisers' requests are matched with the same ad space, the advertiser who pays the most gets access. However, empty ad spaces typically outnumber advertisers, and around 30-40 per cent of the supply is filled.

The efficient ad server essential for rising gross margins

The company's ad server is the part of the platform that takes in all the ad spaces and communicates with the SSPs. The application on the ad server handles large amounts of data in the form of ad spaces in games that are updated continuously. The application resides on Amazon's aws and is built using Scala programming language. That makes the application capacity efficient and constantly adapts to the activity/flow of available ad spaces. In light of this, we believe the company's gross margin can rise relatively quickly up to 40 per cent (given the assumed growth rate).

Revenue model and three prime parties

Revenue model

Today, Advertly's revenue model is based on revenue sharing, i.e. the company receives a share of the game developer's advertising revenue. The percentage of the total revenue the company shares with its customer is usually 50 per cent. Once the market for in-game ads has matured, it is not inconceivable that the company could receive a fixed remuneration and revenue sharing. However, today it is the other way around - that operators offering in-game ad solutions need to pay for game developers to start working with their respective tools. That also largely explains the negative gross profit. In the future, the company will not pay game developers. Since the second quarter of 2022, the gross margin has also been positive.

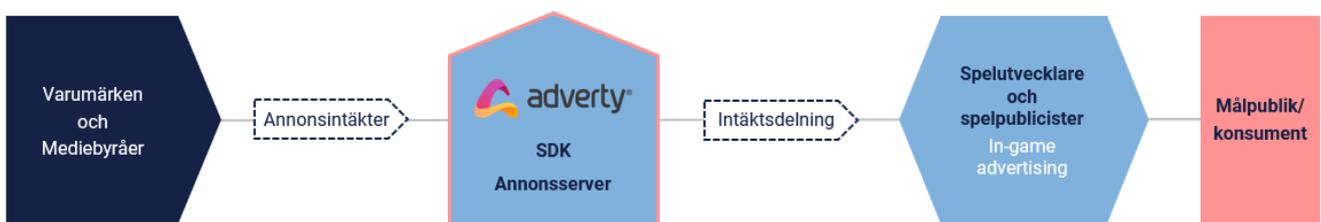
As the company's revenue model is performance-based and linked to the number of views, the company's financial performance also varies with the:

- Number of games where the company's solution is used for in-game ads
- The popularity of the games measured, for example, by the number of daily players and average playing time.
- The filling of integrated ad spaces
- Whether the ad comes in the form of a still image or video
- And more...

A model for positive delta in working capital

An important component of the company's model is that advertising money flows through the company to the game developer, as illustrated in the image below. Thus, the company receives advertising revenue and at a later date pays out the game developer's share. The fact that the company does not tie up capital to grow is beneficial for its cash flow and financial position.

Advertising money flow through Advertly



Source: Company information and Carlsquare

Three main parties and two teams

For the company to have an attractive offer to game developers and publishers, the company must be able to offer suitable advertisers. That is regarding the right brands, content and return on investment. On the other hand, to attract good advertisers, the company needs to have high-quality/popular games of different natures that match the characteristics sought.

The company has dedicated teams that work on business development/sales by bear-baiting game developers and publishers, as well as the demand for ad space in terms of brands and media agencies.

Three main parties



Source: Carlsquare

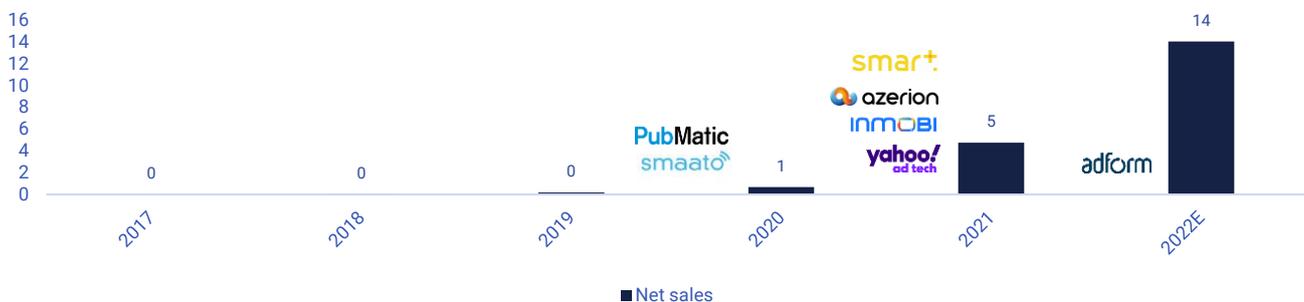
Demand-side

A business development team is tasked with signing direct deals with the brands and media agencies. Their task is to sign direct deals and spread knowledge about the company’s tools and in-game ads in general, which is not a given for both brands and media agencies. Today, the company also works with several partners, such as Canadian Apex Mobile Media, Yazle Marketing Management headquartered in the United Arab Emirates and Adsmovil in the US and Latin America.

Supply-side

Another part of the business development team works on the supply side, i.e. game developers and publishers. This group also works on connecting the company’s solution to various SSPs. In 2020, the company’s solution was connected to the first SSP. Today, the company is connected to seven SSPs, of which Adform was added in 2022. The seven SSPs are, in turn, connected to a range of DSPs to which over 200,000 brands and media agencies are connected. While the company intends to expand the number of SSPs to which the solution is connected, the current set-up provides a good base from which the company can continue to grow.

Connected SSPs and revenue development



Source: Company information and Carlsquare

Partners for global reach and niches

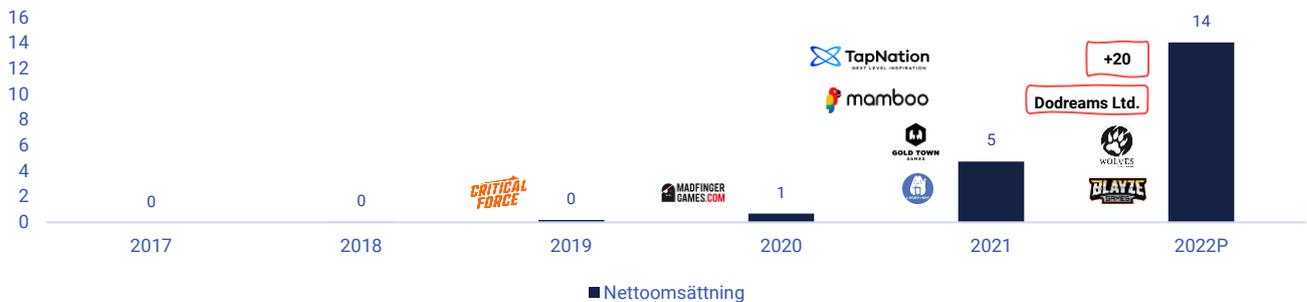
Advertly works with partners that give the company a global reach and the ability to penetrate particular niches. Since the turn of 2021/22, Livewire, a gaming marketing and technology company with primary markets in Asia and the Pacific region with exclusive rights in Australia, Vietnam and Japan, has been such a partner.

Collaborations with game developers

How many game developers or game publishers the company currently works with are unknown to us. The company has actively chosen to be restrictive in communicating this nevertheless important value driver. However, until the end of 2021, press releases were sent out on six collaborations. On 29 January 2023, the company announced that 23 game developers (156 games) were connected to the platform in 2022.

A known collaboration is the one with Critical Force started in 2019 for the game Critical Ops, a FPS game (first-person shooter). That is still today the company's most important FPS game. In 2021, several additional game developers and/or publishers were added, of which TapNation has a portfolio of 22 games in total. The top three games have been downloaded 100+ million times on Apple Play. However, which collaborations and games are the most prominent in terms of revenue from the company's perspective is unknown to us.

Game developers and revenue development

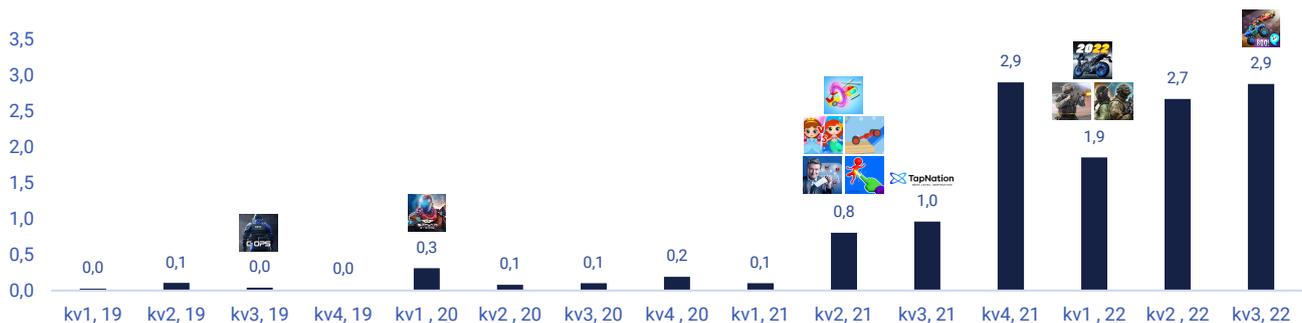


Source: Company information and Carlsquare

In 2021, a number of additional game developers and/or publishers were added, of which TapNation has a portfolio of 22 games in total. Of these games, the top three games have been downloaded 100+ million times on Apple Play. However, which collaborations and games are the most prominent in terms of revenue is unknown to us.

Below is a review of the games the company has communicated using the company's in-game ads solution. Note that the number of downloads only includes Google Play. Some titles are also updated or launched in later versions.

Revenue development and games



Source: Company information, Google Play and Carlsquare

Below is a review of the games in which the company's in-game ads solution is or has been used. As can be seen, the company's solution is found in a range of both small and large titles of various categories. Over time, we believe that the greatest potential is in sports games, but also more light-hearted puzzle games and action games of the same nature such as Grand Theft Auto.

Portfolio of game titles and publishers



Drive Ahead! (Dodreams) has belonged to the company's game portfolio since July 2022. The racing game Drive Ahead! is free-to-play with buy-in-app and ads and has 50+ million downloads, a 4.3 rating and 1.6 million reviews on Google Play.



MotorBike: Drag Racing Game (Wolves Interactive) has been part of the game portfolio since January 2022. The racing game is free-to-play with buy-in-app and ads and has 10+ million downloads, a rating of 3.1 and about 34,000 reviews on Google Play.



Bullet Force (Blayze Games) has belonged to the portfolio since January 2022. The first person shooter game is free-to-play with buy-in-app and ads and has 10+ million downloads, a rating of 3.9 stars and 0.8 million reviews on Google Play.



Forward Assault (Blayze Games) has been part of the game portfolio since January 2022. The first person shooter game is free-to-play with buy-in-app and ads and has 10+ million downloads, a rating of 4.3 stars and 0.4 million reviews on Google Play.



TapNation is a game publisher with a portfolio of 22 titles, of which Giant Rush!, Thief Puzzle: to pass a level and Ice Cream Inc. have all been downloaded 100+ million times on Google Play. The partnership was initiated in July 2021.



Shift Race (Mambo Games) has been in the game portfolio since June 2021. The racing game is free-to-play with buy-in-app and ads and has 10+ million downloads, a rating of 4.1 stars and 0.1 million reviews on Google Play.



Shift Princess (Mambo Games) was added to the game portfolio in June 2021. The racing game is free-to-play with buy-in-app and ads and has 5+ million downloads on Google Play, a rating of 3.9 stars and about 43,000 reviews.



Folding Car Puzzle (Mambo Games) has been part of the game portfolio since June 2021. The puzzle game is free-to-play with buy-in-app and ads and has 1+ million downloads on Google Play, a rating of 3.6 stars and about 4,400 reviews.



World Hockey Manager (Gold Town Games) has been part of the game portfolio since H1 2021. The sports game is free-to-play with buy-in-app and ads and has 1+ million downloads on Google Play, a rating of 3.6 and around 12,000 reviews.



Magic Finger 3D (Lucky Kat Studios) has belonged to the game portfolio since H1 2021. The action game is free-to-play with buy-in-app and ads and has 10+ million downloads on Google Play, a rating of 4.2 and about 0.2 million reviews.



Critical Ops: Multiplayer FPS (Critical Force) has been part of the company's game portfolio since August 2019. The first person shooter game is free-to-play with buy-in-app and ads and has 50+ million downloads on Google Play, a rating of 4.3 and around 2.4 million reviews.

Source: Google Play, company information and Carlsquare

The hidden value in technology and patents

New guidelines for measuring a display

The IAB released the first set of guidelines for the measurement of in-game ads in 2009. The IAB presented a draft updated version in collaboration with the IAB Tech Lab and the Media Rating Council in the summer of 2022. The significant changes are the inclusion of in-game ads in 3D games, including video. The guidelines address ad viewability, measurement, inactivity and deception, etcetera, taking into account various technical factors such as screen size, resolution, angle and lighting.

The following are compiled excerpts of criteria that must be met for an ad to be considered viewable in line with the updated guidelines (Source: "Intrinsic In-Game Advertising Measurement Guidelines 2.0", updated August 2022):

- Ad size relative to the screen (>1.5 per cent) and the number of shown pixels of the ad (>50 percent).
- Angles ads are visible relative to the screen (≤ 55 degrees from any of the X, Y or Z coordinates. Zero degrees = the ad appears directly towards the screen, 90 degrees = diagonally towards the screen, 180 degrees = the ad appears in the opposite direction of the screen)
- Video and dynamic in-game ad visibility in time (\geq two consecutive seconds without interruption)

The guidelines also state that measurement tools (as included in the Advertly solution) should consider other factors affecting visibility, such as low lighting, contrast with background or other objects, shadowing and the effect of moving objects that may partially cover the ad. The guidelines also require reporting on the number of impressions, non-impressions and the number of impressions with unknown status. Furthermore, providers are encouraged to report: (i) the total time ads were viewable and (ii) the median time ads were viewable.

Tigger for the market to take off

New and up-to-date viewability and measurement guidelines will create consistency - rather than providers like Advertly having their own rules for their measurements. That should increase confidence in the ad form among both ad buyers and publishers. This increased confidence will take the market to the next level.

Patented BrainImpression™, a hidden value

Through its SDK, Advertly receives data on an ongoing basis. With this data, the company can determine viewability with respect to the various criteria specified in the IAB guidelines. The proprietary technology for measuring the viewability of in-game ads in 3D games is called BrainImpression™. As mentioned earlier, CPM (Cost per Mille or Cost per thousand impressions) is the typical revenue model for in-game ads. That makes the measurement functionality of viewability crucial for the functioning of the in-game ads market.

BrainImpression™ is patented for all screens

The company's technology or method for measuring whether a digital object is visible in a game on any type of screen is patented in the United States. The

company's management argues that the patent makes it impossible for the competition to use proprietary code to measure whether digital objects are visible in games without infringing Advertly's patent. The following is an extract from the company's patent portfolio:

Patent documents, patent portfolio

#	<input type="checkbox"/> Patent Publication ID (6)	Patent Title	Status	First Filing Date	Publication Date	Most Re... Legal St... ↓	Expiration Date	Current Assignee Name
1	US-11256091-B2	Dynamic objects in virtual reality environments	Active	31-Mar-2017	22-Feb-2022	13-Sep-2022	29-Mar-2038	Advertly AB
2	US-20210048672-A1	Dynamic objects in virtual reality environments	Active	31-Mar-2017	18-Feb-2021	13-Sep-2022		Advertly AB
3	US-20200110262-A1	Dynamic objects in virtual reality environments	Active	31-Mar-2017	09-Apr-2020	14-Jun-2022		Advertly AB
4	US-10859829-B2	Dynamic objects in virtual reality environments	Active	31-Mar-2017	08-Dec-2020	14-Jun-2022	29-Mar-2038	Advertly AB
5	US-20200105049-A1	Methods for detecting if an object is visible	Active	27-Sep-2018	02-Apr-2020	10-Mar-2021		Advertly AB
6	US-10964096-B2	Methods for detecting if an object is visible	Active	27-Sep-2018	30-Mar-2021	10-Mar-2021	26-Sep-2039	Advertly AB

8 December 2022. Source: PitchBook

Patents are thus a hidden asset that can take the company to the top. However, as an external party, it is difficult to assess the strength and hence the value of patents. With guidelines in place, the in-gaming advertising market can take off, and the true value of the company's technology and patents will become visible.

Management, owners and share performance

The management team for the next level

The Advertly team currently consists of 21 people working full-time. Of these, eight are employed by Advertly and the remaining 13 work on consultancy contracts. The headquarter is located in Stockholm. The rest of the staff is spread across offices in London, Lviv, Madrid, Munich, Istanbul and Helsinki.

Since 2022, Advertly is led by CEO Jonas Söderqvist. Co-founder and third largest owner, Niklas Bakos, is active as and strategy director.

Management



Jonas Söderqvist has been the company's CEO since April 2022 after a period as a member of the board. Jonas has previous relevant experience from leading roles in media at, among others, MTG (Nent), MTV and PubMatic. Jonas owns 40,000 shares plus 200,000 warrants through incentive schemes.



Niklas Bakos is co-founder of Advertly together with Niclas Kjellgren and currently acts as the company's Chief Strategy Officer. Niklas is an entrepreneur and has worked in game development and media for 17 years. Niklas has 2.26 million shares making him the third largest shareholder.



Anders Rössel has been CFO and Head of IR at Advertly since 2021. Niklas has previous relevant experience from leading roles at Cherry, among others. Anders holds 9,000 shares and an additional 260,000 warrants through incentive schemes.



Calle Stenson has been the CTO of Advertly since 2021 but has been involved in developing the company's platform since its inception. Calle has no direct ownership through the share but has participated in incentive schemes and thus has exposure through 260,000 warrants.

Source: Company information

The board of directors



Joachim Roos has been Chairman of the Board since 2019 and is an entrepreneur with experience in a variety of industries. Joachim is, among other things, co-founder of the listed company Edgware (video streaming). Joachim owns 30,800 shares in the company.



Oskar Söderström has been a board member since 2022 and is an entrepreneur with a main focus on the internet, technology, and health. Oskar currently owns no shares in Advertly.



Niklas Bakos, see above in the role of Chief Strategy Officer.

Source: Company information

Shares and outstanding warrants

Today, there are a total of approximately 31.8 million shares outstanding in Advertly. The company has a subscribed incentive plan:

- 2021/2024: Strike price SEK 20, maturing in July 2024. Upon full subscription, 1,140,000 shares will be issued.
- 2021/2024: Strike price SEK 7,0, maturing in July 2025. Upon full subscription, 1,240,000 shares will be issued.

The ten largest owners

Founders Niklas Bakos and Niclas Kjellgren are the two single largest shareholders, with 7.1 per cent and 11.2 per cent of the capital and votes, respectively.

The ten largest owners

Owner	% of capital	% of votes	Verified
Niclas Kjellgren	11.2%	11.2%	2022-12-28
Niklas Bakos	7.1%	7.1%	2022-12-28
Avanza Pension	6.8%	6.8%	2022-12-28
Pontus Dahlström med familj	3.6%	3.6%	2022-12-28
Mats Kullstedt	2.1%	2.1%	2022-12-28
Nordnet Pensionsförsäkring	1.6%	1.6%	2022-12-28
Anders Axelsson	1.4%	1.4%	2022-12-28
Futur Pension	1.4%	1.4%	2022-12-28
Johan Fagerström	1.4%	1.4%	2022-12-28
Marie Arrestam	1.0%	1.0%	2022-12-28

Source: Holdings.se

Share- and valuation development

The graph below shows the stock's performance compared to the OMXSPI since the first trading day on 30 November 2018. The stock peaked in the summer of 2019 after the company started to report revenues, which boosted expectations. The second set-up came shortly after Covid and was driven by the gaming hype. Since then, the stock has fallen back and is trading near lows.

ADVT, share development (Index 2018-11-30 = SEK 3.75)



Källa: S&P Capital IQ och Carlsquare

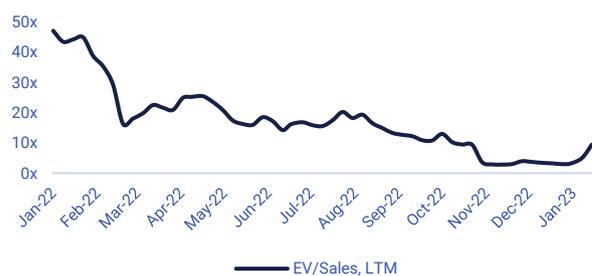
The valuation in terms of EV/Sales LTM is shown below. As can be seen, Advertly is trading at historically low levels but still at a relatively high multiple. That signals that growth expectations are high.

EV/Sales LTM



LTM = Last twelve months. Source: S&P Capital IQ and Carlsquare

EV/Sales RTM, YTD



YTD = Year to date. Source: S&P Capital IQ and Carlsquare

Markets, competition and reference group

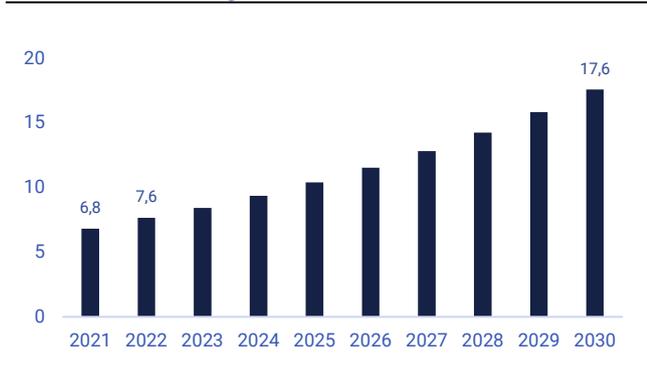
The in-game ads market is estimated to grow at an average rate of 11.1 per cent over the next years to reach USD 17.6 billion by 2030. Today, in-game ads for PC games are the largest vertical. But games for mobile devices are estimated to be the fastest-growing vertical. A large and growing gaming audience, new technologies, and a growing population with internet connectivity drive the market. We also believe that the establishment and broader acceptance of the IAB’s new guidelines for in-game ads is a key growth driver for the market and the company.

Changing market with high expectations

The market expected to grow by a factor of 2.6x by 2030

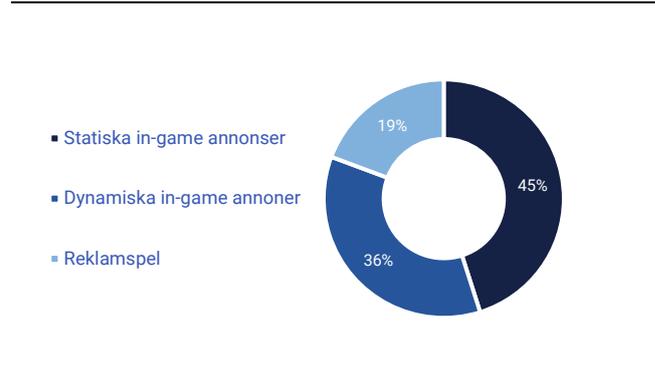
According to analyst firm Research Dive, the global market for in-game ads on mobile phones, tablets and PCs was valued at around USD 6.8 billion in 2021 and is expected to grow at an average annual rate of 11.1 per cent to USD 17.6 billion by 2030. Research Dive divides the in-game ads market into three verticals: static ads, dynamic ads and commercial games. The two largest verticals are static and dynamic ads, which accounted for nearly 81 per cent of the market in 2021.

The market for in-game ads



Source: Research Dive and Carlsquare

Distribution, three verticals



Source: Research Dive and Carlsquare

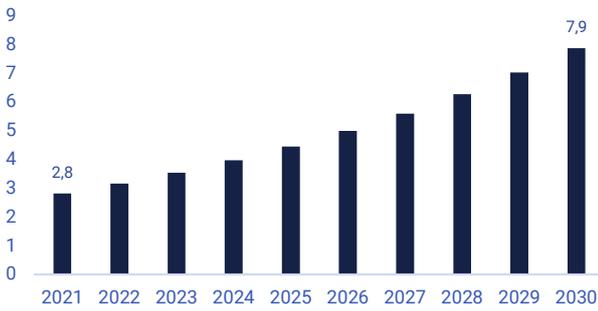
North America, the largest market

North America is the largest market, accounting for around 35 per cent of the global market in 2021. North America is also expected to maintain its leading position until 2030, albeit with a slightly lower share. That is in favour of mainly APAC (Asia-Pacific including Australia), which is expected to grow fastest, by an average of 12.6 per cent per year until 2030.

Mobile games are expected to grow the fastest

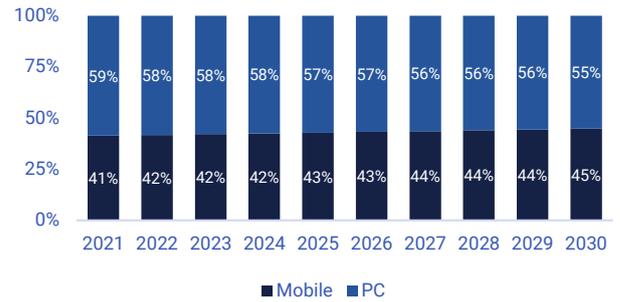
The company’s focus is on games for mobile platforms. According to Research Dive, in-game ads in games for mobile phones and tablets had a market share of 41.4 per cent in 2021. In-game ads for PC games, including streaming, accounted for the remaining 59.6 per cent of the market value. However, the market for mobile games is expected to grow faster and account for around 45 per cent by 2030.

Market for in-game ads, mobile games



Source: Research Dive and Carlsquare

Breakdown, PC and mobile games



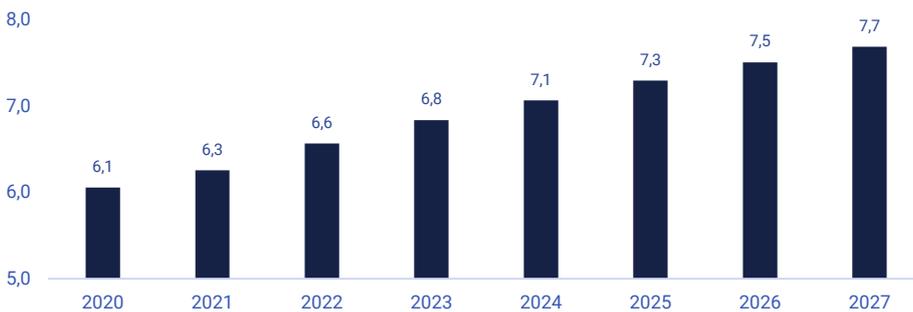
Source: Research Dive and Carlsquare

Growth drivers of different nature

More users of smart mobile phones

Several factors are expected to drive growth. For example, smartphone users are expected to grow steadily over the coming years, from around 6.3 billion to around 7.7 billion by 2027.

Number of users of smartphones (billions)

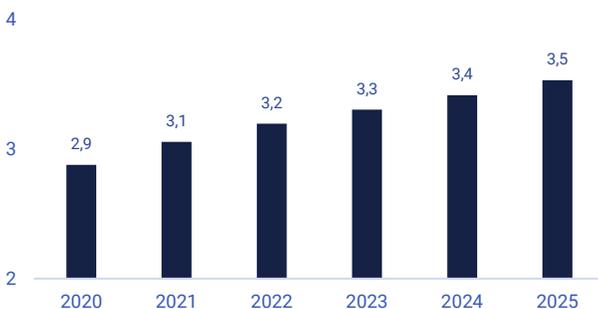


Source: Ericsson and Carlsquare

A growing audience

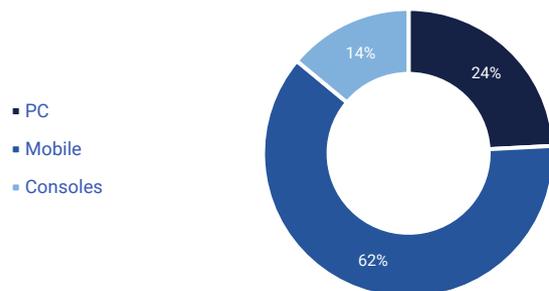
Another important growth driver is a growing audience of active players. Newzoo estimates that the number of active players in 2021 reached approximately 3.1 billion, a figure that is expected to grow to 3.5 billion by 2025.

Number of active players (advertising audience)



Source: Newzoo and Carlsquare

Breakdown by platform, 2022



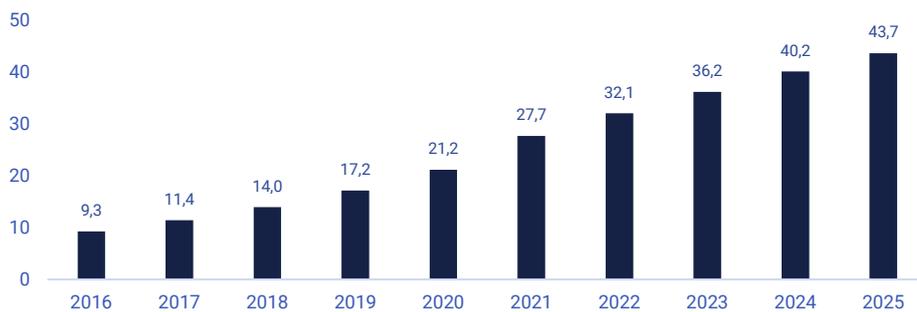
Source: Newzoo and Carlsquare

According to the same source, mobile is by far the most significant platform, with more than 2.7 billion active players in 2022, compared to PC, with around 1.0 billion players and console games, with approximately 0.6 billion players. (Note that a player can be active on one or more platforms.)

Opportunities in CTV

According to Statista, the CTV advertising market was valued at USD 27.7 billion. The company's planned entry into this market increases the market potential by a factor of five.

Online- and Connected TV (CTV) advertising revenue, globally



Source: Statista and Carlsquare

Targeted campaigns made more difficult

Digital or online marketing, including in-game ads, has advantages over, for example, TV, radio or outdoor advertising. One of these advantages is the ability to target advertising to a relevant audience. The other is measurability.

Third-party cookies and Apple's IDFA

A third-party cookie is generated by a website other than the one the user is currently browsing, often through advertisements. Third-party cookies allow advertisers to track an individual's browsing history across all websites that contain their ads and are used to target marketing campaigns.

Another tool advertisers use to optimise advertising is Apple's Identifier for Advertisers (IDFA), launched in 2012 with an anonymous ad ID linked to the iOS device (iPhone and iPad). Developers and advertisers use IDFA to track users' activities within and between apps, such as downloads, clicks and purchases. That is to facilitate targeted advertising and measurement of advertising campaigns.

Third-party cookies and IDFA are being phased out

Browsers like Safari, Firefox and Edge have been blocking third-party cookies by default for some time. Google's browser, Chrome, intends to follow suit. IDFA is also on its way out. That is to promote privacy.

The playing field is clearly considered to have changed from the advertisers' perspective. That, in turn, affects both game networks and game developers, who run the risk of declining ad revenues with declining profitability for advertisers.

Sector colleagues and reference group

Direct competition, unlisted

There are several different solutions with similar functionality to the company. Competition is fierce, which has led to operators with similar offerings having to pay the major game developers to use their respective platforms. That also demonstrates that the market has not yet gained momentum. Over time, we believe that fundamental factors like technology, support and processes (such as onboarding) will be crucial to acquire market shares. Today, perhaps the most prominent player in the sector is Anzu.

Anzu Virtual Reality Ltd.

Israeli Anzu Virtual Reality Ltd. (Anzu), like Advertly, has developed a solution for in-game ads with a patented 3D ad tracking engine. The platform is adapted to in-game ads in games for mobile platforms, PC, consoles, VR, and Roblox. Anzu is a licensed provider of in-game ads for Xbox and Unity-verified. In March 2022, Anzu raised approximately EUR 18.8 million at a pre-money valuation of roughly EUR 150 million. Investors include WPP, Sony Innovation Fund, Chicago Cubs, NBCUniversal, and HTC. The partnership with Ubisoft is one of the reasons for the high valuation. Anzu has raised EUR 33.4 million in equity, compared to Advertly's approximately EUR 11 million. Anzu had 101 employees at the end of July (source: PitchBook).

AdInMo, Ltd

The in-game ads solution developed by French AdInMo, Ltd (AdInMo) is tailored for in-game ads in games for mobile platforms, PC, consoles and VR. In April 2022, AdInMo raised approximately EUR 2.9 million at a pre-money valuation of approximately EUR 5.4 million from Par Equity and others. In total, AdInMo has raised approximately EUR 4.7 million in funding. As of early November 2022, AdInMo had 20 employees (source: PitchBook).

Sayollo Media

UK-based Sayollo Media's (Sayollo) solution is developed for in-game ads in games for mobile, PC, consoles and VR. In January 2019, Sayollo raised about EUR 1.3 million. As of mid-July 2022, Sayollo had 71 employees (source: PitchBook).

Frameplay Corp.

The advertising solution developed by US-based Frameplay Corp. (Frameplay) is adapted for in-game ads in mobile, PC, console and VR games. At the end of 2021, Frameplay raised about EUR 7.1 million at a pre-money valuation of about EUR 21.2 million. Frameplay had 71 employees in early November 2022 (source: PitchBook).

Gadsme SAS

French Frameplay Corp. (Gadsme) is developed for in-game ads in games for mobile platforms, PC, console and VR games. In April 2022, Gadsme raised approximately EUR 7.3 million at a pre-money valuation of approximately EUR 15.0 million. Investors included Galaxy Interactive and Ubisoft Entertainment. As of mid-October 2022, Gadsme had 12 employees (source: PitchBook).

Listade sektorkollegor inom AdTech

In our reference group of listed companies, we have included companies active in AdTech and mainly programmatic advertising. As can be seen, the sector is expected to grow rapidly. BidStack is the company that most resembles Advertly.

Valuation, referensgrupp

	HQ	Mcap (EURm)	EV (EURm)	EV/Sales		EV/EBITDA		EV/EBIT		P/E (adj.)	
				NTM	2023	NTM	2023	NTM	2023	NTM	2023
The Trade Desk, Inc.	US	21 252	20 282	12,3x	13,7x	33,2x	33,2x	105,4x	203,7x	46,1x	46,1x
DoubleVerify Holdings, Inc.	US	3 683	3 537	7,4x	8,4x	25,0x	27,3x	32,7x	36,3x	45,3x	43,3x
Magnite, Inc.	US	1 327	1 838	3,8x	3,8x	11,7x	11,0x	NA	NA	15,4x	14,9x
PubMatic, Inc.	US	723	596	2,4x	2,5x	7,6x	6,5x	26,0x	14,9x	43,7x	27,5x
YOC AG	DE	47	48	NA	NA	NA	NA	NA	NA	NA	NA
Bidstack Group Plc	GB	30	25	2,5x	2,5x	NM	NM	NM	NM	NM	NM
Median		1 327	1 838	3,8x	3,8x	18,4x	19,1x	32,7x	36,3x	44,5x	35,4x
Average		5 406	5 260	5,7x	6,2x	19,4x	19,5x	54,7x	85,0x	37,6x	32,9x
ADVT (curr.) *	SE	10,0	9,2	2,6x	1,0x	NM	NM	NM	NM	NM	NM
ADVT (CSQ)*	SE	19,4	16,3	4,5x	4,6x	NM	NM	NM	NM	NM	NM

*Based on Carlsquare estimates. Source: S&P Capital IQ and Carlsquare estimates

Financial performance and expectations, referensgrupp

Revenue growth	CAGR		2020	2021	2022E	2023E	2024E	2025E
	2019-2022	2022-2025E						
The Trade Desk, Inc.	36,1%	28,0%	41,3%	16,0%	53,9%	40,5%	18,6%	25,9%
DoubleVerify Holdings, Inc.	NA	29,2%	NA	NA	46,8%	44,4%	21,2%	23,4%
Magnite, Inc.	49,8%	18,8%	28,0%	30,0%	102,1%	30,8%	5,6%	21,4%
PubMatic, Inc.	NA	15,9%	NA	19,8%	64,1%	21,4%	7,5%	19,3%
YOC AG	10,2%	NA	4,3%	5,9%	21,3%	Neg.	NA	NA
Bidstack Group Plc	106,9%	165,6%	Neg.	1042,2%	65,0%	221,2%	197,8%	95,8%
Median	36,1%	23,4%	28,0%	17,9%	53,9%	35,6%	13,0%	22,4%
Avg	32,1%	23,0%	24,5%	17,9%	57,6%	34,3%	13,2%	22,5%
ADVT (CSQ)*	179,6%	139,9%	267,9%	593,0%	194,9%	181,5%	123,7%	98,2%
Gross margins	Avg.		2020	2021	2022E	2023E	2024E	2025E
	2020-2022	2023-2025E						
The Trade Desk, Inc.	78,8%	76,8%	76,4%	78,6%	81,5%	77,0%	77,1%	76,4%
DoubleVerify Holdings, Inc.	83,7%	NA	NA	NA	83,7%	NA	NA	NA
Magnite, Inc.	61,7%	59,0%	63,3%	64,9%	56,9%	67,6%	NA	50,4%
PubMatic, Inc.	73,3%	70,2%	NA	72,3%	74,3%	70,2%	NA	NA
YOC AG	39,0%	38,7%	39,0%	NA	NA	NA	38,7%	NA
Bidstack Group Plc	24,5%	24,0%	24,0%	13,3%	36,2%	24,0%	24,0%	NA
Median	73,3%	64,6%	63,3%	72,3%	77,9%	70,2%	57,9%	63,4%
Avg	67,3%	61,2%	59,6%	71,9%	74,1%	71,6%	57,9%	63,4%
ADVT (CSQ)*	-35,8%	30,1%	-76,0%	-54,1%	19,4%	31,3%	39,5%	40,2%
Adj. EBITDA margins	Avg.		2020	2021	2022E	2023E	2024E	2025E
	2020-2022	2023-2025E						
The Trade Desk, Inc.	36,1%	39,8%	32,4%	33,9%	42,0%	41,3%	38,2%	39,8%
DoubleVerify Holdings, Inc.	33,0%	30,9%	NA	NA	33,0%	30,7%	30,2%	31,7%
Magnite, Inc.	23,9%	34,5%	16,4%	19,4%	35,7%	35,0%	32,7%	35,8%
PubMatic, Inc.	38,1%	34,3%	NA	33,8%	42,4%	38,1%	31,7%	33,1%
YOC AG	3,8%	NA	3,8%	NA	NA	NA	NA	NA
Bidstack Group Plc	NA	NA	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.
Median	28,4%	34,3%	10,1%	26,6%	35,7%	35,0%	31,7%	33,1%
Avg	24,7%	33,2%	10,1%	26,6%	37,0%	34,6%	31,5%	33,5%
ADVT (CSQ)*	-593,3%	-13,1%	-832,8%	-410,6%	-141,2%	-39,7%	-7,2%	7,4%

*Based on Carlsquare estimates. Source: S&P Capital IQ and Carlsquare estimates

The Trade Desk, Inc. (TTD)

The US AdTech company, The Trade Desk, Inc. (Trade Desk), is active in programmatic advertising through its DSP, to which brands and media agencies are connected for the purchase of online advertising space.

In 2021, Trade Desk had approximately EUR 1.1 billion in revenues, representing 53.9 per cent growth. Given data from S&P Capital IQ, Trade Desk is expected to

grow in 2022 by 52.4 per cent, generating revenues of EUR 1.6 billion. In 2021, it delivered an EBIT margin of 10.4 per cent. That is expected to decline to 5.3 per cent in the current year and then increase to 20.6 per cent in 2024.

DoubleVerify Holdings, Inc. (DV)

The US AdTech company, DoubleVerify Holdings, Inc. (DoubleVerify), has developed software solutions for (i) brand safety, (ii) for DSPs and SSPs to measure ad impressions and report to their respective clients, and for publishers to measure ad impressions and optimise ad space.

In 2021, DoubleVerify had approximately EUR 293 million in revenues, representing a growth of 46.8 per cent. Given data from S&P Capital IQ, DoubleVerify is expected to grow by 54.7 per cent in 2022, generating revenues of EUR 453 million. In 2021, it delivered an EBIT margin of 23.9 per cent. That is expected to decline to 22.7 per cent in the current year and then increase to 26.8 per cent in 2024.

Magnite, Inc. (MGNI)

The US AdTech company, Magnite, Inc (Magnite), is active in programmatic advertising through its SSP, to which publishers and ad networks are connected to offer ad space in streamed content.

In 2021, Magnite had approximately EUR 366 million in revenues, representing 102.1 per cent growth. Given data from S&P Capital IQ, Magnite is expected to grow by 41.4 per cent in 2022, generating revenues of EUR 518 million. In 2021, it delivered an EBIT result of minus EUR 71 million. The EBIT result is expected to become even more negative in 2022, turning positive in 2024. However, the business has been delivering positive EBITDA margins since 2019. In 2022, the EBITDA margin is expected to be 33.1 per cent.

PubMatic, Inc.

The US AdTech company, PubMatic, Inc. (PubMatic), is active in programmatic advertising through its SSP, to which brands and media agencies are connected for the purchase of online ad space, including streamed content.

In 2021, PubMatic had approximately EUR 200 million in revenues, representing 64.1 per cent growth. Given data from S&P Capital IQ, PubMatic is expected to grow by 40.8 per cent in 2022, generating revenues of EUR 281 million. In 2021, it delivered an EBIT margin of 25.9 per cent. This is expected to fall to 17.3 per cent in 2022 and then continue to fall to 17.0 per cent in 2024.

YOC AG

The German AdTech company, YOC AG (YOC), has developed a trading platform to which both brands and publishers are indirectly connected for programmatic advertising across various online ad formats.

In 2021, YOC had approximately EUR 19.4 million in revenues, representing growth of 21.3 per cent. In the same year, the EBIT result amounted to EUR 2.0 million, corresponding to a margin of 10.3 per cent. (Source: S&P Capital IQ)

Bidstack Group Plc

Bidstack Group Plc (Bidstack), a UK-based AdTech company, has developed a solution, like Advertly, for generating revenue from in-game ads. BidStack has also developed an in-game ads analytics and reporting platform for both game developers and advertisers.

In 2021, Bidstack had approximately EUR 3.1 million in revenues, representing 65.0 per cent growth. Given the data from S&P Capital IQ, Bidstack is expected to grow in 2022 by 221.0 per cent and generate revenues of EUR 10.0 million. In 2021, it delivered a negative EBIT result of minus EUR 9.2 million. The EBIT result is expected to remain negative in 2022 and 2023. S&P Capital IQ does not have an estimate for 2024.

Financial history and Carlsquare estimates

In light of patents for the technology to measure the viewability of in-game ads, Advertly is well positioned as the market takes off as measurement guidelines are established among market participants. We expect a CAGR 2021-2032 of a strong 51.7 per cent. In our scenario, the gross margin rises to 40 per cent while the EBITDA margin over time increases to 14.4 per cent.

Financial history and estimates

Strong growth on the cards as new guidelines take hold

For the full year 2022, we expect net sales of SEK 14.1 million. That is in line with the company's guidance. The fourth quarter is the strongest quarter of the year, given the increased marketing activity related to Single Day, Black Friday, Christmas, etcetera. Except for the first quarter, we expect positive sequential growth on a quarterly basis in the coming years. That is in light of our assumptions around the main growth drivers:

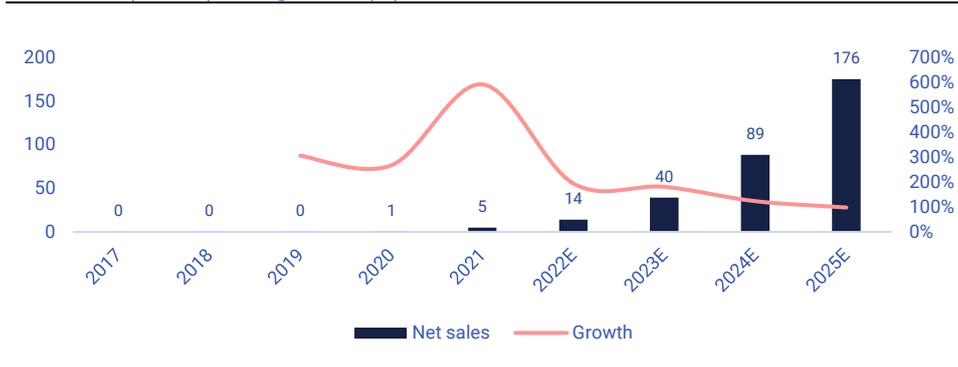
The company reports net sales as the sum of advertising revenues flowing through the company before revenue sharing.

- A growing ad network with more games being added.
- Higher interest in in-game ads as new guidelines gain traction and acceptance. Thus, the company's so-called "fill rate" is assumed to increase, i.e. more ad space is filled with ads.

In 2023, we expect net sales of SEK 39.6 million. That corresponds to a strong growth of 181 per cent, slightly below the company's target of SEK 42 million. CAGR 2021-2025 is assumed to be a strong 146 per cent. CAGR 2025-2027 is assumed to be 30.1 per cent. Over the entire forecast period, 2022-2032, we have assumed a CAGR of 51.7 per cent.

We would like to see Q1 and Q2 2023 suggest net sales in 2023 of SEK 42 million before aligning our forecast with the company's target.

Net sales (SEKm) and growth (%), 2017–2025



Source: Company information and Carlsquare estimates

As mentioned earlier, as the company's investment into CTV is at an early stage, we do not model with any revenue contribution from CTV. Also, we do not include any acquisitions in our assumptions. The CTV venture and possible acquisitions, therefore, create a potential upside.

Improved gross margin is essential

Historically, the company has had a negative gross margin on an annual basis. As mentioned earlier, this is explained by the fact that new customers have received a fee for using the bola-get platform. However, the company has stopped paying

Raw materials and supplies consist mainly of revenue sharing but also of server costs and other direct costs.

customers to install the company’s SDK. That is also reflected in the gross margin, which was positive as of the second quarter of 2022. In 2022, we expect a gross margin of 16.3 per cent, calculated on net sales. We expect the gross margin to increase to 30.4 per cent in 2023 and 40.0 per cent in 2025, which is also the assumed sustainable level over time. Traditional software companies are typically around 60-90 per cent, depending on size. Revenue sharing thus holds back the company’s gross margin relative to traditional software companies.

Gross profit (SEKm) and margin (%), 2017–2025



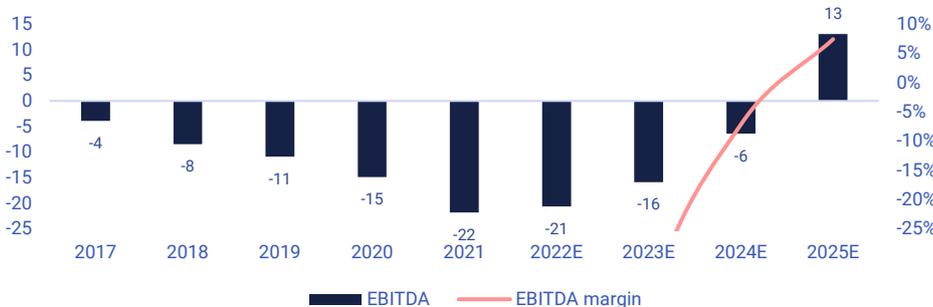
Source: Company information and Carlsquare estimates

Positive EBITDA in 2025

Excluding raw materials and consumables as well as depreciation and amortisation, Advertly had a cost base of SEK 13.9 million in the first three quarters of 2021. In the first three quarters of 2022, the corresponding figure was SEK 17.8 million, an increase of 29 per cent. For the full year 2022, we expect the cost base, excluding raw materials and consumables as well as depreciation and amortisation, to be SEK 23.5 million. Thus, the company has a relatively large cost base that must be covered before break-even can be reached. In our scenario, break-even at the EBITDA level is reached in the fourth quarter of 2024. A positive EBITDA result on a full-year basis is reached in 2025. With scalability, we expect the EBITDA margin to rise to 14.4 per cent by 2032. That compares to traditional software companies that typically range between 15-25 per cent.

Given a lower gross margin than traditional software companies, our assumption of a sustainable EBITDA margin of 14.4 per cent is a relatively aggressive assumption.

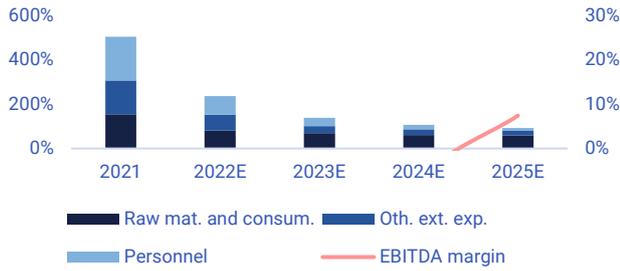
EBITDA result (SEKm) and margin (%), 2017–2025



Source: Company information and Carlsquare estimates

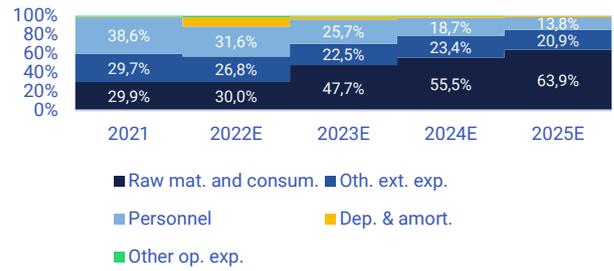
Raw materials and supplies are the company’s largest cost item today and are expected to continue to be so over the forecast period. Personnel costs are expected to be the second largest cost item, followed by other external costs.

Costs as % of net sales and EBITDA margin



Source: Company information and Carlsquare estimates

Cost breakdown



Source: Company information and Carlsquare estimates

EBIT (SEKm) and EBIT-margin (%)



Source: Company information and Carlsquare estimates

EBT (SEKm) and margin (%)



Source: Company information and Carlsquare estimates

Net profit (SEKm) and margin (%)



Source: Company information and Carlsquare estimates

EPS (SEK) and shares outstanding (M)



Shares outstanding, end of the period. Source: Company information and Carlsquare estimates

Cash flow and dividends

As mentioned earlier, advertising revenue flows through the company. That means that the company does not need to tie up as much working capital, as revenue-sharing payments are lagging relative to the receipt of advertising revenues.

Cash flow (SEKm)



Source: Company information and Carlsquare estimates

At the same time, we expect the company to carry out a new share issue in early 2023 of SEK 20 million. In our scenario, this is sufficient to finance the business until the company is cash flow positive. At this stage, we do not model with any dividends paid to shareholders.

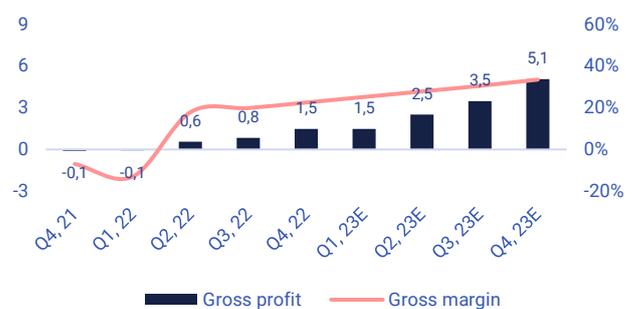
On a quarterly basis

Net sales (SEKm) and growth (%), quarterly



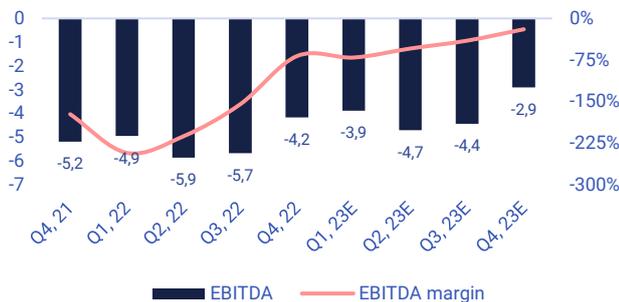
Source: Company information and Carlsquare estimates

Gross profit (SEKm) and gross margin* (%), quarterly



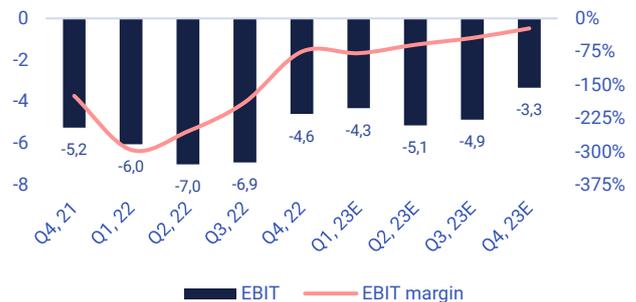
* Gross margin on net sales. Source: Company information and Carlsquare estimates

EBITDA (SEKm) and EBITDA-margin (%), quarterly



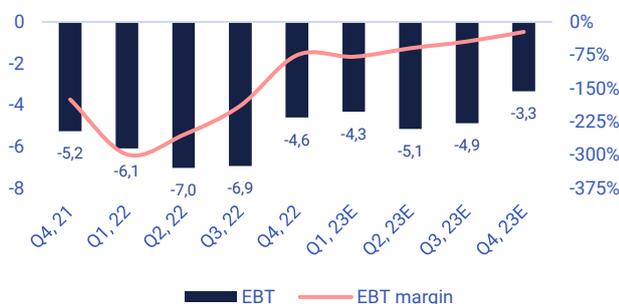
Source: Company information and Carlsquare estimates

EBIT (SEKm) and EBIT-margin (%), quarterly



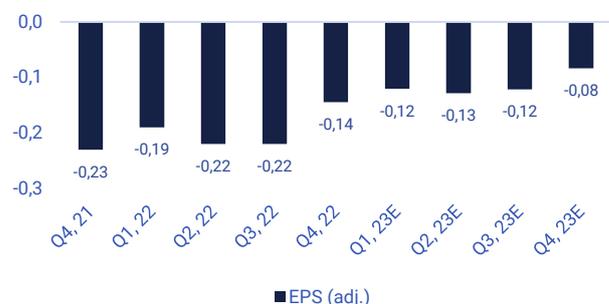
Source: Company information and Carlsquare estimates

EBT (SEKm) and EBT-margin (%), quarterly



Source: Company information and Carlsquare estimates

EPS (SEK), quarterly



Source: Company information and Carlsquare estimates

Valuation

By combining a DCF valuation with a multiple valuation in an average, a fair value per share is calculated at SEK 4.9 for the next 6-12 months. Our valuation corresponds to an EV/multiple on adjusted sales in 2023 of 9.2x and 2024 of 4.1x. The reference group trades at EV/Sales 2023 of 3.8x.

Fair value within a range

Share under pressure with good potential upside

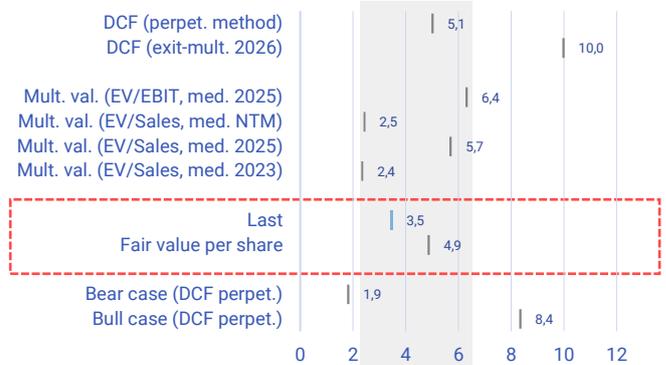
By combining a DCF valuation with a multiple valuation, a motive value per share of SEK 4.9 is calculated for the next 6-12 months in a base-case scenario. That corresponds to an upside of approximately 40 per cent. The valuation is based on an assumption of strong growth and a rapidly increasing gross margin.

Fair value, base case scenario

Valuta, SEK	1,0
Mult. val. (EV/Sales, med. NTM)	SEK 2,5
Mult. val. (EV/Sales, med. 2025)	SEK 5,7
Mult. val. (EV/EBIT, med. 2025)	SEK 6,4
DCF valuation	SEK 5,1
Fair value per share	SEK 4,9
Potential up-/downside	40%
Shares outstanding, fully financed, and diluted	M 44
Shareholder value	SEKm 216
Cash (last rep. Q)	SEKm 9,3
Debt (last rep. Q)	SEKm 0,6
PV cash from equity financing	SEKm 25
EV	SEKm 182

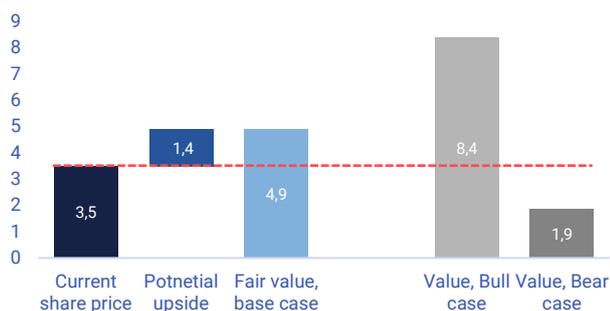
Source: Carlsquare estimates

Fair value within a range (SEK/share)



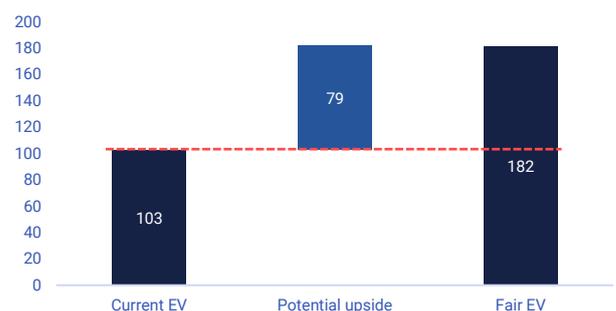
Source: Carlsquare estimates

Fair value per share (SEK), three scenarios



Source: Carlsquare estimates

Visualisation EV, base case (SEKm)



Source: Carlsquare estimates

Implied valuation multiples, base case scenario

	NTM	2021	2022P	2023P	2024P	2025P
EV/Sales	4.5x	20.0x	12.9x	4.6x	2.1x	1.0x
EV/Adj. sales	9.1x	76.2x	25.8x	9.2x	4.1x	2.1x
EV/EBITDA	NM	NM	NM	NM	NM	13.9x
EV/EBIT	NM	NM	NM	NM	NM	16.0x
P/E	NM	NM	NM	NM	NM	19.8x

* Adjusted sales refer to reported net sales reduced by 50 per cent, corresponding to the prevailing revenue sharing ratio. Source: Carlsquare estimates

DCF valuation

DCF-valuation, base case scenario

DCF-värdering						
PV(UFCF)	SEKm	67	Disc. rate			
PV(TV)	SEKm	123	Risk free rate	1,9%	Tax adj. inter. on debt	2,4%
Enterprise value	SEKm	189	Market risk premium	6,7%	Leverage	0,0%
Net cash(+), last Q	SEKm	8.7	Size premium	4,2%	WACC	15,0%
Value, associated comps.	SEKm	0.0	Beta	1,2x	Comp. spec. premium	0,0%
Value, minority interest	SEKm	0.0	Req. return on equity	15,0%	Discount rate	15,0%
Shareholder value	SEKm	198	Assumptions			
PV(equity financing proceeds)	SEKm	25	CAGR, 2021-2031	51,7%		
Shareholder value, after financing	SEKm	223	EBITDA-margin, 2031	14,4%		
Current shares outstanding	M	32	EBIT-margin, 2031	13,4%		
New shares	M	12	Tax rate	20,6%		
Shares outstanding after financing and dilution	M	44	Implied multiples			
Value per share (before financing and dilution)	SEK	6.2	EV/Sales, NTM	4,7x	EV/EBITDA, NTM	NM
Value per share (after financing and dilution)	SEK	5.1	EV/Sales, 2023E	4,8x	EV/EBITDA, 2023E	NM
Currency	SEK/SEK	1.0	P/S, NTM	4,9x	EV/EBIT, NTM	NM
Value per share (before financing and dilution)	SEK	6.2	P/S, 2023E	5,0x	EV/EBIT, 2023E	NM
Value per share (after financing and dilution)	SEK	5.1	EV/Gross prof., NTM	15,1x	P/E, NTM	NM
Potential up-/downside		44%	EV/Gross prof., 2023E	15,7x	P/E, 2023E	NM

Source: Carlsquare estimates

Multiple valuation

Note that we have applied the multiples to the adjusted net turnover, i.e. net turnover reduced by revenue sharing of 50 per cent.

Multiple valuation median EV/Sales NTM, base case scenario

	HQ	Mcap (SEKm)	CAGR, 2021-2024E	μEBIT-marg., 2021-2024E	EV/Sales, 2023
The Trade Desk, Inc.	US	22 287	29%	14%	12.3x
DoubleVerify Holdings, Inc.	US	3 872	31%	25%	7.4x
Magnite, Inc.	US	1 401	20%	10%	3.8x
PubMatic, Inc.	US	680	18%	13%	2.4x
YOC AG	DE	43	-100%	NA	NA
Bidstack Group Plc	GB	45	167%	NA	2.5x
Median		1 401	20%	14%	3.8x
Average		5 657	0%	16%	6.5x
Discount					0.0%
Applied multiple					3.8x
Adjusted sales, NTM*	SEKm				20
Enterprise value	SEKm				76
Net cash(+), last Q	SEKm				8.7
Value, associated comps.	SEKm				0.0
Value, minority interest	SEKm				0.0
PV(Cash from equity financing)	SEKm				24.8
Shareholder value, after financing	SEKm				109
Current shares outstanding	M				32
New shares	M				12.2
Shares outstanding after financing and dilution	M				44
Value per share (before financing and dilution)	SEK				2.7
Value per share (after financing and dilution)	SEK				2.5
Exchange rate	SEK/SEK				1.0
Value per share (before financing and dilution)	SEK				2.7
Value per share (after financing and dilution)	SEK				2.5

*Adjusted net sales refer to reported net sales reduced by 50 per cent, corresponding to the current revenue sharing ratio. Source: S&P Capital IQ and Carlsquare estimates

Multiple valuation median EV/Sales 2025, base case scenario

	HQ	Mcap (SEKm)	CAGR, 2021-2024E	μEBIT-marg., 2021-24E	EV/Sales, NTM
The Trade Desk, Inc.	US	22 516	29%	14%	12.3x
DoubleVerify Holdings, Inc.	US	3 908	31%	25%	7.4x
Magnite, Inc.	US	1 478	20%	10%	3.8x
PubMatic, Inc.	US	677	18%	13%	2.4x
YOC AG	DE	43	NA	NA	NA
Bidstack Group Plc	GB	45	167%	NA	2.5x
Median		1 478	25%	14%	3.8x
Average		5 725	25%	16%	6.5x
Discount					
Discount					0.0%
Applied multiple					3.8x
Adjusted sales, 2025E*	SEKm				88
Enterprise value	SEKm				331
PV(Enterprise value)	SEKm				220
Net cash(+), last Q	SEKm				8.7
Value, associated comps.	SEKm				0.0
Value, minority interest	SEKm				0.0
PV(Cash from equity financing)	SEKm				25
Shares outstanding (after financing and dilution)	SEKm				253
Current shares outstanding (m)	M				32
New shares	M				12
Shares outstanding after financing and dilution	M				44
Value per share (before financing and dilution)	SEK				7.2
Value per share (after financing and dilution)	SEK				5.7
Exchange rate	SEK/SEK				1.0
Value per share (before financing and dilution)	SEK				7.2
Value per share (after financing and dilution)	SEK				5.7

* Adjusted net sales refer to reported net turnover reduced by 50 per cent, corresponding to the prevailing revenue sharing ratio. Source: S&P Capital IQ and Carlsquare estimates

Multiple valuation median EV/EBIT 2025, base case scenario

	HQ	Mcap (SEKm)	CAGR, 2021-2024E	μEBIT-marg., 2021-24E	EV/EBIT, NTM
The Trade Desk, Inc.	US	22 516	29%	14%	105,4x
DoubleVerify Holdings, Inc.	US	3 908	31%	25%	32,7x
Magnite, Inc.	US	1 478	20%	10%	NA
PubMatic, Inc.	US	677	18%	13%	26,0x
YOC AG	DE	43	NA	NA	NA
Bidstack Group Plc	GB	45	167%	NA	NM
Median		1 478	25%	14%	32,7x
Average		5 725	25%	16%	54,7x
Discount					
Discount					0,0%
Applied multiple					32,7x
EBIT, 2025E	SEKm				11,4
Enterprise value	SEKm				371
PV(Enterprise value)	SEKm				246
Net cash(+), last Q	SEKm				8,7
Value, associated comps.	SEKm				0,0
Value, minority interest	SEKm				0,0
PV(Cash from equity financing)	SEKm				24,8
Shares outstanding (after financing and dilution)	SEKm				280
Current shares outstanding (m)	M				31,8
New shares	M				12,2
Shares outstanding after financing and dilution	M				44,1
Value per share (before financing and dilution)	SEK				8,0
Value per share (after financing and dilution)	SEK				6,4
Exchange rate	SEK/SEK				1,0
Value per share (before financing and dilution)	SEK				8,0
Value per share (after financing and dilution)	SEK				6,4

Source: S&P Capital IQ and Carlsquare estimates

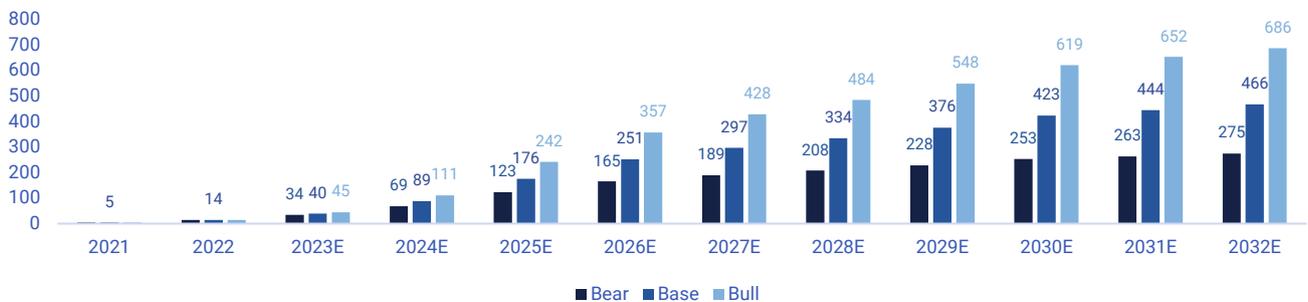
Valuation range

In the Bull and Bear scenarios, we have used our DCF (perpetual capitalisation) model but developed alternative growth and profitability curves. In a more optimistic Bull scenario, we model a risk-adjusted CAGR, 2021-2032, of 57.1 per cent (base 51.7 per cent) and an EBITDA margin in 2032 of 16.6 per cent (base 14.4 per cent). In the Bull scenario, a value per share using our DCF model is calculated at SEK 8.4.

In a more defensive Bear scenario, we model a CAGR, 2021-2032, of 44.6 per cent and an EBITDA margin 2032 of 11.6 per cent. In the Bear scenario, a value per share using our DCF model is calculated at SEK 1.9.

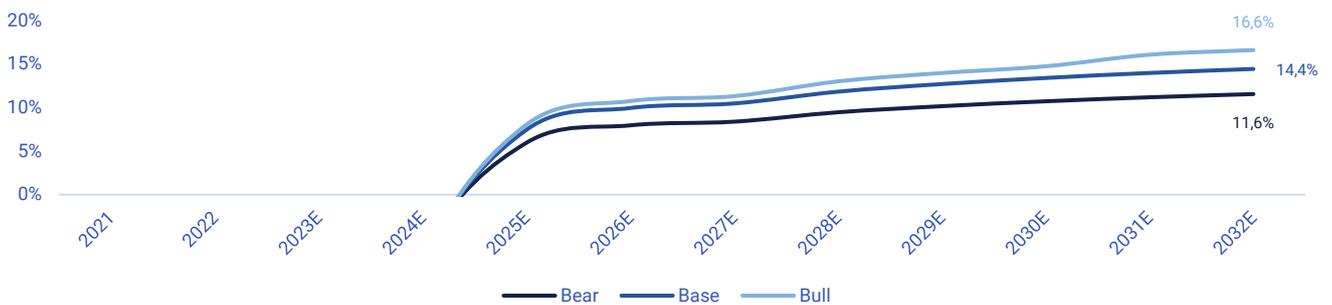
The assumed evolution of net sales and EBITDA margin in the three scenarios is shown below.

Net sales (SEKm), three scenarios



Source: Company information and Carlsquare estimates

EBITDA-margin, three scenarios



Source: Company information and Carlsquare estimates

Key figures and accounts

Key figures(SEK)

	2019	2020	2021	2022E	2023E	2024E	2025E
SEK/EUR	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Share price	9.4	13.9	4.5	1.3	3.5	3.5	3.5
Market cap	114	283	102	41	111	111	111
EV	120	279	96	39	39	39	39
P/S	56.2x	158.4x	19.2x	2.8x	2.8x	1.2x	0.6x
P/E	-9.3x	-18.8x	-4.6x	-1.7x	-7.7x	-18.6x	14.1x
P/CF operations	-10.2	-17.8	-6.1	-1.5	-14.7	-55.0	5.0
EV/Sales	59.0x	156.1x	18.0x	2.7x	1.0x	0.4x	0.2x
EV/Gross profit	258.0x	-205.3x	-33.2x	13.8x	3.1x	1.1x	0.6x
EV/EBITDA	-11.0x	-18.7x	-4.4x	-1.9x	-2.5x	-6.1x	3.0x
EV/EBIT	-10.8x	-18.5x	-4.3x	-0.8x	-0.9x	-1.1x	-4.7x
CSQ fair value per share	9.4	13.9	4.5	4.9	4.9	4.9	4.9
CSQ market cap	114.0	283.2	102.0	216.3	216.3	216.3	216.3
CSQ EV	119.7	279.0	95.6	213.9	210.5	210.7	195.9
P/S, CSQ implied	56.2x	158.4x	19.2x	14.8x	5.4x	2.4x	1.2x
P/E, CSQ implied	-9.3x	-18.8x	-4.6x	-8.8x	-12.3x	-26.6x	19.8x
P/CF operations, CSQ implied	-10.2x	-17.8x	-6.1x	-8.0x	-28.6x	-106.9x	9.7x
EV/Sales, CSQ implied	59.0x	156.1x	18.0x	15.2x	5.3x	2.4x	1.1x
EV/Gross profit, CSQ implied	258.0x	-205.3x	-33.2x	75.4x	16.8x	6.0x	2.8x
EV/EBITDA, CSQ implied	-11.0x	-18.7x	-4.4x	-10.4x	-13.2x	-33.0x	15.0x
EV/EBIT, CSQ implied	-10.8x	-18.5x	-4.3x	-4.1x	-4.7x	-5.9x	-23.8x
Shares outstanding (EoP)	12.1	20.4	22.6	31.8	40.0	44.1	44.1
Shares outstanding, fully dil. (Avg)	12.1	16.3	21.5	27.2	35.9	42.0	44.1
EPS (SEK)	-1.010	-0.740	-0.970	-0.774	-0.454	-0.188	0.247
DPS (EUR)	0.000	0.000	0.000	0.000	0.000	0.000	0.000
BV per share (SEK)	-0.1	1.5	0.8	0.8	0.7	0.6	0.9
tBV per share (SEK)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
EV per share (SEK)	9.9	17.2	4.4	1.4	1.1	0.9	0.9
Equity per share	-0.1	1.9	0.8	1.0	0.8	0.7	0.9
Dividend yield	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
FCF yield	-14.4%	-7.7%	-21.9%	-84.3%	-13.8%	-8.7%	13.3%
FCF yield (unlevered)	-11.4%	-6.5%	-17.6%	-72.0%	-10.5%	-7.2%	11.6%

EoP = End of period. Source: Company information and Carlsquare estimates

Income statement (SEKm), quarterly

	Q4, 21	Q1, 22	Q2, 22	Q3, 22	Q4, 22E	Q1, 23E	Q2, 23E	Q3, 23E
Net sales	2,9	1,9	2,7	3,5	6,0	5,4	8,6	10,9
Total revenue	3,0	2,0	2,8	3,7	6,1	5,5	8,7	11,1
Gross profit	-0,1	-0,1	0,6	0,8	1,5	1,5	2,5	3,5
EBITDA	-5,2	-4,9	-5,9	-5,7	-4,2	-3,9	-4,7	-4,4
Adj. EBITDA	-5,2	-4,9	-5,9	-5,7	-4,2	-3,9	-4,7	-4,4
EBIT	-5,2	-6,0	-7,0	-6,9	-4,6	-4,3	-5,1	-4,9
Adj. EBIT	-5,2	-6,0	-7,0	-6,9	-4,6	-4,3	-5,1	-4,9
EBT	-5,2	-6,1	-7,0	-6,9	-4,6	-4,3	-5,1	-4,9
Adj. EBT	-5,2	-6,1	-7,0	-6,9	-4,6	-4,3	-5,1	-4,9
Net profit/loss	-5,2	-6,1	-7,0	-6,9	-4,6	-4,3	-5,1	-4,9
Adj. Net profit/loss	-5,2	-6,1	-7,0	-6,9	-4,6	-4,3	-5,1	-4,9
Basic EPS adj. (SEK)	-0,2	-0,2	-0,2	-0,2	-0,1	-0,1	-0,1	-0,1
Growth	Q4, 21	Q1, 22	Q2, 22	Q3, 22	Q4, 22E	Q1, 23E	Q2, 23E	Q3, 23E
Net sales	1412%	1736%	232%	268%	107%	190%	220%	210%
Total revenue	1116%	1046%	162%	240%	104%	170%	214%	202%
Gross profit	89%	94%	360%	152%	1570%	2765%	343%	312%
EBITDA	-16%	8%	-8%	4%	20%	21%	20%	22%
EBIT	-16%	-12%	-28%	-17%	12%	29%	27%	30%
EBT	-16%	-13%	-28%	-17%	12%	29%	27%	30%
Net profit/loss	-16%	-13%	-28%	-17%	12%	29%	27%	30%
Margins	Q4, 21	Q1, 22	Q2, 22	Q3, 22	Q4, 22E	Q1, 23E	Q2, 23E	Q3, 23E
Gross margin	-3%	-3%	21%	23%	24%	27%	29%	31%
EBITDA margin	-173%	-242%	-212%	-154%	-68%	-70%	-54%	-40%
Adj. EBITDA margin	-173%	-242%	-212%	-154%	-68%	-70%	-54%	-40%
EBIT margin	-174%	-296%	-254%	-189%	-75%	-78%	-59%	-44%
Adj. EBIT margin	-174%	-296%	-254%	-189%	-75%	-78%	-59%	-44%
EBT margin	-175%	-298%	-254%	-189%	-75%	-78%	-59%	-44%
Adj. EBT margin	-175%	-298%	-254%	-189%	-75%	-78%	-59%	-44%
Profit margin	-175%	-298%	-254%	-189%	-75%	-78%	-59%	-44%
Adj. profit margin	-175%	-298%	-254%	-189%	-75%	-78%	-59%	-44%

Source: Company information and Carlsquare estimates

Income statement (SEKm), yearly

	2019	2020	2021	2022E	2023E	2024E	2025E
Net sales	0,2	0,7	4,8	14,1	39,6	88,6	175,5
Total operating income	2,0	1,8	5,3	14,6	40,1	89,1	176,0
COGS	-1,6	-3,1	-8,2	-11,8	-27,6	-53,9	-105,3
Gross profit	0,5	-1,4	-2,9	2,8	12,5	35,2	70,7
Other operating expenses, less COGS and D&A	-11,4	-13,5	-18,9	-23,5	-28,5	-41,5	-57,6
EBITDA	-10,9	-14,9	-21,8	-20,6	-15,9	-6,4	13,1
Adj. EBITDA	-10,9	-14,9	-21,8	-20,6	-15,9	-6,4	13,1
Dep. and amort.	-5,9	-5,1	-8,1	-10,5	-13,0	-22,7	-34,4
EBIT	-16,8	-20,0	-29,9	-31,1	-28,9	-29,1	-21,3
Adj. EBIT	-27,7	-34,8	-51,7	-51,7	-44,8	-35,5	-8,2
Net finances	-1,1	0,0	0,0	-0,1	0,0	0,0	-0,2
EBT	-12,2	-15,1	-22,0	-24,6	-17,7	-8,1	11,2
Adj. EBT	-12,2	-15,1	-22,0	-24,6	-17,7	-8,1	11,2
Tax	0,0	0,0	0,0	0,0	0,0	0,0	-0,3
Net profit/loss	-12,2	-15,1	-22,0	-24,6	-17,7	-8,1	10,9
Adj. net profit/loss	-12,2	-15,1	-22,0	-24,6	-17,7	-8,1	10,9
Basic EPS adj.	-1,0	-0,7	-1,0	-0,8	-0,5	-0,2	0,2
Fully diluted EPS adj.	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Shares, EoP	12,1	20,4	22,6	31,8	40,0	44,1	44,1
Shares, avg.	12,1	16,3	21,5	27,2	35,9	42,0	44,1
Growth	2019	2020	2021	2022E	2023E	2024E	2025E
Net sales	307%	268%	593%	195%	181%	124%	98%
Tot. revenue	735%	-12%	197%	175%	175%	122%	98%
Gross profit	-117%	-393%	112%	-199%	342%	180%	101%
EBITDA	-29%	-37%	-47%	5%	23%	60%	305%
Adj. EBITDA	-29%	-37%	-47%	5%	23%	60%	305%
EBIT	-29%	-36%	-46%	-11%	28%	54%	240%
Adj. EBIT	-29%	-36%	-46%	-11%	28%	54%	240%
EBT	-46%	-24%	-46%	-12%	28%	54%	238%
Adj. EBT	-46%	-24%	-46%	-12%	28%	54%	238%
Net profit/loss	-46%	-24%	-46%	-12%	28%	54%	234%
Adj. net profit	-46%	-24%	-46%	-12%	28%	54%	234%
Basic EPS adj.	46%	-27%	31%	-20%	-41%	-59%	-232%
Margins	2019	2020	2021	2022E	2023E	2024E	2025E
Gross profit	23%	-76%	-54%	19%	31%	39%	40%
EBITDA margin	-537%	-833%	-411%	-141%	-40%	-7%	7%
Adj. EBITDA margin	-537%	-833%	-411%	-141%	-40%	-7%	7%
EBIT margin	-544%	-843%	-415%	-168%	-44%	-9%	6%
Adj. EBIT margin	-544%	-843%	-415%	-168%	-44%	-9%	6%
EBT margin	-600%	-844%	-415%	-168%	-44%	-9%	6%
Adj. EBT margin	-600%	-844%	-415%	-168%	-44%	-9%	6%
Profit margin	-600%	-844%	-415%	-168%	-44%	-9%	6%
Adj. profit margin	-600%	-844%	-415%	-168%	-44%	-9%	6%

EoP = End of period. Source: Company information and Carlsquare estimates

Balance sheet (SEKm)

	2019	2020	2021	2022E	2023E	2024E	2025E
Tot. intangible assets	8	14	19	23	29	35	40
Tot. tangible assets	0	0	0	0	0	0	0
Tot. other fixed assets	0	0	0	0	0	0	1
Total fixed assets	8	14	19	23	29	35	41
Inventories	0	0	0	0	0	0	0
Accounts Receivables	1	1	4	9	5	6	11
Other current assets	0	0	0	0	0	0	0
Cash	1	17	5	3	6	6	26
Total current assets	1	18	9	12	11	12	37
Total assets	10	32	28	35	41	47	78
Total equity	-2	30	18	26	27	28	39
Debt to creditors	0	0	0	0	0	0	0
Other long-term liabilities	8	0	0	1	1	1	6
Tot. long-term liabilities	8	0	0	1	1	1	6
Short-term debt to creditors	0	0	0	0	0	0	0
Accounts payable	2	1	2	2	5	11	26
Other short-term liabilities	1	1	8	7	8	7	7
Tot. short-term debt	3	2	10	8	13	18	33
Total debt	11	2	10	9	13	19	39
Tot. equity and debt	10	32	28	35	41	47	78
Liquidity	2 019	2 020	2 021	2022E	2023E	2024E	2025E
Current ratio	0.5x	10.6x	0.9x	1.4x	0.9x	0.7x	1.1x
Cash ratio	0.2x	10.1x	0.5x	0.4x	0.5x	0.3x	0.8x
Leverage	2 019	2 020	2 021	2022E	2023E	2024E	2025E
Net debt(+)/Net cash(-)	8	-17	-5	-2	-6	-6	-20
Net debt/EBITDA	NM						
Net debt/Equity	NM						
Equity/Total Assets	NM	94%	63%	75%	67%	60%	50%
Efficiency	2 019	2 020	2 021	2022E	2023E	2024E	2025E
ROA	-90%	-57%	-58%	-62%	-37%	-15%	14%
ROE	-283%	-83%	-72%	-88%	-53%	-23%	27%
ROIC	-329%	-136%	-101%	-92%	-71%	-42%	-17%

Source: Company information and Carlsquare estimates

Cash flow (SEKm)

	2019	2020	2021	2022E	2023E	2024E	2025E
CF, operations b4 delta WC	-12	-15	-22	-21	-16	-6	13
Delta operating capital	1	-1	5	-6	8	4	10
CF operations	-11	-16	-17	-27	-8	-2	22
CF investing	-5	-6	-6	-8	-8	-8	-7
Free cash flow	-16	-22	-22	-35	-15	-10	15
CF financing	11	39	10	33	19	9	5
Cash flow	-6	17	-12	-2	3	0	20
Cash, BoP	6	1	17	5	3	6	6
Cash, EoP	1	17	5	3	6	6	26
Key ratios	2019	2020	2021	2022E	2023E	2024E	2025E
CF operations/Total operating income	-552%	-891%	-313%	-186%	-19%	-2%	13%
CF operations/EBITDA	103%	107%	76%	132%	48%	32%	170%

Source: Company information and Carlsquare estimates

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