

# Starbreeze

## Initiation of coverage

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# It starts with PAYDAY 3

Starbreeze's upcoming game, *PAYDAY 3*, is set to be released in H2 2023. The game is highly anticipated and will play a large role in shaping the company's future. With a loyal player base and the success of its predecessor, we believe that *PAYDAY 3* will be a commercial success. However, there is always uncertainty regarding game releases and together with the limited visibility into the game projects after *PAYDAY 3*, it's hard to assess the company's long-term potential. Therefore, while we are optimistic about the company's future, we believe that the current valuation only provides a modestly positive risk/return opportunity. We consequently initiate our coverage with an Accumulate recommendation and a target price of SEK 1.15.

## Turnaround video game company focusing on cooperative games

Since emerging from restructuring in late 2019, Starbreeze has been a *PAYDAY* company, with almost all their revenues coming from the *PAYDAY 2* game. Meanwhile, the company has invested all its resources into the development of *PAYDAY 3* and has consequently operated with a negative free cash flow. A successful *PAYDAY 3* would set up Starbreeze nicely for the future by providing the company with a recurring revenue source to fuel their growth strategy. The company's long-term strategy is to have at least three revenue producing games by 2028. A key part of this strategy is the implementation of a Games as a Service (GaaS) model for all games. This model has been very successful with *PAYDAY 2*, where regular releases of downloadable content (DLCs) have maintained an active player base for a decade. Starbreeze also got back into third-party publishing in 2022 by agreeing to publish a small indie game and aims to further expand their publishing capabilities going forward.

## Ongoing rights issue

To strengthen their balance sheet and to support growth initiatives, Starbreeze is currently conducting a SEK 450 million rights issue. Of the proceeds SEK 150 million will be used to pay off debt. Together with the commitment from Digital Bros to convert their outstanding loan to shares, Starbreeze will essentially become debt free. Getting rid of the debt naturally lessens Starbreeze's risk profile. The remaining part of the proceeds (MSEK 267) will be used for investing into game development and publishing operations.

## Risk return ratio adequate but not great at current valuation

Our estimates assume that *PAYDAY 3* will be a commercial success and so will the next two games set to be released in late 2025 or early 2026 and 2027. Up to 2028, revenues and profits will fluctuate, with higher revenues in years with game releases and lower revenues in years without. By 2029, we assume that Starbreeze will have reached a "steady state" with revenues growing in a more stable manner. We estimate that EBIT will average SEK 160 million during 2028-2032, resulting in a reasonable EV/EBIT ratio of 6.8x. We do recognize that achieving an EBIT level of SEK 160 million does require several factors to align. Therefore, we think the risk return ratio is adequate, but not great at the current valuation. We would be remiss not to point out that every game release carries significant variability, ranging from being a complete failure to a mega-hit. As such, we have conducted different scenarios in our DCF valuation, with the valuation per share ranging from SEK 0.70 to 2.25. The base case DCF valuation comes in at SEK 1.16, which is 13% above the current share price.

## Recommendation

**Accumulate**

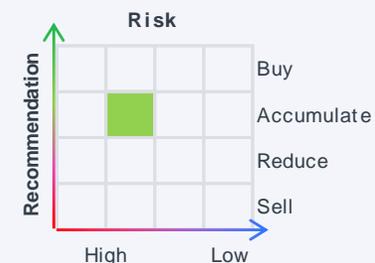
(previous)

**1.15 SEK**

(previous EUR)

**Share price:**

1.03 SEK



## Key indicators

	2022	2023e	2024e	2025e
<b>Revenue</b>	128	669	370	341
<b>growth-%</b>	2 %	424 %	-45 %	-8 %
<b>EBIT adj.</b>	7	455	140	183
<b>EBIT-% adj.</b>	5.3 %	68.0 %	37.9 %	53.6 %
<b>Net Income</b>	-60	405	139	181
<b>EPS (adj.)</b>	-0.08	0.27	0.09	0.12

<b>P/E (adj.)</b>	neg.	3.8	11.7	8.9
<b>P/B</b>	21.6	1.4	1.3	1.1
<b>P/FCF</b>	neg.	8.7	12.1	22.4
<b>EV/EBIT (adj.)</b>	>100	2.4	6.9	4.9
<b>EV/EBITDA</b>	22.5	1.9	3.4	3.6
<b>EV/S</b>	11.7	1.6	2.6	2.6

Source: Inderes

## Guidance

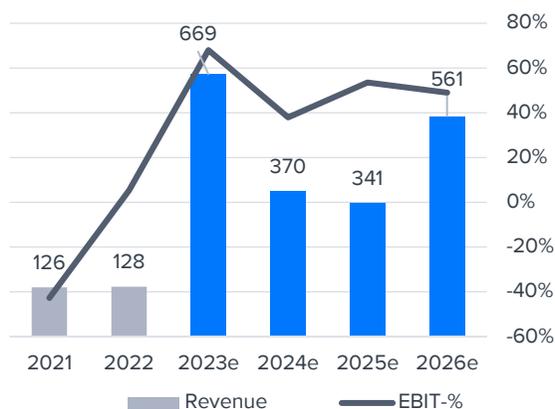
(Starbreeze provides no guidance)

## Share price



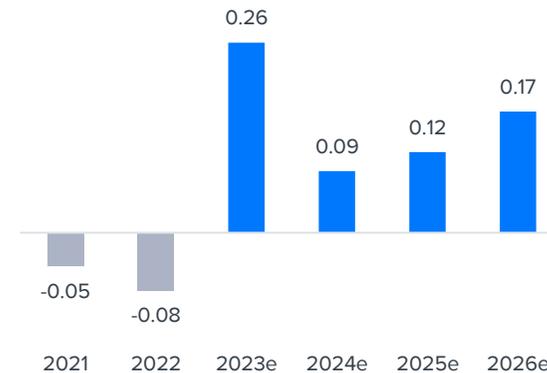
Source: Millistream Market Data AB

## Revenue & operating profit-%



Source: Inderes

## Earnings per share (adj.)



Source: Inderes



## Value drivers

- *PAYDAY 3* is set to be released in H2 2023, if successful it will greatly improve the company's outlook
- The company's main asset is their ownership of the *PAYDAY* game franchise
- Starbreeze has built up an organization of 173 employees capable of developing large scale video games
- New game releases after *PAYDAY 3*. One game in the pipeline set to be released in 2025/2026
- Future publishing operations



## Risk factors

- Undiversified revenue stream with all revenues coming from a single game
- *PAYDAY 3*, being a commercial failure would see Starbreeze take a step back and push their growth story years into the future
- Limited visibility into the games after *PAYDAY 3* makes it hard to assess the company's long-term potential
- Delays in *PAYDAY 3* or future game projects

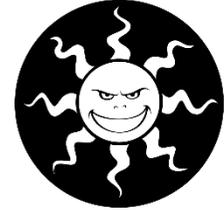
Valuation	2023e	2024e	2025e
Share price	1.03	1.03	1.03
Number of shares, millions	1,570	1,570	1,570
Market cap	1,621	1,621	1,621
EV	1,095	963	892
P/E (adj.)	3.8	11.7	8.9
P/E	4.0	11.7	8.9
P/FCF	8.7	12.1	22.4
P/B	1.4	1.3	1.1
P/S	2.4	4.4	4.8
EV/Sales	1.6	2.6	2.6
EV/EBITDA	1.9	3.4	3.6
EV/EBIT (adj.)	2.4	6.9	4.9

Source: Inderes

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# Starbreeze in brief



Starbreeze is a Swedish game developer and publisher centered around the PAYDAY franchise. The company will release the next installment of PAYDAY in 2023 followed by an unnamed game in 2025/2026.

## 1998

Year of establishment

## 2000

IPO

## 127.6 MSEK (+1.5 % vs. 2021)

Net Sales 2022

## 6.7 MSEK (5.3 % of net sales)

EBIT 2022

## 144 MSEK (112 % of net sales)

Invested in game development in 2022

## 173

Personnel at the end of Q1'23

## 99% of revenues in Q1'23 from PAYDAY 2

- |   |   |  |
|---|---|--|
| <ul style="list-style-type: none"> <li>• <i>PAYDAY 2</i> is launched in Aug 2013 and is an instant hit selling 2.5 million copies in the first year</li> <li>• Profits generated from PD2 are invested into acquisitions, publishing rights, and VR projects</li> </ul> | <ul style="list-style-type: none"> <li>• Over-investment combined with the commercial failure of Starbreeze's next game, <i>Overkill's The Walking Dead</i>, forces the company into restructuring in Dec 2018</li> </ul> | <ul style="list-style-type: none"> <li>• A new leaner and more focused Starbreeze emerges from restructuring in Dec 2019</li> <li>• Close to 100% of revenues derived from <i>PAYDAY 2</i> in 2020-2022</li> </ul> |
|---|---|--|



# Company description

## Turnaround video game company

Starbreeze is Swedish game company founded in 1998 and is best-known for their video game franchise *PAYDAY*. At the end of 2022, Starbreeze employed 165 people in Stockholm, Barcelona, London, and Paris and had revenues of SEK 128 million. Essentially, all revenues (97%) came from a single game, *PAYDAY 2*.

In December 2019, Starbreeze emerged from restructuring as a leaner and more focused company having shed all non-core assets. Despite the newest installment, *PAYDAY 2*, celebrating its 10-year anniversary in 2023, the game is still generating a steady stream of revenues, which has allowed the company to stay afloat. 2023 is set to be a big year for Starbreeze as the company has announced that *PAYDAY 3* will be released sometime during the year. The expectations have been building as the game was originally announced seven years ago in 2016.

## The brief history of Starbreeze

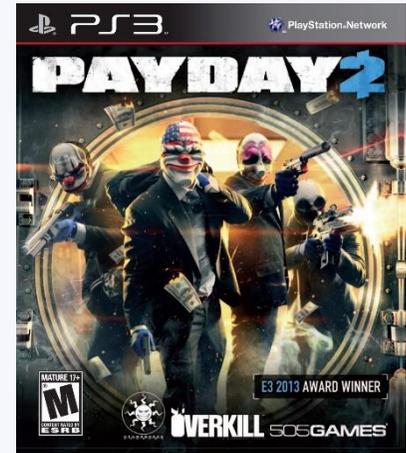
Starbreeze has been active in game development for over two decades. The company's history is one of mixed results with some successful game releases such as *PAYDAY 2* and *Brothers: A Tale of Two Sons* and some commercial failures like Overkill's *The Walking Dead* and *Syndicate*. Throughout the two decades of operations, the company has financially struggled from time to time as game projects have fallen apart or failed to reach commercial success.

Starbreeze's lifespan can be divided roughly into the following three phases: original Starbreeze (1998-2012), Overkill Starbreeze (2012-2019), and New

Starbreeze (2020-). Original Starbreeze was founded to develop PC and console games and did this with reasonable success. However, after a number of projects fell through, and the commercial failure of the *Syndicate* game the company came under financial pressure.

In 2012, in response to financial difficulties, the company merged with Overkill Software (developer of *PAYDAY: The Heist*). The transaction made the owners of Overkill Software the majority shareholders in Starbreeze. Overkill's CEO and co-founder Bo Andersson was made the new CEO of the merged company. Under the stewardship of Bo Andersson, Starbreeze released the hit game *PAYDAY 2* in 2013. The game propelled the company to record profits and a bright future. However, Starbreeze failed to replicate the success of *PAYDAY 2* with their next game, *Overkill's The Walking Dead* (OTWD). OTWD turned out to be a giant flop. That combined with over-investments in game development, publishing, and virtual reality (VR) projects forced Starbreeze into restructuring in December 2018. Starbreeze's CEO, Bo Andersson, was let go and he and his brother sold their majority stake in Starbreeze to *PAYDAY 2*'s publisher Digital Bros.

During the restructuring, Starbreeze shut down or sold off essential everything but the *PAYDAY* franchise. Starbreeze's restructuring was completed in December 2019. Today, Starbreeze has a new management team and are laser-focused on maintaining *PAYDAY 2* while completing the development of *PAYDAY 3*. The current strategy is to become a multi-project game developer with a publishing division for both internally and externally developed games.



# Business model 1/2

## Introduction

Starbreeze is active in the fields of video game development and publishing. The company's current development efforts are primarily centered on finishing the development of *PAYDAY 3*. The company also develops add-on content for *PAYDAY 2*, which generates most of the company's current revenues. In addition, Starbreeze has also started the development of an untitled game with the goal to release the game in late 2025 or early 2026.

Before Starbreeze entered restructuring in 2018, the company had a decent-sized publishing business with a healthy pipeline. However, during restructuring these operations were discontinued and the publishing rights were sold off. The last published game by Starbreeze was *Inked* in 2018. In October 2022, Starbreeze announced that it's getting back into third-party game publishing by signing an agreement with the German indie development studio Walking Tree Games to finance their game *The Tribe Must Survive*. The publishing operations are still in their infancy with only one game as of now.

In addition to game development and publishing, Starbreeze has also licensed the *PAYDAY* intellectual property (IP) rights to the mobile game company PopReach who are in the process of launching a mobile game titled *PAYDAY: Crime War* for IOS and Android. As the IP holder, Starbreeze will be entitled to receive royalties based on the game's future revenues.

## The video game value chain

The video game industry value chain consists of several distinct positions, including developers, publishers, IP rights holders, and distributors. Sometimes each of these positions are filled by a

different company and sometimes a single video game company covers the entire value chain. What or which position(s) a company holds often dictate the level of risk the company takes, and consequently how much reward can be gained.

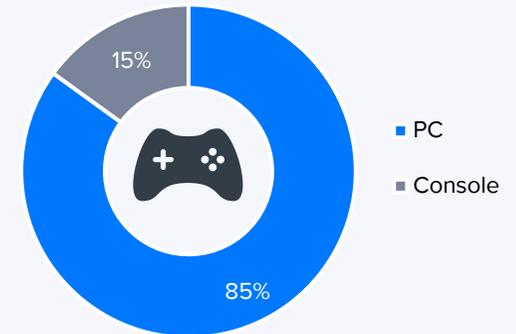
Developers are responsible for creating the game, which requires a team of programmers, animators, artists, and designers. Developers have the option of self-financing and self-publishing their games, or they may choose to partner with an external publisher. By self-financing and self-publishing, developers maintain control over the game, but they also assume more financial risk. On the other hand, partnering with a publisher provides access to additional resources and expertise, but will result in a smaller share of the profits.

Publishers fund, market, and distribute video games, often publishing both in-house and third-party titles. Today most of the large game companies operate as both developers and publishers. Independent developers may partner with third-party publishers to secure financing for their games, with publishers receiving royalties based on future sales in exchange for their investment.

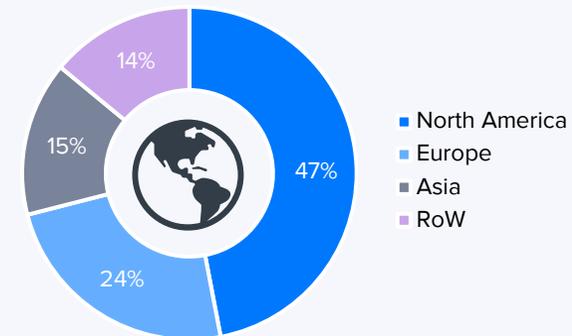
The IP rights holder owns the intellectual property that a game is based on. The IP can be an existing one or a totally new one. If the developer or publisher does not own the IP, they can obtain a license from the rights holder, usually by paying an upfront fee and a share of the royalties.

Video games can be distributed digitally or through physical retailers. Major digital distribution platforms include Steam, Xbox Marketplace, PlayStation Store, and Epic Games Store. Examples of retailers include Amazon and GameStop.

### 2022 revenues per platform



### 2022 revenues per region\*



Source: Inderes, Starbreeze.  
\*RoW = Rest of the world

# Business model 2/2

When it comes to Starbreeze they currently cover the first three roles. If we take PAYDAY 3 as an example: Starbreeze owns the IP rights to the PAYDAY trademark and acts as the developer of the game. Starting out Starbreeze financed the development from their own balance sheet. However, as the project advanced Starbreeze decided to bring on a co-publisher to secure the remaining development, marketing, and distribution costs of the game.

## Revenues

Currently, Starbreeze's revenues come almost entirely from digital sales of PAYDAY 2 and the associated DLCs (downloadable content). DLCs are exclusively sold digitally via the video game marketplaces Steam, PlayStation Store, and Microsoft Store.

Currently, the base game costs EUR 9.99 and the DLCs vary in price between EUR 0.99 - 6.99. The digital marketplaces take a significant cut of the top, usually in the realm of 20-30%. The net amount after the marketplace fee and VAT is transferred to the company and is what Starbreeze reports as net revenues (see table on the right for an illustrative model).

The revenue stream from games has traditionally been irregular with the largest amount occurring just after the release with revenues then starting to decline as the game ages. With the emergence of different monetization options such as subscriptions, microtransactions, and DLCs, the game developers have managed to increase the lifespan and monetization of games.

As for PAYDAY 2, you can find an illustrative graph

on the right where the share of revenue from the game is split between sales of the base game and DLCs. As we can see, in 2013, when the game was released, 96% of revenues came from sales of the base game. In turn, in 2022, 78% of revenues came from the sale of DLCs.

As essentially all the revenues are coming from a single game, Starbreeze's revenues are highly undiversified. At the same time, the number of end-customers are in the thousands and millions and are globally spread out. Therefore, every single customer accounts only for a miniscule part of total revenues.

The games are sold globally with the largest share of revenue coming from North America (47%), Europe (24%), and Asia (15%).

## Costs

The company's costs are almost exclusively in the form of wages and salaries for game development, sales, marketing, and administrative tasks. Starbreeze also purchases some of these services from external providers (40% of costs in 2022). A large part of the costs for game development are capitalized to the balance sheet (SEK 144 million, 2022) and thus lower the costs on the income statement with the equivalent amount.

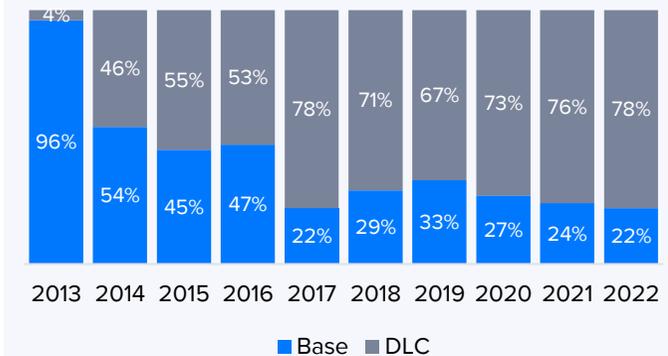
As the costs are mostly salaries the cost structure is heavily fixed. This is of course good in respect to the marginal profit of every game sold as it is very high. On the other hand, a fixed costs structure gives little flexibility in the event of tougher times say a failed game launch. In that event the company would find themselves with a heavy fixed cost burden without sufficient revenues to support it.

## Illustrative business model for Starbreeze Games

Examples in USD	Digital	Physical
	Sales	sales
Sale price per unit	49.9	49.9
VAT, %	10 %	12 %
Cost per unit sold, %	-	10 %
Distribution fees, %	30 %	60 %
<b>Starbreeze's net revenues</b>	<b>31.4</b>	<b>15.8</b>

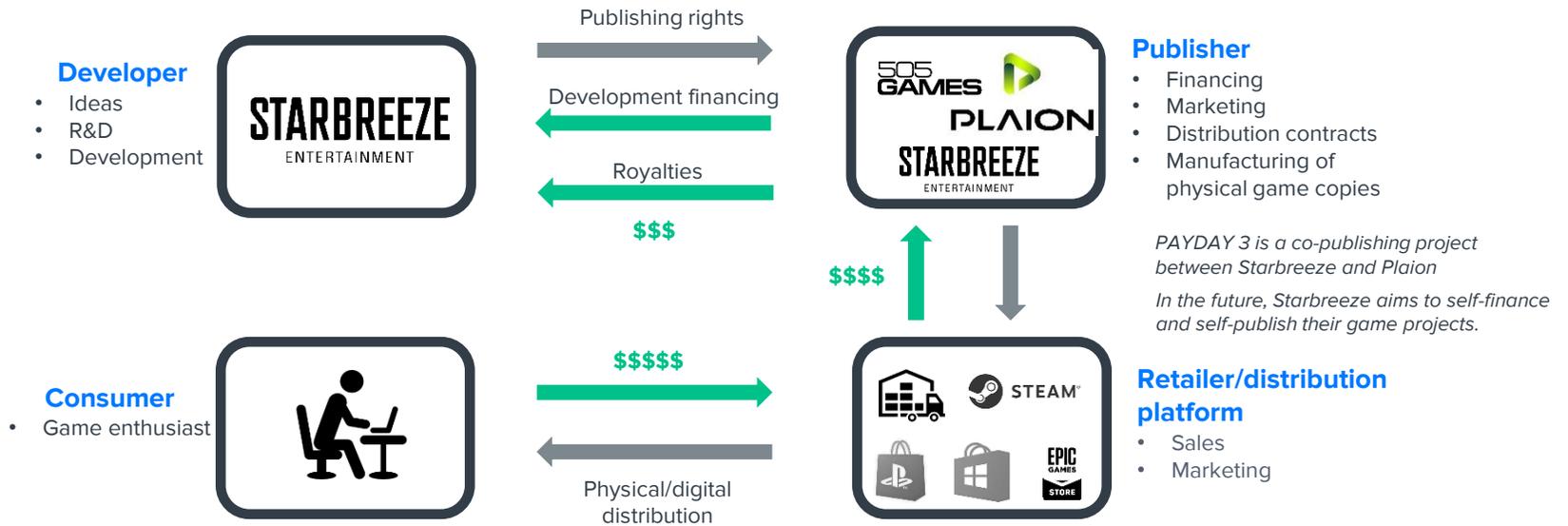
Revenue sharing, if any, with external financial backers or external IP owners is additional.

## PAYDAY 2 - Base game vs DLC revenue split

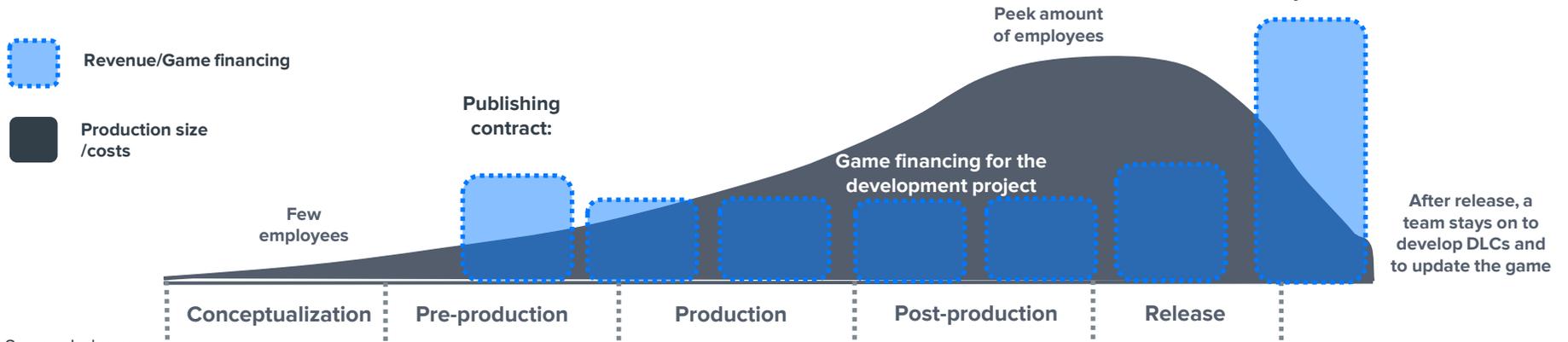


Source: Inderes, Starbreeze

# Starbreeze's value chain and development process



## Illustration of game development when publisher helps finance production



Source: Inderes

# The PAYDAY franchise 1/3

## The franchise

PAYDAY games are cooperative first-person shooters for PC and console. The franchise consists of two games developed by a subsidiary of Starbreeze, Overkill Software. The games are *PAYDAY: The Heist* (2011) and *PAYDAY 2* (2013). Currently, the third installment *PAYDAY 3* is under development by Starbreeze and is set to be released in 2023. A mobile game based on the PAYDAY IP, *PAYDAY: Crime War*, is currently under development by a third-party studio under a license from Starbreeze. The franchise has so far generated gross sales of over USD 300 million with over 38 million installed copies (Q4'22). In total, over 240 DLCs and updates have been released for the games.

## PAYDAY: The Heist

*PAYDAY: The Heist* was released in October 2011 by Overkill Software (not yet part of Starbreeze) and published by Sony. The game was released on PC and PlayStation 3. The game is a cooperative first-person shooter where players cooperate to complete a set of objectives such as robbing banks and stores.

The game was a modest success, reportedly selling more than 700,000 copies in its first year and all together over 2.5 million copies. The game has an average Metacritic score of 73/100. The game ran on the in-house game engine Diesel that was originally developed by the predecessor company to Overkill Software, Grin.

## PAYDAY 2 ("PD2")

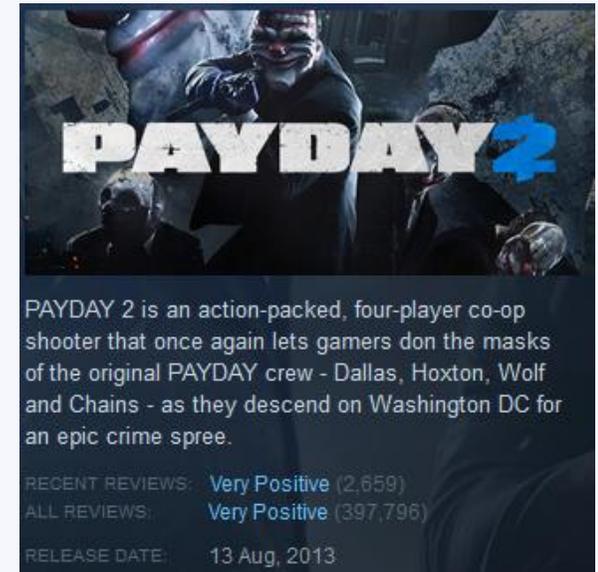
The sequel to the original game, *PAYDAY 2*, was released in August 2013 for PC, PlayStation 3, and

Xbox 360 platforms. The game was also later released on PS4, Xbox One, and Nintendo Switch. The game was published by 505 Games, which is a subsidiary of Milan-based Digital Bros. Digital Bros is today also the largest shareholder (in terms of voting rights) and creditor of Starbreeze.

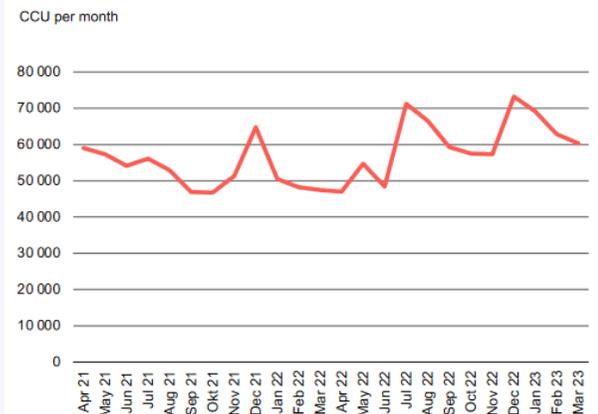
PD2 was an immediate commercial success and during the first year the game sold over 2.5 million copies. By the end of 2017, the game had sold over 16 million copies. The game's critical reception was good with the Metacritic rating averaging 71/100 over all platforms. The game's PC version received a higher rating of 79/100. The game also currently holds a 'Very Positive' rating on Steam. The game has created a strong and loyal player base that has stuck with the game for nearly 10 years. In Q1'23, the game had a peak MAU (monthly active users) of 908,000, a level that few games could boast of heading into their 10<sup>th</sup> year.

The game retains the core gameplay mechanics of the first game where the players together aim to complete "heists" such as robbing stores, banks, and offices. The players can complete these heists in different manners such as using stealth or going in "guns blazing". The heists can be replayed multiple times in multiple ways, which creates re-playability, allowing players to spend hundreds of hours playing.

To further prolong the game's lifespan and keep players coming back, Starbreeze adopted the Games as a service model (GaaS) and has continuously released add-on content for sale since the original release of the game. The add-on content includes new heists and new in-game items. Currently, Starbreeze releases new content for the game every 2-4 weeks.



PAYDAY™ – Peak CCU per month



Source: Steam, Starbreeze  
\*CCU = concurrent users

# The PAYDAY franchise 2/3

PD2 also uses the company's proprietary game engine Diesel, which at this point has become rather long in the tooth. Due to problems with the Diesel engine, Starbreeze has struggled to maintain and release new content for the console platforms. Because of this, today PD2 is mostly a PC game with close to 85% of revenues generated from the PC platform.

PD2 is monetized in three ways. The game itself needs to be purchased for a one-time fee that grants the players access to the base game. When *PAYDAY 2* was released, the base game was priced at USD 29.99. In the years since the release the average price of the game has fallen and was USD 6.5 in 2022 (graph on the right). The lower price works to attract new players to the game. In addition to the one-time fee, players can purchase add-on content in the form of DLCs that provide the players with access to further heists and other content such as weapons, skins, and outfits. The players can also purchase digital safes (loot boxes) that gives the players a random in-game item.

## PAYDAY 3 ("PD3")

The long-awaited next installment in the PAYDAY franchise is set to be released in 2023. The release year was confirmed by Starbreeze in a press release on January 1<sup>st</sup>, 2023. The company has refrained from giving any further details regarding the exact release date of the game as to not let the competitors plan around it.

Starbreeze bought the full rights to the PAYDAY franchise from 505 Games in 2016 for 10.9 million shares worth about EUR 30 million. Furthermore, 505 Games retained a 33% revenue share from future

sales of *PAYDAY 3*.

The game will be developed in-house by Starbreeze. For *PAYDAY 3* the game engine has been changed to Unreal Engine owned by Epic Games. This is a welcomed change as the Unreal Engine is considered significantly better than the old Diesel engine. This move will also allow Starbreeze to release and simultaneously update the game on both PC and console platforms. This will enable Starbreeze to reach a broader customer base from the release.

In March 2021, Starbreeze reached a co-publishing agreement with Plaion (Embracer Group) regarding *PAYDAY 3*. The agreement secured the continued development of PD3, and global publishing. According to the press release, Starbreeze and Plaion committed to coinvest EUR 50 million into the development, which also covers the post-launch period for up to 18 months.

As for the game itself only partial information has been released thus far. We do know that the game will follow the same cooperative first-person shooter theme and will contain heists in the style of the previous games.

As for monetization, nothing concrete has been released yet except for a statement that the game is to be provided as a Game as a service experience. Based on this, it's reasonably safe to assume that Starbreeze will sell DLCs and in-game items in the fashion of *PAYDAY 2*. We also know that the base game will need to be purchased. If the game will feature some subscription-based model is unknown as of now.

**PAYDAY 2 - Base game average price (Steam)**



Source: SteamDB, Starbreeze

# The PAYDAY franchise 3/3

## Revenue Share

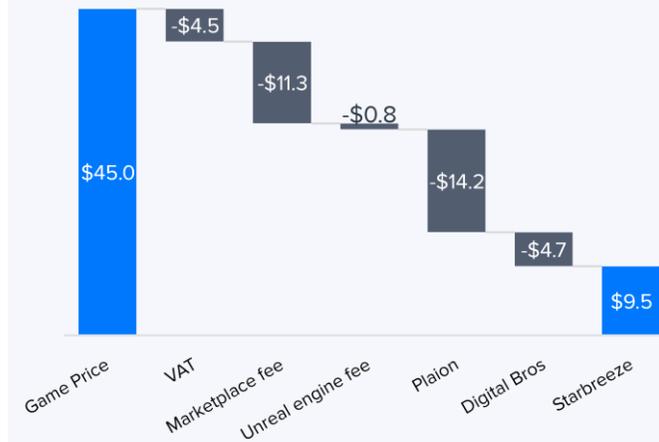
When a publisher is brought on to finance, distribute, and market a game they do so in exchange for a share of future revenues. In the case of *PAYDAY 3*, the details regarding the revenue split between Starbreeze and Plaion were not publicly announced. However, based on industry practice and the wording of the press release, we estimate that the revenue will be split half and half between Starbreeze and Plaion.

In addition to Plaion's revenue share from *PAYDAY 3*, two other entities are also entitled to a portion of the revenues. Firstly, there is the licensing fee for Unreal Engine, which is usually a low single digit percentage point of gross sales. We estimate that for *PAYDAY 3* the licensing fee is 2%. Secondly, we have 505 Games (Digital Bros) who retained a revenue share in *PAYDAY 3* when selling the *PAYDAY* IP rights back to Starbreeze. According to the press release (May 30, 2016) 505 Games retains 33% revenue share of Starbreeze's net revenues from future sales of *PAYDAY 3* capped at USD 40 million, and after Starbreeze has fully recouped its development and marketing costs.

All in all, we estimate that after deducting marketplace fees, VAT, Unreal Engine's licensing fee, Plaion's share, and 505 Games share that Starbreeze will retain between 21% to 32% of the gross sale price per unit sold.

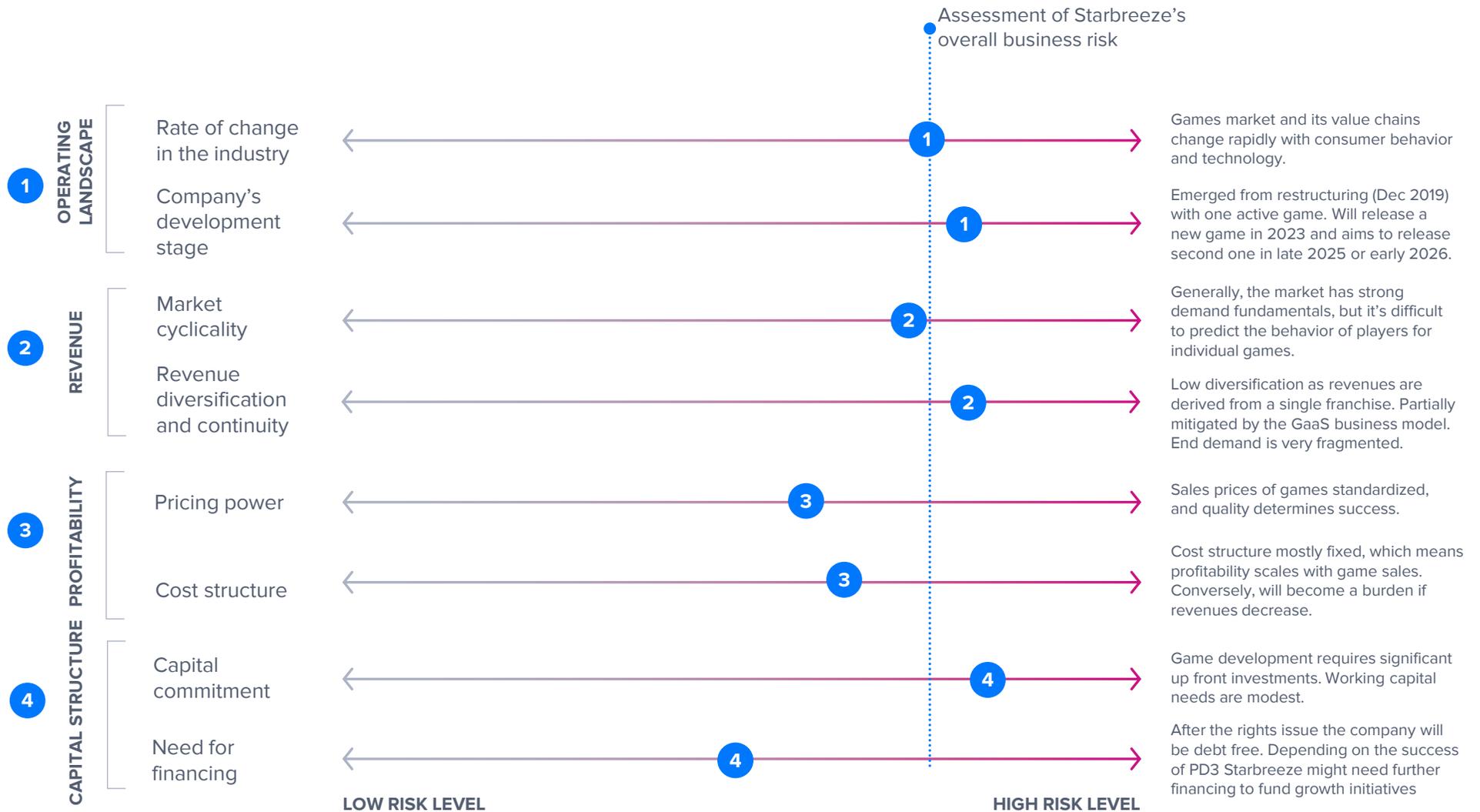


## PAYDAY 3 revenue share (post recoup)\*



Source: Inderes & Starbreeze \*Inderes estimate

# Risk profile of Starbreeze's business model



# Rights Issue

## Rights Issue

On April 28th Starbreeze announced its intention to conduct a rights issue for SEK 450 million. The rights issue is set to be completed by the middle of June 2023. The proceeds will be used to pay off debt (MSEK 150) and to accelerate game development and third-party publishing (MSEK 267).

In conjunction with the rights issue, Digital Bros, the largest shareholder and creditor of the outstanding convertible loan has committed to converting the outstanding debt into shares. With the SEK 150 million used to settle a refinancing charge to Digital Bros and the conversion of the loan Starbreeze will emerge essentially debt free.

As of writing this report the rights issue has been approved by the shareholders and Starbreeze has received commitments of up to SEK 250 million. Which means that the refinancing charge is covered no matter what.

The subscription price is set at SEK 0.75. Each share will be entitled to one subscription right and six (6) subscription rights entitle to subscription for five (5) new shares. If the full amount of SEK 450 million is subscribed the number of outstanding shares would increase by 83% to 1,328 million shares (725 million). In addition, we estimate that the conversion of the loan held by Digital Bros would add an additional 242 million shares for a total number of outstanding shares of 1,570 million. This represents a total dilution

of approximately 54%. We expect the issue to be subscribed fully due to the low subscription price in relation to the current market price.

## Digital Bros potential mandatory takeover bid

Before the rights issue Digital Bros controls about 12% of the shares and about 29% of the votes in Starbreeze. Digital Bros has undertaken to subscribe for its pro rata share of the Rights Issue. In addition, Digital Bros has undertaken to underwrite the issue with an amount of SEK 100 million if needed. This means that it is possible that Digital Bros' ownership would cross the 30% trigger to make a mandatory takeover bid.

However, on May 16, 2023, Starbreeze announced that the Swedish Securities Council granted Digital Bros an exemption from the mandatory takeover bid requirement that would arise if Digital Bros' holdings of shares or votes in Starbreeze would exceed 30% as a consequence of Digital Bros' subscription and underwriting commitments.

This exemption does not, however, cover Digital Bros crossing the 30% threshold due to the conversion of the convertible loan. In a situation where Digital Bros' control crosses the 30%, threshold the company is required to make a mandatory takeover bid unless Digital Bros converts A shares to B shares and/or divests shares in order for to decrease its holding below the threshold.

## Preliminary timetable for the Rights Issue

The timetable below is preliminary and may be subject to change.

May 24, 2023	▪ EGM to approve the Board of Directors' resolution on the Rights Issue
May 26, 2023	▪ Last day of trading in Starbreeze shares including the right to participate in the Rights Issue
May 26, 2023	▪ Planned announcement date of the prospectus
May 30, 2023	▪ Record date for participation in the Rights Issue, i.e. holders of shares who are registered in the share register on this day will receive subscription rights for participation in the Rights Issue
June 1-12, 2023	▪ Trading in subscription rights
June 1-15, 2023	▪ Subscription period
June 1-21, 2023	▪ Trading in BTAs (Sw. betalda tecknade aktier)
June 16, 2023	▪ Announcement of the outcome of the Rights Issue

# Investment profile 1/2

## Turnaround company with a strong franchise, but long-term potential unclear

Starbreeze emerged from restructuring with little more than the IP rights to the PAYDAY franchise and a single revenue-producing game. After a ten-year gap, Starbreeze is set to publish the newest installment of the PAYDAY franchise.

PAYDAY 3 being a commercial success would nicely set up the company going forward. Before the rights issue was announced the hope was that PD3 would generate enough cash flow to pay off the debt and any excess cash would be reinvested into the business.

Now with part of the proceeds from the ongoing rights issue being used to pay down debt (and Digital Bros commitment to convert their convertible loan to shares) Starbreeze will be essentially debt free once the issue is completed. The remaining proceeds of about SEK 267 million (if issue subscribed fully) together with any cash flow generated by PAYDAY 3 will be used to fund new game projects and publishing operations.

However, every game launch carries the risk of a commercial failure. Should this fate fall upon PAYDAY 3, Starbreeze as a company would take a step back. The ongoing rights issue and the conversion of the convertible loan give Starbreeze more room to maneuver as the looming maturity of the debt is removed. A commercial failure of PAYDAY 3 would most likely mean that the company would be forced to raise additional capital or bringing on an external publisher to finance future game projects.

In the near-term Starbreeze currently has all the

eggs in the PAYDAY 3 basket and therefore any investment into the company's equity is closely tied to the success of PAYDAY 3, at least over the short-term. In considering Starbreeze as an investment we must, however, also consider what comes after PAYDAY 3.

## Beyond PAYDAY 3

After PAYDAY 3, the company aims to release new games on an ongoing basis while also expanding their third-party publishing business. Starbreeze envisions releasing a new game in late 2025 or early 2026 followed by another game in 2027.

To our understanding, only the first of these two projects has been started. The game is to be based on a licensed IP and have a budget estimated to exceed SEK 480-534 million. As this amount exceeds the proceeds from the rights issue the gap will either have to be closed by internally generated cash flow or by raising more capital/bring on a publisher.

As for the games the same risk of commercial failure naturally exists. As the games will not be based on the PAYDAY IP we would argue the risk of failure is perhaps even larger. Regarding the 2025/2026 game Starbreeze announced on May 22 that they are negotiating to license an IP. According to the company the IP is an iconic brand characterized by collaborative experiences and storytelling in an expansive world. They also mention that the IP in question has been used, among other things, as the base for games, computer games, books and short stories as well as feature films. Having a well-known IP would lower the risk of commercial failure as a known brand will pique the consumers interests as we recently saw with the mega success of the

*Hogwarts Legacy* game. However, as we do not have information regarding which IP the company is negotiating about and limited information regarding the game in general it is hard to assess the potential of this game.

This is of course even more true in regard to the 2027 games of which we know very little of except that the company aims for it to be based on an internally developed IP.

All in all, we know that to grow into a diversified multi-project games company Starbreeze will need to invest a relatively significant amount of cash to fund these growth initiatives. From where the funding comes from (internal or external) will depend on the success of each subsequent game.

## Three potential scenarios

In considering Starbreeze's future we have chosen to outline the three following scenarios:

1. PAYDAY 3 and next game are commercially successful
2. PAYDAY 3 is a commercial success, but the next game disappoints
3. PAYDAY 3 is a commercial disappointment

The **first scenario** would essentially be one where everything goes more or less as planned. PD3 is successful and so are the next games. By 2028/2029 Starbreeze would have three income-producing games that generate enough free cash flow to invest into future games and third-party publishing projects. This would create a significantly more diversified and predictable revenue stream that would lower the overall risk profile of the company.

# Investment profile 2/2

The **second scenario** is one where PD3 is a commercial success, but the next game (2025/2026) is a failure. In this case, we would be somewhat back to square one, with Starbreeze deriving all their revenues from a single game (PD3). In this scenario, Starbreeze's outlook over the short-term has clearly improved but the growth story has been pushed back a few years. In addition, the same questions regarding the long-term prospects of the company remain.

The **third scenario** is one where PD3 is a commercial failure. Starbreeze would try to keep PD3 and possibly PD2 running to keep the lights on. With the rights issue the company has created some more breathing room as there is no impending debt maturing. However, it is likely that Starbreeze would not have enough cash to self-finance the 2025/2026 game and would need to either raise additional capital or bring on an external publisher. In this scenario, the company's growth story would be pushed back several years, and we would expect the valuation to suffer severely.

In closing remarks, it's evident that there is a range of outcomes regarding Starbreeze's future that first and foremost depend on the success of each new game. Game developers are only as good as their latest game. Starbreeze can, however, feel more comfortable ahead of PD3's release as it is a sequel to a very popular game. Game developers and movie studios alike have found out that the closest you can get to a sure thing is sequels, prequels, and remakes of popular games/movies.

## Positive value drivers and opportunities

The main positive value driver for Starbreeze is their

ownership of the PAYDAY IP. The current game PD2 has an active and loyal player base that the company hopes to leverage into strong game sales for the follow-up version *PAYDAY 3*. In Q1'23 PD2's monthly active users peaked at 908,000. PD2 also has one of the largest Steam communities with over 8.6 million members.

Another value driver for Starbreeze is their experience with the GaaS monetization model. This model has proved to be very successful in both driving revenues and keeping players interested in *PAYDAY 2* for almost 10 years now.

The main opportunity for Starbreeze is clearly a successful release of *PAYDAY 3*. If the game turns out to be what the players and Starbreeze hope for, the ceiling of success is very high and could change the company's future overnight.

Other opportunities include further games based on the PAYDAY IP, other monetization of the PAYDAY franchise such as the licensing of the IP to different products such as merchandise and transmedia opportunities such as TV shows and movies. Starbreeze took their first step regarding this in February 2023 by entering a partnership with Stockholm Syndrome to explore the opportunity to develop a PAYDAY TV-show or movie.

## Risks and threats

The main risk without a doubt is that *PAYDAY 3* turns out to be a commercial failure. This could happen for various reasons, including poor game design, an overly aggressive monetization model, technical issues, or simply bad luck. In addition, the release of another anticipated game at the same

time or a release of a game in the similar style might divert players away from *PAYDAY 3*.

A completed commercial failure of *PAYDAY 3* would have serious consequences for Starbreeze as the company is all in on this game. When *PAYDAY 3* is released, we expect most of the existing players of *PAYDAY 2* to switch over to the new game. If the new game turns out to be a dud, there are no guarantees that the disappointed players return to the older version. If this scenario were to materialize, Starbreeze would be left with a significant fixed cost structure and a too small income stream to support it. The GaaS business model does help to somewhat mitigate this risk as Starbreeze will keep developing and releasing new content for the game after launch. This gives them the ability to change and improve on the game on an ongoing basis.

The company is currently conducting a rights issue of up to SEK 450 million. As the situation is ongoing there exists the risk that the issue will not be subscribed to the full amount. However, Starbreeze has secured SEK 250 million in commitments meaning that even if only SEK 250 million is raised there will be enough to cover the debt.

Another risk is the delay of *PAYDAY 3* or a delay of the future games. Delays often result in increased costs and/or delayed revenues. Video games are notorious of having their release dates pushed back. The commercial failure of future game projects is also a significant risk.

# Investment profile

1. Turnaround company with all the eggs in the PAYDAY basket
2. Strong video game franchise in PAYDAY
3. Upcoming release of the new PAYDAY 3 game to PC and console
4. GaaS business model provides longevity, scalability, and reduces risk
5. Large and growing market

## Potential



- Successful release of *PAYDAY 3* would generate strong cash flow and set Starbreeze up for the future
- Widening the monetization of the PAYDAY IP through more games and other income streams
- Large PAYDAY community that can be leveraged to promote new games
- Future new game releases
- Potential future publishing operations
- Strong demand outlook on the market

## Risks



- Starbreeze reliant on a single game for their revenues
- *PAYDAY 3*, being a commercial failure would see the company take a step back and push their growth story a few years back
- Low visibility into future projects after *PAYDAY 3*
- Highly competitive market with many competing products

# Strategy

## Long-term game developer, with a big community

In the very near-term, Starbreeze's strategy is to complete the development of *PAYDAY 3* and release it on schedule (H2'2023). While doing this, Starbreeze is keeping the *PAYDAY 2* player base active through ongoing releases of add-on content. Not only is PD2 generating decent revenues, but it also enables Starbreeze to stay connected to the *PAYDAY* players with the aim to entice them over to *PAYDAY 3*.

However, being totally reliant on a single game or single game franchise is not ideal from a risk management perspective. Starbreeze has expressed their ambitions to diversify their revenue stream. This is to be done mainly through two ways. The first is to have multiple active internally developed games and the second is to act as the publisher for externally developed games.

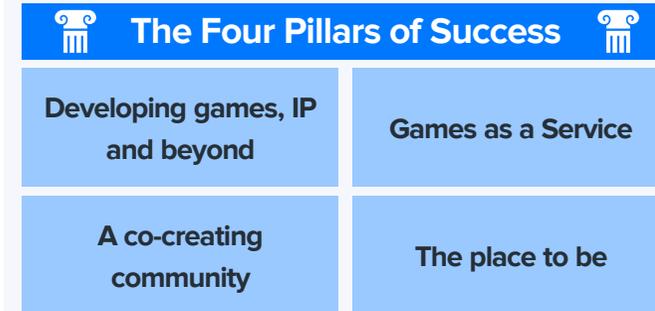
According to Starbreeze, the company is currently developing a new game with a targeted release date in late 2025 or early 2026. The plan is for the game to be based on a licensed IP and for Starbreeze to act as both developer and publisher. The game will have a development and marketing budget estimated to exceed USD 45-50 million, including the first 18 months of live service.

After the 2025/2026 game Starbreeze is aiming to release their next game in 2027 with the hope of this being based on an internally developed IP. This would allow them to have at least three active games on the market. According to Starbreeze,

the company's strategy for new games is to leverage their experience in GaaS and community building to create long-lasting gaming experiences.

When it comes to publishing externally developed games, the company took the first step regarding this by signing an agreement to publish the indie game *The Tribe Must Survive*. Starbreeze has stated that they are currently evaluating several opportunities to further grow and diversify their publishing business. However, they are also committed to doing this responsibly without ending up overextending themselves. One of the reasons Starbreeze decided to get back into publishing is so that they can build up their publishing capability and would eventually be able to self-publish all their internally developed games.

In summary, Starbreeze's strategy is to have multiple revenue-generating games on the market that are either based on internally created IPs or on licensed IPs. They aim to release new games on an ongoing basis with the next game after PD3 set to be released in late 2025 or early 2026. Starbreeze is also working to broaden businesses related to the *PAYDAY* IP, creating additional revenue streams to complement *PAYDAY 3* when releasing the game in 2023.



# Strategy



## Must Win Battles in the strategy

### Implemented

- Shedding non-core operations
- Securing the financing for PD3
- Re-structuring the convertible loan to Digital bros
- Successfully maintaining the PD2 game
- Securing a stronger financial position with the rights issue

### Near future, 1-2 years

- Successful launch of PAYDAY 3
- Able to maintain the PD3 player base with the optimal monetization strategy
- Diverting the PD3 development team to new project(s)

### The next 5 years

- Successful release of a non-PAYDAY game
- Several active games on the market
- Publishing several externally developed games
- Build strong communities by user-generated content and high engagement

# Market overview – Games market 1/2

## The gaming market is big and global

The popularity of gaming has increased dramatically in the 2000s as the standard of living has risen. Today, around 3 billion people play games and gaming is one of the most popular form of entertainment in the world. Newzoo estimates that the global games market was around USD 184 billion (-4.3%) in 2022. The modest decrease is mostly due to the huge boost gaming received in 2020-2021 as a result of the COVID pandemic. Going forward Newzoo expects the market to continue to grow at around 5% CAGR until 2025. This growth is mainly driven by growth in both the number of players and the amount of money spent on games.

Geographically, the Asia-Pacific region is the largest market, accounting for nearly half (48%) of its total value (with China contributing roughly half of that). North America and Europe represent the second and third largest markets, respectively, at 26% and 18%. Big screen PC and console gaming that are the key platforms for Starbreeze is still mainly focused on developed markets. However, the popularity of console gaming is quickly rising in emerging markets as incomes increase.

## Starbreeze develops games for PC and console

Divided by platform, PC and console constitute just below 50% of the entire gaming market (USD 92 billion). Mobile gaming is makes up the other half.

Breaking it further down the console market is estimated at around USD 52 billion in 2022. The console market has grown strongly in recent years (CAGR 16-22: 8%) and the growth is expected to

continue at around the same level in 2022-2025. The growth drivers are the next generation PlayStation and Xbox consoles and new versions of Nintendo Switch that have been released. In addition, the very strong equipment base and extensive game selection of the older consoles supports the overall sales console games. Over 117 million PS4s and over 32 million PS5s have been sold. It's estimated that over 51 million Xbox One units and over 20 million new Xboxes have been sold. On the console side, the role of physical distribution is still important, but the role of digital distribution has increased considerably as the COVID situation further accelerated the trend. According to Sony's Q4'21 report released in May 2022, 71% of PlayStation's game sales were digital.

The size of the PC gaming market in 2022 is estimated at USD 38 billion. The market has grown at a stable rate (CAGR 16-22: 4%) and stable growth is also expected for the near future (CAGR 22-25: 2.2%). The distribution of PC games is virtually fully digital. The PC games marketplace Steam had around 132 million active monthly users in 2021 (2020: 120 million). Epic Games Store that has risen to challenge Steam in recent years had 62 million active monthly users in December 2021 (2020: 56 million).

Over the past 10 years, mobile gaming has grown exponentially as smart phones have become common and the most popular gaming platform. The market size (mobile and tablet) in 2022 was USD 92 billion. Newzoo forecasts that the mobile games market will continue to grow at an annual rate of 4.3% between 2022 and 2025, making

mobile gaming the fastest growing gaming segment. The increase in the popularity of mobile gaming has not taken away from PC and console gaming. Mobile gaming has brought about a completely new "casual gaming" genre, reaching completely new gamer target groups. A mobile version of PAYDAY is currently being developed by a third-party studio under license from Starbreeze.

We estimate that the big screen focused console and PC-gaming markets, which Starbreeze relies on, are currently very stable and have healthy growth drivers. At the same time, industry trends (subscription-based models, cloud gaming, digital distribution, and long-term game services) support Starbreeze's outlook when the demand for high-quality gaming content increases in future.

## Business models are developing in the industry

In AAA games, the conventional business model has been that the game is sold both as physical and digital copies as one-time purchases costing between EUR 40-70 apiece. The commercial success of a game is largely determined by how many copies are sold during the release year. Thanks to digital distribution, the lifespan of games has grown considerably. Additional sales is increasingly sought through DLCs developed after the original game release. DLCs can also support the original game's sales price that is likely to have dropped at that point and to attract completely new buyers for the game. Thus, games are increasingly considered to be long-term services (GaaS, Games as a Service). Starbreeze successfully utilized the GaaS model for their hit game *PAYDAY 2*.

# Market overview – Games market 2/2

The free-to-play business model (F2P) typical for mobile games has increased its popularity in PC and console games pushed by recent hit games (e.g. Fortnite). In the F2P model players can get the game for free and the revenue is based on in-game purchases and advertisements. The challenge for the F2P model on consoles is achieving sufficient scale, as usually only a small share of players spend money in the game. The significantly lower number of consoles compared to the number of active smartphones (Newzoo: 3.6 billion units) limits the size of the potential group of players. Thus, a F2P game developed for a console virtually also requires a PC version. In addition, console/PC games tend to be significantly more expensive to develop than mobile games, which contributes to increasing the risks of F2P game projects.

In recent years, subscription-based business models have also been introduced in gaming as already has happened in terms of music (Spotify) and movies (Netflix). For example, subscription services from Sony and Microsoft allow you to play games from their selection for a monthly fee. A natural continuum on the subscription-based models is streaming console and PC games directly from the cloud and the fight for the “Netflix of games” position has already started. Google made an opening in this field when launching the Stadia service in November 2019 (Shutdown in 2022). Microsoft is building a game streaming service around Xbox Game Pass and Sony around the PlayStation Now service. In addition, Amazon with its strong cloud services is entering the market as a challenger with its Luna service. Cloud gaming requires a seamless and fast

Internet connection, and we estimate its popularity will increase gradually over the next 5 years as, e.g., 5G and fiber connections are becoming more common. If cloud gaming really breaks through, it is likely to happen towards the end of the life cycle of next generation game consoles (PS5 and Xbox Series X|S) at some time towards the end of the 2020s. If/when game streaming becomes more common, it would increase the available players base of AAA games as the need to buy a physical console for playing disappears.

## On PC, competition between distribution platforms intensifies

Steam that has long dominated the digital distribution of PC games but has recently been challenged by Epic Games’ EGS marketplace. Unlike the 30% (25% after 10 MEUR and 20% after 50 MEUR sales) distribution fee charged by Steam; Epic only charges a 12% fee. Epic argues that Steam’s fees are no longer reasonable in the digital distribution landscape. With the financial resources generated by the success of Fortnite, Epic is well-positioned to challenge Steam’s dominance.

In order to grow its platform, Epic Games has actively signed time-based exclusive distribution agreements with game developers in recent years. Developers’ role in the value chain is growing. Game publishers have traditionally had a strong position in the value chain, as they have acted as gatekeepers between game developers and distributors. Console manufacturers have also always been strong in their own closed platforms. The situation has, however, changed and is constantly changing as digital

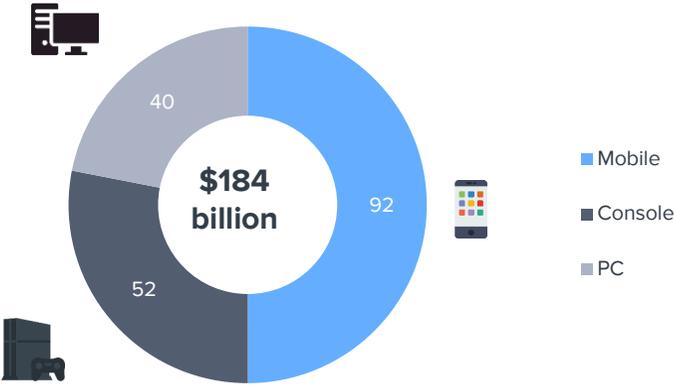
distribution, subscription-based business models, cloud gaming and the F2P model shape the market.

The biggest value shift in the market in recent years has taken place from the physical distributors of games towards publishers and game developers as digital distribution has grown considerably. For example, as recently as five years ago physical distributors (e.g. GameStop) had a lot of power over publishers but that is no longer the case.

The role of game studios in the value chain is not disappearing, which is good for Starbreeze. The business models of game developers may change, but their place in the value chain is only likely to grow in the future. The need for high-quality game content becomes emphasized as the competition between players and digital platforms tightens. This might enable attractive offers for publishing and exclusive agreements for Starbreeze in the future. In addition, there is only handful of Starbreeze-like independent AAA studios globally, which also makes the company an interesting acquisition target for several players.

# Market overview – Games market

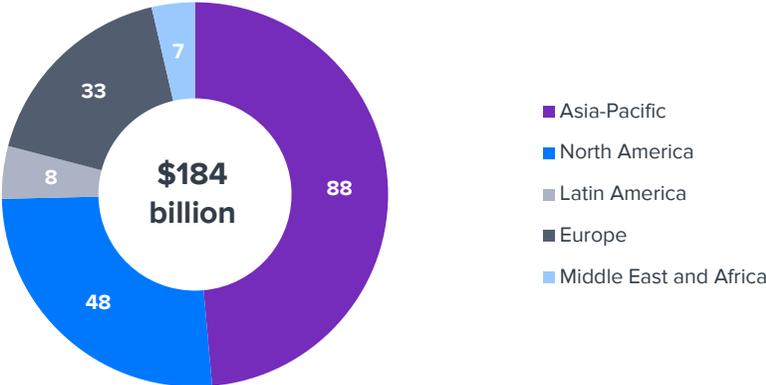
Games market by platform 2022



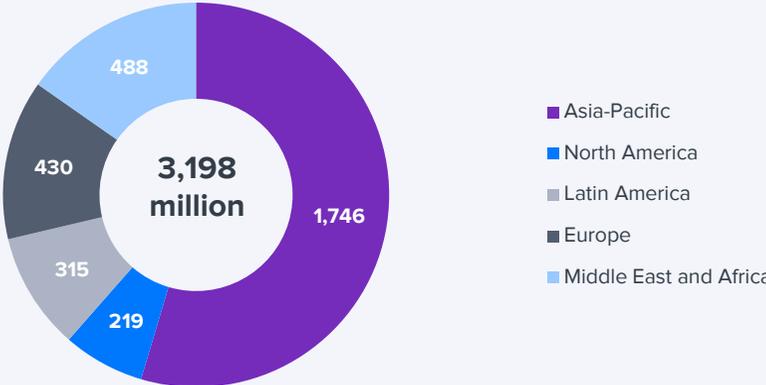
Games market development



Geographical breakdown of games market



Number of players (millions)



Source: Newzoo, Inderes

# Competition

## Nature of the competition in the gaming industry

Regardless of the market, game genre or platform, game companies ultimately compete for the time and money of consumers. Entertainment is the most important competitive edge of the sector.

Competition in the gaming industry is global and geographical factors play a minor role in the era of digital distribution. Competition is instead defined by the release platform, game genre, and production size. In Starbreeze's game category competition is, for example, very different than in mobile games. The entry barrier is clearly higher in AA/AAA games, there is only a handful of competitors globally, and production budgets are significantly larger.

Measured by revenue, Starbreeze is a relatively small player in the industry, but within its category it competes with some of the biggest companies in gaming. However, AA/AAA games are divided into their own sub-categories and game developers often focus on developing games in a particular genre based on their strengths (e.g. action, adventure, strategy, role play, driving games). Starbreeze specializes in cooperative first-person shooter games.

The competition for consumers' attention is fierce across the world and consumers pay attention to game reviews and discussions concerning the games on, e.g., social media. Especially for AAA games in the higher price range, players follow reviews and comments closely to assess the entertainment value and quality of the game before making a purchase decision. One of the biggest risks of Starbreeze's market is the quality of the

competition, not so much the quantity. Starbreeze must be able to produce very high-quality content that stands out from the bigger competitors in order to succeed in the competition.

## Starbreeze's competition

In the end Starbreeze competes for the end users' money and time. Here the competitors are other first person shooter games, completely alternative game categories, and, in the bigger picture, also other forms of entertainment apart from gaming.

There are just a few independent AA/AAA game studios like Starbreeze in the world as most have ended up being acquired. For example, Sony, Microsoft, and Embracer have been active on the acquisition front. Early 2022 saw the biggest acquisition in gaming history when Microsoft announced it would buy Activision Blizzard for USD 68.7 billion. The transaction is subject to approval of the competition authorities.

Out of the independent game studios, an ever-smaller group is formed by studios developing high production value first person shooter games like Starbreeze. New competitors are not easily born in this category due to the high entry barrier. For example, it is very difficult for a studio specialized in driving games to switch to FPS games, as developing them requires notably different technology and knowhow.

## Starbreeze's competitive advantages

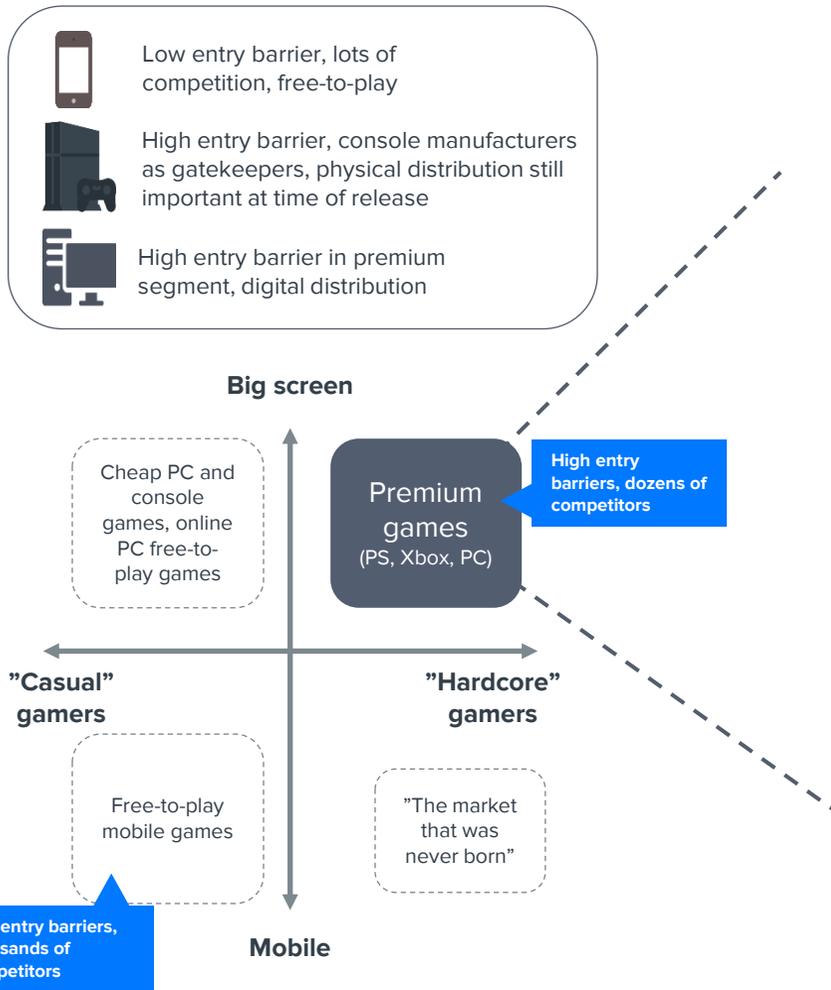
Starbreeze biggest win has been the successful implementation of the GaaS model on their popular video game PAYDAY 2. This has allowed Starbreeze

to enjoy a steady revenue stream for almost 10 years and will also act as a bridge leading into the release of PAYDAY 3. The company tried to replicate this success with *Overkill's The Walking Dead* game, but the game failed mostly due to a poor technical implementation and releasing the game before the development team had enough time to solve these challenges. In our view, Starbreeze's key competitive advantages are:

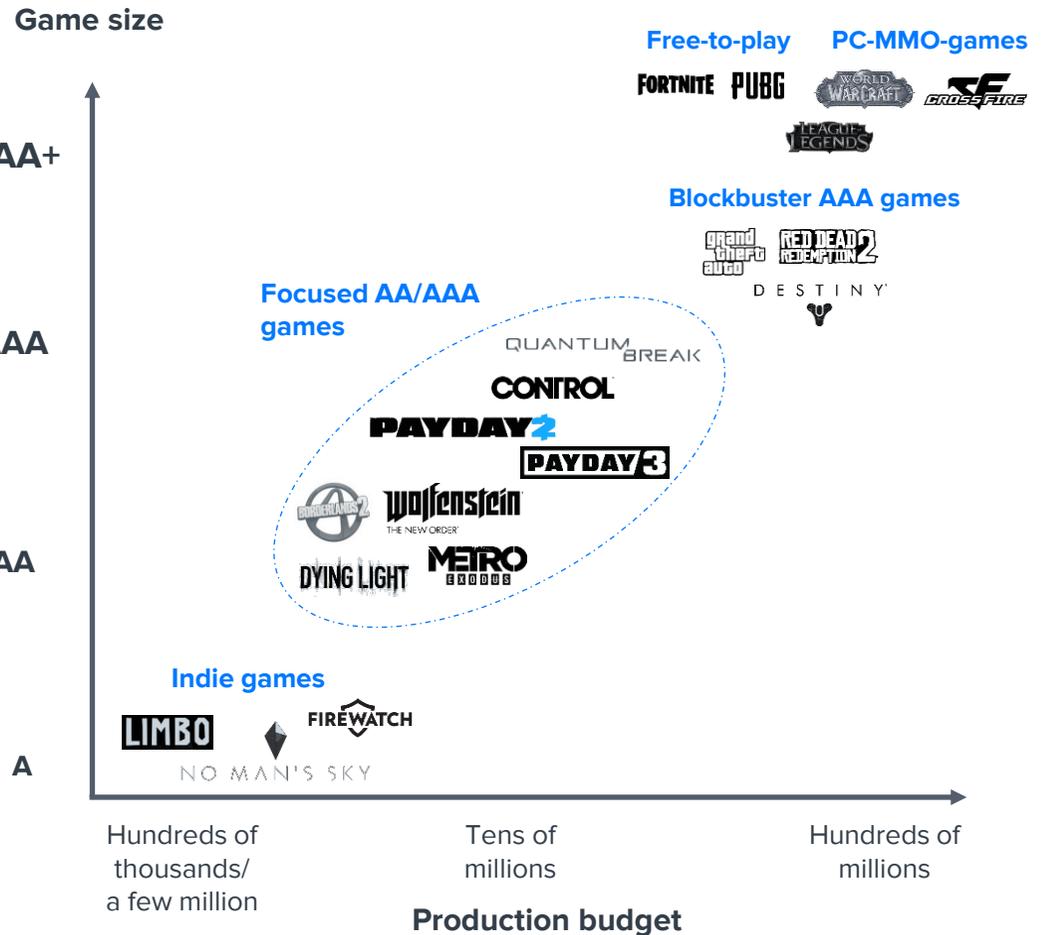
- Strong PAYDAY IP that has earned over USD 300 million
- Large and active player community with more than 38 million installed copies
- Starbreeze has shown the ability to develop a very well received and long-lasting game. The company has also shown that it can make the GaaS model work
- With the PAYDAY franchise Starbreeze has shown that they know how to make coop multiplayer games fun and engaging for players.

# Starbreeze's positioning on the market

## Game market segments



## Starbreeze's sub-segments



# Financial position 1/2

## Historical development

Starbreeze completed restructuring in December 2019. This means we have three years of financial statements of the new leaner company. During these three years, Starbreeze revenues have been quite stable with a slight increase from SEK 118 million in 2020 to SEK 128 million in 2022. The growth is due to an increase in the PD2 player base and partially also due to the strong dollar.

Starbreeze's operating profit measured as EBIT has been modest with the EBIT margin averaging 9% for all three years. A lower EBIT margin is to be expected as the company is staffed for developing a bigger game like PD3 while only enjoying the revenues of a 10-year-old game. As the majority of the game development costs are capitalized their impact on the company's profits is reflected through amortization. Consequently, if we look at EBITDA the margin has been quite a bit higher varying between 42% to 60%. Starbreeze's net profit during these three years have been heavily negative as the company has had large financial expenses. Net profit was SEK -130 million (2020), SEK -103 million (2021), and SEK -60 million (2022).

## Financial position

Per Q1'23 Starbreeze had total assets of SEK 770 million. The assets consist mostly of SEK 589 million of non-current intangible assets related to capitalized game development costs, IP/Technology, and Goodwill. An asset base consisting mainly of intangible asset is what we would expect of a games company like Starbreeze.

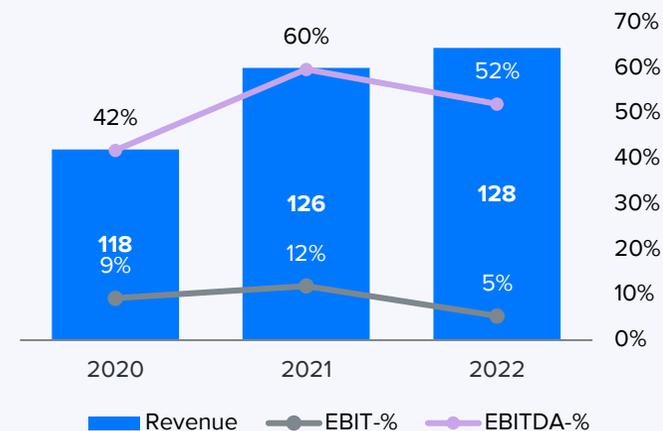
Other non-current assets are Financial assets of SEK 9 million and Property, plant, and equipment (PPE) of SEK 19 million. The financial assets consists of a joint venture with Acer called StarVR, which provides sales and marketing for StarVR's virtual reality headset *StarVR One*. Most of the PPE are Right-of-Use assets related to lease agreements for office space.

The company's current assets amount to SEK 153 million and consist largely of SEK 78 million of Cash and cash equivalents. The rest of the current assets consist of receivables, prepaid income, and accrued expenses.

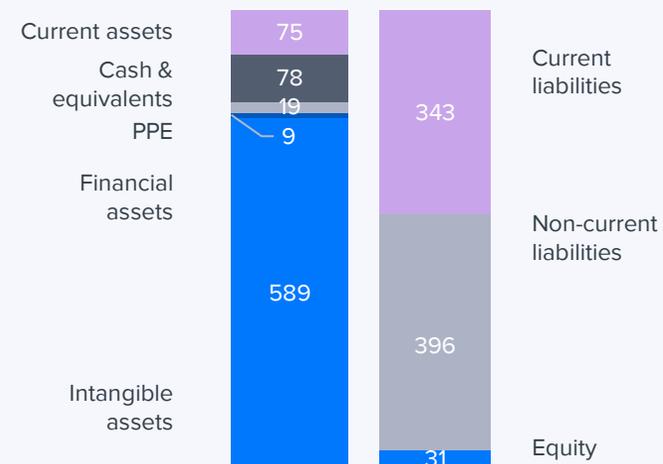
The other side of the balance sheet is split into SEK 31 million of equity and SEK 738 million in total liabilities. The non-current liabilities consist almost exclusively of a SEK 391 million convertible loan (including a SEK 165 million refinancing charge) to Digital Bros. The convertible loan to Digital Bros has an interest rate of 2% and matures in December 2024. Starbreeze has announced that SEK 150 million from the rights issue will be used to settle the refinancing charge owed to Digital Bros.

In addition, Digital Bros has undertaken to convert the outstanding loan into new B-shares after the completion of the rights issue. The current conversion price is SEK 1.63, but it will be revised down after the rights issue is completed. With the capital increase through the rights issue, repayment of the financing charge, and Digital Bros converting the loan to shares, Starbreeze's solvency will improve drastically from the current precarious position.

## Revenues and EBIT & EBITDA-%\*



## Total assets SEK 770 million (Q1'23)



Source: Inderes, Starbreeze

\*2021 EBIT & EBITDA figures adjusted for one-off effects related to PAYDAY mobile game

## Financial position 2/2

The current liabilities consists mainly of SEK 205 million in game financing from the PD3 co-publisher Plaion. As the co-publisher for *PAYDAY 3*, Plaion provides Starbreeze with financing to complete the development of the game. This financing is listed as a liability on Starbreeze's balance sheet. The liability doesn't carry interest and will be credited against future sales derived from *PAYDAY 3*. As crediting takes place through revenue distribution it does not affect cash flow. The amount is expected to increase as we near the release of *PAYDAY 3*.

The remaining current liabilities consist of payables, accrued expenses, deferred income, deferred tax liability, and current lease liabilities.

### Solvency

Per Q1'23 (before the rights issue) Starbreeze's solvency figures were weak with a net debt to EBITDA ratio of 4.8x and an equity ratio of 4.1%. With the proceeds from the rights issue and the conversion commitment from Digital Bros, Starbreeze

would end up with a net cash position as all interest-bearing debt (except for some small lease liabilities) would be paid off. If the issue is subscribed fully Starbreeze estimates that it would bring in SEK 267 million in cash. The rights issue would naturally also markedly improve the company's equity position. Based on our 2023 estimates Starbreeze's net debt to EBITDA would become negative as the company has a net cash position, while the equity ratio would increase to a solid 89%.

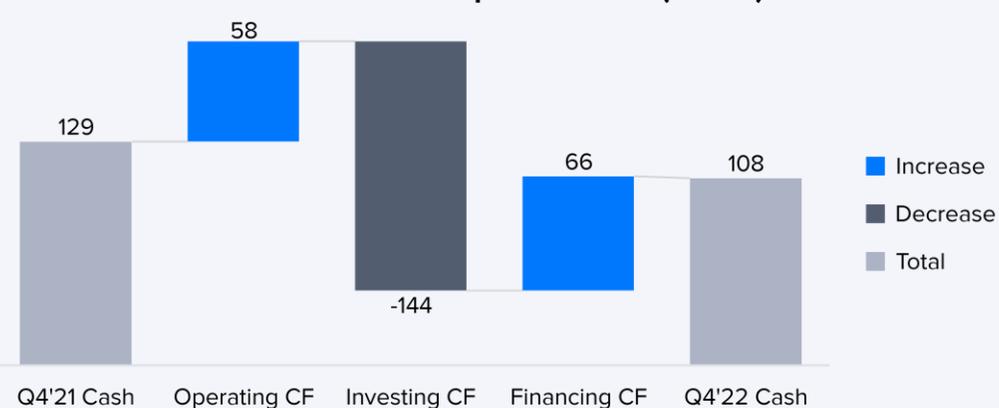
### Capital commitments

Starbreeze has invested significant sums into capital expenditure in the form of development costs for *PAYDAY 3* and for the DLC's for *PAYDAY 2*. These investments amounted to SEK 144 million in 2022, SEK 111 million in 2021, and SEK 95 million in 2020. Investing significant sums into new game development is part and parcel of the games industry. The players' attention spans are often rather short, forcing game companies to release new

content on a continuous basis. With that said, at this investment level, Starbreeze's FCF has been negative over the last three years and consequently the company had to take on a co-publisher to finish the development of *PAYDAY 3*. In 2022, Plaion provided Starbreeze with SEK 86 million in game financing.

Working capital is expected to be relatively low in relation to revenue going forward. Generally, when it comes to game developers, they rarely need to tie up a lot of cash in the form of receivables and accrued income.

Cashflow development 2022 (MSEK)



Free cash flow 2020 - 2022



# Estimates 1/3

## Basis for the estimates

In estimating Starbreeze’s revenues and profits, we must account for the variability in revenues, D&A, and capitalization of development costs. The revenues are highly dependent on the timing of game releases and their relative success. Over our estimation period, we expect Starbreeze to transform from a company with a single source of revenue to a company with multiple ones. Starting out the only source of revenue is *PAYDAY 2*, which is then followed by *PAYDAY 3* in H2 2023. The next revenue streams we expect to come online are the two new games Starbreeze will develop and release at the end of 2025/early 2026 and 2027/2028. To simplify our projections, we will assume that the two new games will start to generate revenues as of January 2026 and January 2028, respectively. We also assume that the rights issue will be subscribed fully, and that Digital Bros will convert their loan into shares.

When it comes to *PD2* revenues, we expect them to stay relatively flat until the release of *PD3*. After *PD3* is released, we expect the sales from *PD2* to decrease quite heavily as the player base shifts over to the new game. This is what we would expect to happen when a sequel is released, and this is also what happened to the original *PAYDAY* game when *PD2* was released.

To estimate revenues from *PD3*, we must identify the likely date of release, number of copies sold, royalty per copy, and the number of DLCs sold. We know that *PD3* will be released sometime in H2’2023. In our estimates, we assume that the game will be released during Q3’23. As for sales we make the assessment that *PD3* sales will follow the development of *PD2* sales, yet at a larger scale. Our

assumption that *PD3* sales will outperform *PD2* is mainly due to three factors. Firstly, *PD3*’s sales will benefit from *PD2*’s brand recognition and popularity. *PD2* has amassed a steam community consisting of over 8.6 million users. Starbreeze will attempt to leverage this large community into *PD3* sales. Secondly, *PD3* is launching simultaneously on both PC and console, which means the available customer base is bigger right from the get-go. Thirdly, in their Q1’23 report Starbreeze announced that *PD3* currently has more than one million members on Steam who have added the game to their wishlists. As of writing this *PD3* is ninth on Steam’s [Top Wishlists](#).

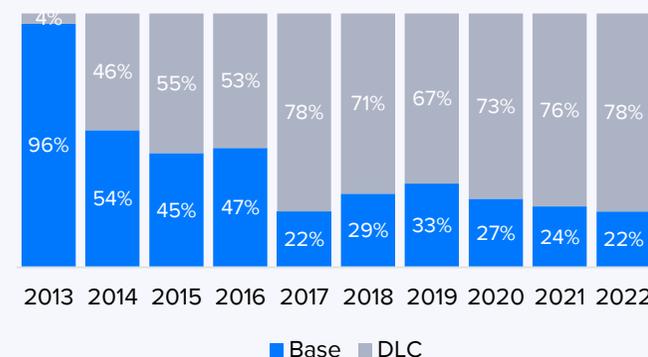
Based on these arguments we estimate *PD3* to sell about 4 million copies over the first 12 months (*PD2*: 2.5 million). We estimate that the game will be priced at USD 45 on release. Due to revenue sharing agreements, we assess that Starbreeze’s average royalty share of each copy sold is 29 %. Once Starbreeze has recouped its development and marketing costs, 505 Games will start to receive their 33% share of net revenues, which will decrease Starbreeze’s share for a while. Once 505 Games reach their USD 40 million cap Starbreeze’s royalty share will increase. See table on the right for our estimate of the post-recoup revenue schedule.

We estimate that initially almost all revenues are derived from selling the base game. As time goes on, however, we expect more and more of the *PD3*’s revenues to be derived from DLCs. To estimate the split between revenues from DLC ‘s and the base game we will rely on historical data regarding *PD2*’s sales (see graph on the right). Overall, revenues derived from *PD3* will be the largest close to the release date and decrease as time goes on.

## PAYDAY 3 revenue share schedule

Revenue share (post-recoups)	USD
Gross Price per copy	\$45.0
VAT (10%)	-\$4.5
Marketplace Fee (25%)	-\$11.3
<b>Net Price per copy</b>	<b>\$29.3</b>
Unreal Engine (2%)	-\$0.8
<b>Sum A</b>	<b>\$28.4</b>
Plaion (50%* Sum A)	-\$14.2
<b>Sum B</b>	<b>\$14.2</b>
505 Games (33%* Sum B)	-\$4.7
<b>Starbreeze Net Sales</b>	<b>\$9.5</b>
Starbreeze-% of Price per copy	21 %

## PAYDAY 2 - Base game vs DLC split



Source: Inderes, Starbreeze

# Estimates 2/3

## Estimates for 2023

For the first half of 2023, we expect revenues and profits to be roughly in line with 2022. As *PD3* will be released in Q3, Starbreeze's revenues will increase considerably in this quarter. We estimate that *PD3* will sell 1.8 million copies in Q3 and 1.1 million in Q4. According to our estimates, Starbreeze's revenue share from *PD3* sales will amount to SEK 320 million in 2023. In addition to *PD3* revenues, we estimate that *PD2* will generate revenues of SEK 85 million (a 30% decrease year-on-year). Starbreeze's revenues will also enjoy a one-off non-cash increase of approximately SEK 259 million that relates to the game financing provided by Plaion. As *PD3* is released and Plaion starts to receive royalties, these royalties will be credited against the game financing liability on Starbreeze's balance sheet. For both sides of the balance sheet to balance, a positive non-cash transaction must be booked on the income statement. According to Starbreeze, this non-cash income will be booked under revenues. Overall, we estimate that Starbreeze's 2023 full-year revenues will come in at SEK 669 million (424% increase over 2022).

When it comes to operating costs, we must keep in mind that the costs mainly consist of two things: wages, and depreciation & amortization. As we do not expect Starbreeze to hire significantly more employees during 2023, we estimate only a slight increase in wage-related costs. However, we estimate that D&A will increase by 112% to SEK 127 million. This is due to how amortization of capitalized game development costs are dealt with. When a game is released, the capitalized costs associated with the game will be amortized. It is a standard practice for game companies to quite aggressively

amortize the capitalized costs in the beginning of the game's lifespan. We estimate that Starbreeze will amortize 40% of the capitalized development costs associated with *PD3* during the first year and 40% during the next year. The remaining 20% will be amortized over a longer period. The large D&A costs in the first two years will naturally somewhat depress the accounting profits in 2023 and 2024.

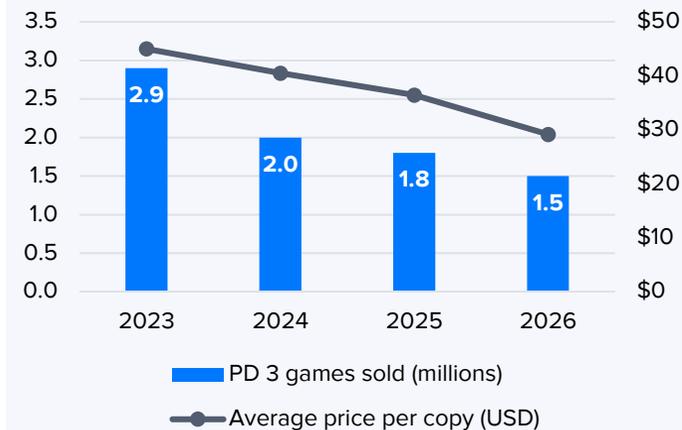
With our revenue and cost estimates, Starbreeze's EBIT for 2023 lands at SEK 455 million (68% margin). If we add back the D&A costs, we get an EBITDA of SEK 581 million (87% margin). After deducting financial expenses (49 MSEK) from EBIT, Starbreeze's net profit comes in at SEK 405 million. Thus, EPS would amount to SEK 0.26. Due to large historical losses, we do not expect Starbreeze to pay income taxes for several years.

When it comes to cash flow, we need to add back the non-cash expenses of depreciation & amortization and deduct the non-cash revenues related to the game financing. After these adjustments, operating cash flow comes in at SEK 362 million. We expect capex to remain inline Q1'23 and amount to SEK 171 million for the full year. For the first half of 2023, the development of *PD3* will be in full swing. Once the game is released a part of the development team will stay on to develop DLCs while the majority of the team will shift to work on the new game projects. As the next game is set to be released in 2025/2026 and will according to Starbreeze have a budget in line with *PD3*, we assess that investments need to stay at the same level. By deducting capex from the operating cash flow, we get a free cash flow estimate of SEK 187 million.

Revenue and EBIT-% development



PAYDAY 3 - number of copies sold and average price



Source: Inderes

# Estimates 3/3

## Estimates for 2024-2025

In 2024 and 2025, we expect *PD3* game sales to remain relatively strong. We project 2 million copies sold in 2024 and 1.8 million copies sold in 2025. Starting in 2024, we assume that the average price per game copy sold will decrease 10% in 2024 and 2025 as Starbreeze participates in seasonal discount events. During 2024 and 2025, we assume that Starbreeze will start to earn significant revenues from DLC's. We estimate that together the sales of the base game and DLCs of *PD3* will generate revenues of SEK 331 million and SEK 321 million for Starbreeze. *PD2*'s revenues will continue to decline coming in at SEK 34 million in 2024 and SEK 14 million in 2025. As for the new game that is set to be released in late 2025 or early 2026, we make the assumption that the game will start to generate revenues in January 2026.

We expect Starbreeze's total revenues for 2024 to decline compared to 2023 and to come in at SEK 370 million. EBIT for 2024 is still under pressure from the large amortizations related to *PD3* and comes in at SEK 140 million (38% margin). As we expect the convertible loan to be retired in Q2'23 financial expenses for 2024 are substantially lower at SEK 1 million. Net profit would therefore come in at SEK 139 million and EPS at SEK 0.09.

In 2025, we expect revenues to decline further as the sales of both *PD3* and *PD2* slow down. We estimate that the total revenues for 2025 are SEK 341 million. With the large amortizations of *PD3* now behind, Starbreeze's EBIT increases to SEK 183 million (54% margin). Net profits we estimate to increase to SEK 181 million. EPS would come in at SEK 0.12

## Long-term estimates

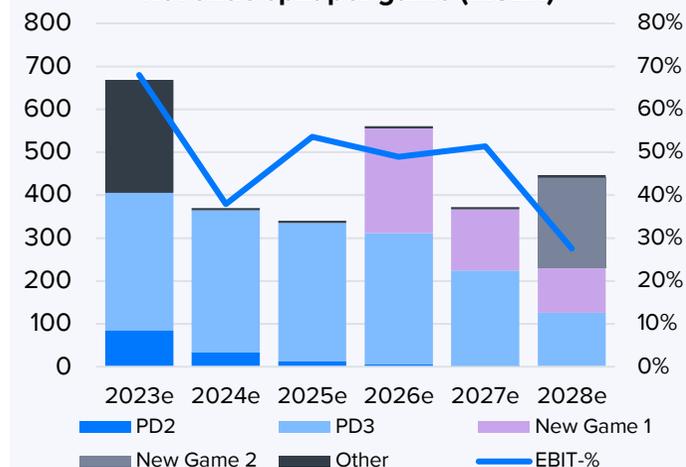
Beyond 2025 we expect *PD3* to generate decent but decreasing revenues to Starbreeze. In our estimates the two new games will start to generate revenues in 2026 and 2028. These games will provide a boost for revenue growth during these years with subsequent revenue declines in 2027 and 2029. As per our estimates, by 2029 Starbreeze will have three active games on the market, and we assess that the company has reached a sort of steady state. With this we mean that Starbreeze has multiple revenue sources while continuing to release games on an ongoing basis. Consequently, Starbreeze's revenues and profits would no longer be as volatile as previously but would rather grow at a more stable pace.

Between 2030-2031, we estimate new game/DLC releases to drive an average revenue growth of 17.0% until dropping to 2.5% in 2032, which is our terminal growth rate. Our revenue estimate for 2032 stands at around SEK 580 million. As for profitability, we expect EBIT to level out at a long-term margin of 32%. Over the long-term we estimate that Starbreeze investments into new game projects will increase steadily over the years reaching SEK 202 million in 2032. At this investment level Starbreeze would generate about SEK 132 million in free cash flow. We expect Starbreeze to re-invest any surplus free cash flow back into the business to further grow their development and publishing operations.

## Earnings per share



## Revenue split per game (MSEK)\*

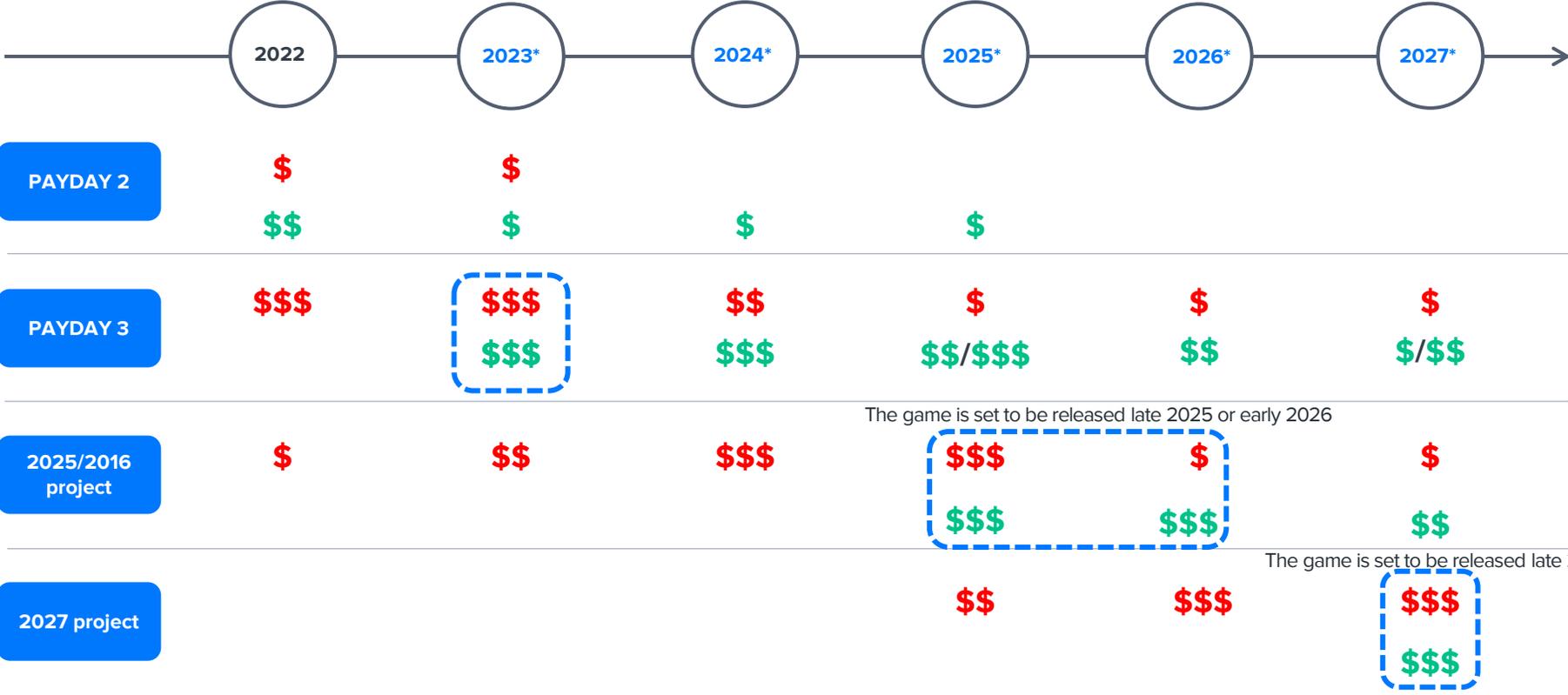


\*2023 Other, includes the non-cash game financing income  
Source: Inderes

# Timeline of game projects

Release year

\$ =low revenue      \$ =low development costs  
 \$\$ =medium revenue      \$\$ =medium development costs  
 \$\$\$ =considerable revenue      \$\$\$ =considerable development costs



Source: Inderes, \*Inderes' estimates

# Income statement

Income statement	2020	2021	Q1'22	Q2'22	Q3'22	Q4'22	2022	Q1'23	Q2'23e	Q3'23e	Q4'23e	2023e	2024e	2025e	2026e
Revenue	118	126	24	32	39	34	128	27	33	466	143	669	370	341	561
EBITDA	49	6	5	18	24	19	66	4	9	446	123	581	287	249	467
Depreciation	-38	-60	-14	-15	-15	-15	-60	-16	-15	-49	-48	-127	-147	-67	-192
EBIT (excl. NRI)	11	15	-10	3	9	4	7	-12	-6	397	75	455	140	183	275
EBIT	11	-54	-10	3	9	4	7	-12	-6	397	75	455	140	183	275
Share of profits in assoc. compan.	-2	0	0	0	0	0	0	0	0	0	0	-1	-1	-1	-1
Net financial items	-139	-52	-14	-14	-17	-17	-61	-13	-36	0	0	-49	-1	-1	-1
PTP	-130	-105	-24	-11	-7	-12	-54	-25	-42	397	75	405	139	181	273
Taxes	0	2	0	0	0	-4	-5	0	0	0	0	0	0	0	0
Minority interest	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Net earnings	-130	-103	-24	-11	-8	-17	-60	-25	-42	397	75	405	139	181	273
EPS (rep.)	-0.28	-0.14	-0.03	-0.02	-0.01	-0.02	-0.08	-0.03	-0.03	0.25	0.05	0.26	0.09	0.12	0.17
<b>Key figures</b>	<b>2020</b>	<b>2021</b>	<b>Q1'22</b>	<b>Q2'22</b>	<b>Q3'22</b>	<b>Q4'22</b>	<b>2022</b>	<b>Q1'23</b>	<b>Q2'23e</b>	<b>Q3'23e</b>	<b>Q4'23e</b>	<b>2023e</b>	<b>2024e</b>	<b>2025e</b>	<b>2026e</b>
Revenue growth-%	-57.9 %	6.5 %	-15.7 %	-0.8 %	11.4 %	8.3 %	1.5 %	13.3 %	4.8 %	1105.8 %	324.5 %	424.3 %	-44.7 %	-8.0 %	64.7 %
Adjusted EBIT growth-%		37.5 %	-222.0 %	163.2 %	82.3 %	579.7 %	-54.9 %	17.1 %	-265.0 %	4323.6 %	1632.4 %	6642.1 %	-69.1 %	30.0 %	50.4 %
EBITDA-%	41.7 %	5.0 %	19.4 %	57.0 %	63.0 %	57.4 %	52.0 %	15.2 %	27.0 %	95.6 %	85.8 %	86.9 %	77.6 %	73.2 %	83.2 %
Adjusted EBIT-%	9.2 %	11.9 %	-42.1 %	10.6 %	23.2 %	12.9 %	5.3 %	-43.5 %	-16.6 %	85.2 %	52.4 %	68.0 %	37.9 %	53.6 %	48.9 %
Net earnings-%	-110.4 %	-82.3 %	-102.1 %	-35.4 %	-20.1 %	-49.8 %	-46.9 %	-93.5 %	-125.1 %	85.1 %	52.3 %	60.5 %	37.5 %	53.2 %	48.6 %

Source: Inderes

# Balance sheet

Assets	2021	2022	2023e	2024e	2025e
<b>Non-current assets</b>	<b>499</b>	<b>586</b>	<b>631</b>	<b>657</b>	<b>764</b>
Goodwill	42	48	48	48	48
Intangible assets	405	506	560	591	699
Tangible assets	36	23	14	10	9
Associated companies	1	1	1	1	1
Other investments	0	0	0	0	0
Other non-current assets	9	7	7	7	7
Deferred tax assets	4	0	0	0	0
<b>Current assets</b>	<b>176</b>	<b>160</b>	<b>633</b>	<b>743</b>	<b>819</b>
Inventories	0	0	0	0	0
Other current assets	2	0	0	0	0
Receivables	45	52	100	78	82
Cash and equivalents	129	108	533	665	736
<b>Balance sheet total</b>	<b>674</b>	<b>746</b>	<b>1,264</b>	<b>1,400</b>	<b>1,583</b>

Source: Inderes

Liabilities & equity	2021	2022	2023e	2024e	2025e
<b>Equity</b>	<b>123</b>	<b>57</b>	<b>1,129</b>	<b>1,268</b>	<b>1,449</b>
Share capital	14	14	31	31	31
Retained earnings	-1,890	-1,950	-1,545	-1,406	-1,225
Hybrid bonds	0	0	0	0	0
Revaluation reserve	19	13	13	13	13
Other equity	1,979	1,979	2,630	2,630	2,630
Minorities	0	0	0	0	0
<b>Non-current liabilities</b>	<b>443</b>	<b>386</b>	<b>3</b>	<b>3</b>	<b>3</b>
Deferred tax liabilities	0	1	1	1	1
Provisions	0	0	0	0	0
Long term debt	422	380	0	0	0
Convertibles	0	0	0	0	0
Other long term liabilities	21	5	2	2	2
<b>Current liabilities</b>	<b>109</b>	<b>303</b>	<b>132</b>	<b>129</b>	<b>131</b>
Short term debt	0	0	0	0	0
Payables	91	108	114	111	112
Other current liabilities	18	195	18	18	18
<b>Balance sheet total</b>	<b>674</b>	<b>746</b>	<b>1,264</b>	<b>1,400</b>	<b>1,583</b>

# Valuation and recommendation 1/5

## Investment view and recommendation

At the current valuation it is clear that Starbreeze's value is heavily based on the anticipated success of *PAYDAY 3*. This is supported by the company's steep 2022 multiples, the P/E ratio is negative, EV/EBIT is over 100, and EV/sales is 11.7x. Hence in the short-term Starbreeze's share price will correlate with the success of *PAYDAY 3*. The release of *PD3* will most likely be an inflection point for the share with upwards pressure if the game is a success and downwards pressure if it fails to meet expectations.

This means that the short-term valuation is to a large degree is reliant on estimating the success/failure of the game itself, which is hard to do. A commercial failure of *PD3* is a possibility, which can't be ruled out and must be factored in when considering Starbreeze as an investment opportunity. However, there are a couple of risk mitigating factors when it comes to *PAYDAY 3*. First and foremost, *PD3* is a sequel to the popular *PD2* game. A sequel to a successful game is naturally an easier sell, as players are familiar with the product and know what to expect. Another pitfall to avoid is a rushed development that leads to the game being plagued by technical issues at launch. Starbreeze only really having the *PAYDAY* franchise has enabled them to be laser focused on nurturing the *PD3* development. The game has been under development for several years and at least so far there has not been any news/rumors regarding development issues. *PD3* is also being developed on the proven and reliable third-party game engine, *Unreal Engine*, which should help to mitigate the risk of technical issues.

After the launch of *PD3*, we must turn our attention

beyond 2023-2024 and assess Starbreeze's potential in generating revenue growth from other game projects. The goal is to mature into a multi-project business model that provides multiple streams of revenues, which would act to lower the risk profile of the company. The key here is to build upon the potential success of *PD3* and to reinvest profits into the new game projects. Naturally, these games also need to succeed. The current low visibility into these future projects combined with the lack of a track record in operating a multi-project model creates uncertainty around any and all long-term projections regarding Starbreeze's financials.

Based on our assessment and valuation of the company, we initiate our coverage with an accumulate recommendation and a target price of SEK 1.15. Our target price corresponds to the fair value estimate of our DCF model of SEK 1.16. Compared to the current share price our fair value estimate is about 13% higher. Our estimates assume that the next three games released by Starbreeze will be commercially successful. With these estimates we arrive at a valuation somewhat higher than the current market valuation. It can therefore be reasoned that the current valuation already is pricing in a positive scenario. Any deviation to the downside from this scenario would naturally lead to a lower fair value estimate. However, at the current valuation we assess that the risk to reward ratio is modestly adequate. We do concede that any game release has a broad range of outcomes, and a situation may arise where *PD3* strongly outperforms or underperforms our estimates, and this would naturally increase/decrease Starbreeze's fair value.

Valuation	2023e	2024e	2025e
Share price	1.03	1.03	1.03
Number of shares, million:	1,570	1,570	1,570
Market cap	1,621	1,621	1,621
EV	1,095	963	892
P/E (adj.)	3.8	11.7	8.9
P/E	4.0	11.7	8.9
P/FCF	8.7	12.1	22.4
P/B	1.4	1.3	1.1
P/S	2.4	4.4	4.8
EV/Sales	1.6	2.6	2.6
EV/EBITDA	1.9	3.4	3.6
EV/EBIT (adj.)	2.4	6.9	4.9

Source: Inderes

# Valuation and recommendation 2/5

## Valuing Starbreeze

Valuing a company in Starbreeze's situation presents some challenges. In the coming years Starbreeze will exhibit fluctuating revenues, earnings, and cash flows. This makes the use of conventional valuation methods challenging as they are best suited for stable estimates of revenues and earnings.

Of the valuation methods, the discounted cashflow (DCF) model is perhaps the one least impacted by fluctuating financials as it aggregates the results. In addition, the DCF model focuses on free cash flow, which we believe is important when it comes to valuing Starbreeze. The model also challenges us to look beyond *PAYDAY 3* in estimating Starbreeze's revenues and earnings generation capacity. Therefore, we will rely primarily on the DCF model in valuing Starbreeze, while also looking for support from the valuation multiples of Starbreeze and its peers.

## Discounted cash flow model

Our DCF model indicates an equity value of SEK 1,826 million or SEK 1.16 per share, which is 13% above the current share price. For the terminal period we have used an EBIT margin of 32% and a revenue growth rate of 2.5%.

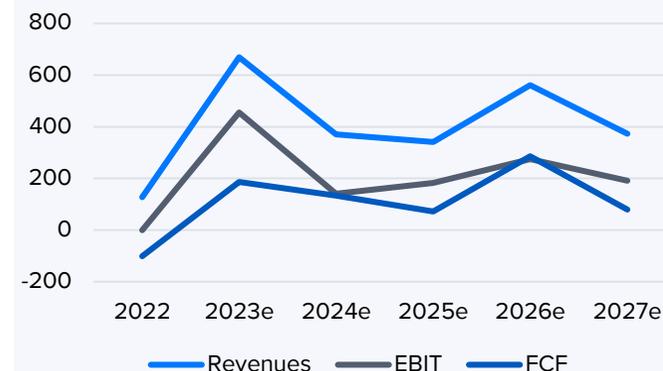
The model uses a cost of capital (WACC) of 11.0%. Given the inherent unpredictability in game releases and the low visibility of growth beyond *PAYDAY 3*, we believe that a required return rate of 11.0% is well justified. Future cash flows are sensitive to changes in WACC and the indicated value by our DCF model fluctuates in line with this (see chart on the right).

As our Starbreeze estimates are heavily dependent on projections of *PAYDAY 3* sales and the sales of future game projects, there is quite a bit of inherent uncertainty in these estimates. Therefore, to support our valuation we have conducted a DCF valuation for the following three scenarios: baseline case, downside case, and upside case.

The **baseline case scenario** is the one detailed in earlier sections of this report. From an equity story perspective, the baseline case rests on the assumption that *PAYDAY 3* is a commercial success and outsells PD2 in the early years (4.9 million total units in 2023 & 2024). The game then continues to provide a stable, but diminishing revenue stream as time passes. We also assume that the next two games are released on schedule (2025/2026, 2027/2028) and are commercially successful. After this, we assume that with three revenue generating games Starbreeze has reached a steady state where their revenues and earnings won't fluctuate as much, but rather grow at a more stable pace.

The **downside case** is one where we assume that *PAYDAY 3* performs below expectations (2.5 million copies in 2023 & 2024). The game generates enough revenues to warrant continued development of add-on content, while the company sets their eyes on the 2025/2026 and 2027 game project. We assume that the 2025/2026 and 2027 games are modest successes providing a bump in revenue in the year of their release. Overall, Starbreeze's revenues and EBIT would be significantly lower over the next ten years.

Revenue, EBIT & FCF development (Base case)



DCF value sensitivity



# Valuation and recommendation 3/5

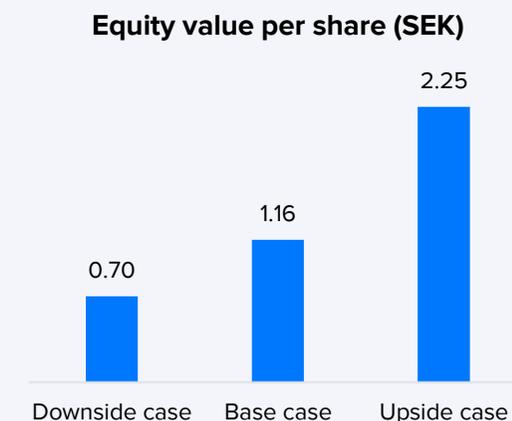
In this scenario, the per share equity value of the company falls to SEK 0.70.

This scenario demonstrates the downside risk associated with any investment into Starbreeze at the current market valuation. One also must consider the capital needs Starbreeze will have in this scenario as *PD3* will not generate enough cash to finance the new games and would likely have to bring on an external publisher. This scenario helps to demonstrate the expectations placed on Starbreeze at the current market valuation as even a scenario between this and the baseline case would fall short of the current market price.

The **upside case** is mostly in line with the baseline case, but just enhanced. We assume that *PD3* sells

even more copies especially in the beginning (8 million units in 2023-2024) and so do the two next games. We also assume that the long-term EBIT margin is 35% instead of the 32% in the baseline case. With these assumptions, we get a share price of SEK 2.25, which would be an upside of 110%. This scenario first and foremost highlights the potential of *PAYDAY 3* if it exceeds our baseline estimates of games/DLCs sold.

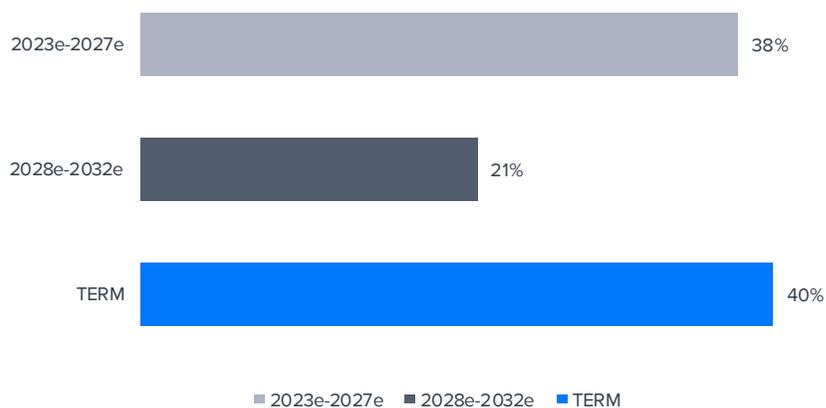
Baseline case	2023e	2024e	2025e	2026e	2027e	2028e	2029e	2030e	2031e	2032e	Term
Revenues	669	370	341	561	372	447	412	486	564	578	2.5 %
EBIT	455	140	183	275	191	123	129	156	180	185	
EBIT-%	68 %	38 %	54 %	49 %	51 %	28 %	31 %	32 %	32 %	32 %	32 %
Downside case	2023e	2024e	2025e	2026e	2027e	2028e	2029e	2030e	2031e	2032e	Term
Revenues	588	238	198	297	220	312	264	303	343	350	2.0 %
EBIT	378	34	71	69	86	71	66	79	96	98	
EBIT-%	64 %	14 %	36 %	23 %	39 %	23 %	25 %	26 %	28 %	28 %	28 %
Upside case	2023e	2024e	2025e	2026e	2027e	2028e	2029e	2030e	2031e	2032e	Term
Revenues	960	657	552	744	527	735	660	779	920	943	2.5 %
EBIT	743	422	389	456	340	410	231	273	322	330	
EBIT-%	77 %	64 %	70 %	61 %	65 %	56 %	35 %	35 %	35 %	35 %	35 %



# DCF calculation

DCF model	2022	2023e	2024e	2025e	2026e	2027e	2028e	2029e	2030e	2031e	2032e	TERM
Revenue growth-%	1.5 %	424.3 %	-44.7 %	-8.0 %	64.7 %	-33.6 %	19.9 %	-7.7 %	18.0 %	16.0 %	2.5 %	2.5 %
EBIT-%	5.3 %	68.0 %	37.9 %	53.6 %	48.9 %	51.4 %	27.6 %	31.4 %	32.0 %	32.0 %	32.0 %	32.0 %
<b>EBIT (operating profit)</b>	<b>7</b>	<b>455</b>	<b>140</b>	<b>183</b>	<b>275</b>	<b>191</b>	<b>123</b>	<b>129</b>	<b>156</b>	<b>180</b>	<b>185</b>	
+ Depreciation	60	127	147	67	192	75	224	198	195	194	195	
- Paid taxes	0	0	0	0	0	0	0	0	-32	-37	-38	
- Tax, financial expenses	6	0	0	0	0	0	0	0	0	0	0	
+ Tax, financial income	0	0	0	0	0	0	0	0	0	0	0	
- Change in working capital	-8	-219	20	-3	-5	-6	-7	-7	-7	-8	-8	
<b>Operating cash flow</b>	<b>65</b>	<b>362</b>	<b>307</b>	<b>246</b>	<b>462</b>	<b>260</b>	<b>340</b>	<b>320</b>	<b>311</b>	<b>330</b>	<b>334</b>	
+ Change in other long-term liabilities	-16	-4	0	0	0	0	0	0	0	0	0	
- Gross CAPEX	-151	-171	-173	-173	-177	-180	-183	-188	-193	-197	-202	
<b>Free operating cash flow</b>	<b>-102</b>	<b>187</b>	<b>134</b>	<b>72</b>	<b>286</b>	<b>80</b>	<b>157</b>	<b>132</b>	<b>119</b>	<b>133</b>	<b>132</b>	
+/- Other*	0	665	0	0	0	0	0	0	0	0	0	
FCFF	-102	852	134	72	286	80	157	132	119	133	132	0
<b>Discounted FCFF</b>		<b>800</b>	<b>113</b>	<b>55</b>	<b>196</b>	<b>49</b>	<b>87</b>	<b>66</b>	<b>54</b>	<b>54</b>	<b>48</b>	<b>581</b>
Sum of FCFF present value		2,105	1,305	1,192	1,137	940	891	804	737	684	630	581
<b>Enterprise value DCF</b>		<b>2,105</b>										
- Interest bearing debt		-380										
+ Cash and cash equivalents		108										
-Minorities		0										
-Dividend/capital return		0										
<b>Equity value DCF</b>		<b>1,826</b>										
<b>Equity value DCF per share</b>		<b>1.16</b>										

## Cash flow distribution



WACC	
Tax-% (WACC)	20.6 %
Target debt ratio (D/(D+E))	0.0 %
Cost of debt	8.0 %
Equity Beta	1.50
Market risk premium	4.75 %
Liquidity premium	1.40 %
Risk free interest rate	2.5 %
<b>Cost of equity</b>	<b>11.0 %</b>
<b>Weighted average cost of capital (WACC)</b>	<b>11.0 %</b>

Source: Inderes

\*Other for 2023 is the MSEK 450 from the rights issue + MSEK 215 to compensate for the increase in shares from the convertible loan being converted into shares

# Valuation and recommendation 4/5

## Multiple-based valuation suffers from fluctuating financials

Fluctuating revenues and earnings naturally lead to fluctuating multiples, as can be seen in the graphs on the right. In the near-term, Starbreeze also has a couple of larger non-cash charges such as D&A and the game financing liability, which make the underlying financial figures messy. For 2023, the earnings-based multiples are very low as Starbreeze is set to release a significant game relative to the company's size (P/E 3.8x, EV/EBIT 2.4x). These multiples naturally seem extremely attractive, but one must keep in mind that 2023 will likely be the best year Starbreeze will have in a while. In addition, earnings in 2023 will be amplified due to the game financing liability (non-cash) being credited in the revenues. Free cash flow meanwhile will be lower than the earnings as cash flow is adjusted for the game financing liability and due to an increase in receivables (increase in working capital). Therefore, the P/FCF multiple will be higher at 8.7x.

In 2024, we see that all three multiples increase as revenues from *PAYDAY 3* decrease. The earnings-based multiples are also burdened by high amortization related to *PAYDAY 3* in 2024. Consequently, the earnings-based multiples would increase to P/E 11.7x and EV/EBIT 6.9x. Free cash flow will meanwhile be burdened by the relatively high level of investment and consequently P/FCF increases to 12.1x. Going forward this oscillation of multiples will continue as Starbreeze releases a new game every couple of years. Due to this fluctuation, it is hard to draw firm conclusions of Starbreeze's value based on the near-term

multiples as it depends on what year and what multiple we choose to look at. Simply put, the P/E ratio of 3.8x in 2023 looks very cheap while the 11.7x ratio for 2024 is more modest. And we would argue that neither years gives a great insight into the long-term normalized earnings capacity of the company.

If we look further out to 2028-2032 where we estimate that Starbreeze has reached a steady state and that earnings have normalized, we estimate that EBIT will average roughly SEK 160 million. This would translate to a quite low EV/EBIT multiple of 6.8x on the 2023 EV.

All in all, due to the near-term financials fluctuating so much and the forecast error associated with long-term projections it is our opinion that one should perhaps not focus too much on multiples when it comes to Starbreeze.

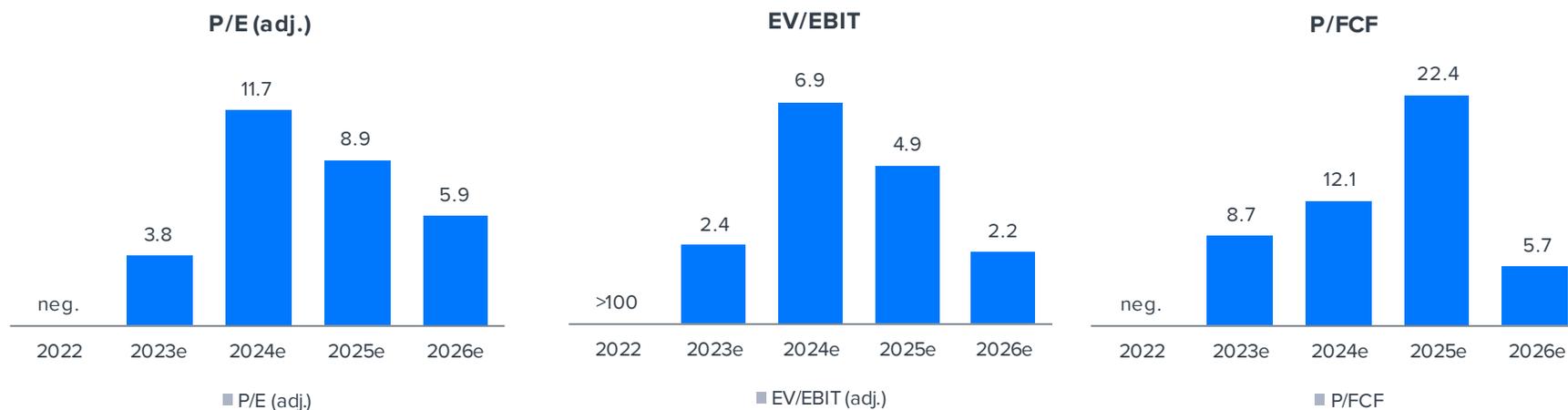
In this chapter, we have highlighted the three multiples we believe are the most relevant to Starbreeze: EV/EBIT, P/E, and P/FCF. We prefer EBIT over EBITDA because in the former the development costs are reflected as an amortization charge, while in the latter development costs are ignored. However, EBIT comes with its own issues as amortization of development costs will fluctuates between years. The same problem impacts the net earnings figure. Meanwhile, the free cash flow is adjusted for the non-cash effects of D&A and the game financing liability, and therefore we believe it gives a "truer" picture of the company's cash/earnings capacity. FCF's drawback is its tendency to fluctuated with capex and working capital changes.



# Valuation table

Valuation	2018	2019	2020	2021	2022	2023e	2024e	2025e	2026e
Share price	0.57	1.30	1.09	1.00	1.69	1.03	1.03	1.03	1.03
Number of shares, millions	318	328	470	725	725	1,570	1,570	1,570	1,570
Market cap	182	427	512	726	1,225	1,621	1,621	1,621	1,621
EV	128	465	647	1,019	1,496	1,095	963	892	608
P/E (adj.)	neg.	neg.	neg.	neg.	neg.	3.8	11.7	8.9	5.9
P/E	neg.	neg.	neg.	neg.	neg.	4.0	11.7	8.9	5.9
P/FCF	neg.	neg.	neg.	neg.	neg.	8.7	12.1	22.4	5.7
P/B	0.5	69.3	2.2	5.9	21.6	1.4	1.3	1.1	0.9
P/S	0.5	1.5	4.3	5.8	9.6	2.4	4.4	4.8	2.9
EV/Sales	0.4	1.7	5.5	8.1	11.7	1.6	2.6	2.6	1.1
EV/EBITDA	neg.	neg.	13.1	>100	22.5	1.9	3.4	3.6	1.3
EV/EBIT (adj.)	neg.	neg.	59.5	68.2	>100	2.4	6.9	4.9	2.2

Source: Inderes



# Valuation and recommendation 5/5

## Comparable valuation

We have assembled a peer group of games companies that focus primarily on PC and console games. We have both large and small European and North American companies. All but one of the peers are larger in size than Starbreeze and in general have more diversified revenue streams, which lowers their risk level and justifies a valuation discount for Starbreeze.

For 2023-2024, the peer group's median multiples are as follows:

- EV/S: 5x-4.5x
- EV/EBIT: 16x-13x
- P/E: 17x-17x

During the past year, we have seen a correction in gaming companies' valuations as the pandemic-fueled growth has normalized. With this correction, we now think the overall sector's valuation is at a

reasonable level.

If we again look further out in the future to our average EBIT estimate of SEK 160 million in 2028-2032 and apply EV/EBIT multiple in line with the peer group median, we get an equity value per share between SEK 1.8 to 2.3 (see table below). Assuming a net cash position of SEK 750 million and a 5-year holding period, the annualized return would range from 11–17%. All three of the returns are at or above our cost of capital of 11%. We would, however, argue that an appropriate multiple for Starbreeze is closer to 10x than to 20x.

Valuation range	Low	Medium	High
EBIT avg. 2028-2032	160	160	160
Multiple	13	16	18
<b>Enterprise value</b>	<b>2,080</b>	<b>2,560</b>	<b>2,880</b>
Net cash	750	750	750
<b>Equity value</b>	<b>2,830</b>	<b>3,310</b>	<b>3,630</b>
Per share (SEK)	1.8	2.1	2.3
Return	71 %	100 %	120 %
Annualized return (5-years)	11 %	15 %	17 %

# Peer group valuation

Peer group valuation	EV	EV/EBIT		EV/EBITDA		EV/S		P/E		Dividend yield-%		P/B
Company	MEUR	2023e	2024e	2023e	2024e	2023e	2024e	2023e	2024e	2023e	2024e	2023e
Remedy	286		60.3		27.3	8.2	5.0			0.4	0.6	4.5
Embracer	3,805	7.8	6.2	4.9	3.7	1.2	1.1	6.1	6.1			0.5
CD Projekt	2,455	29.4	45.3	20.8	28.6	10.8	13.5	33.2	48.7	1.0	0.7	5.1
Paradox Interactive	2,195	25.3	22.4	15.0	13.0	10.6	9.5	33.0	29.2	0.8	0.8	9.0
Tinybuild	87	4.4	4.0	3.5	3.2	1.3	1.2	7.0	6.5			
Enad Global 7	193	5.5	5.9	4.0	4.2	1.0	1.0	8.7	9.0			0.6
11 Bit Studios	316	20.9	7.8	8.9	6.3	6.2	4.6	11.4	8.7			6.1
Playway	552	10.8	10.6	10.8	10.6	7.3	6.9	15.0	14.8	3.7	4.7	4.9
Activision Blizzard	49,398	15.2	13.9	14.8	13.4	5.5	5.4	19.8	18.4	0.6	0.7	2.8
Electronic Arts	31,472	16.4	14.9	14.2	13.5	4.7	4.4	21.0	18.6	0.5	0.6	4.7
Take-Two Interactive	23,624	30.9	30.6	27.5	28.4	4.8	4.5	39.2	41.3			2.4
Ubisoft	4,137		12.1	5.0	4.6	2.1	1.9		16.9			1.9
<b>Starbreeze (Inderes)</b>	<b>105</b>	<b>2.4</b>	<b>6.9</b>	<b>1.9</b>	<b>3.4</b>	<b>1.6</b>	<b>2.6</b>	<b>3.8</b>	<b>11.7</b>	<b>0.0</b>	<b>0.0</b>	<b>1.4</b>
<b>Average</b>		<b>16.7</b>	<b>19.5</b>	<b>11.7</b>	<b>13.1</b>	<b>5.3</b>	<b>4.9</b>	<b>19.4</b>	<b>19.8</b>	<b>1.2</b>	<b>1.4</b>	<b>3.9</b>
<b>Median</b>		<b>15.8</b>	<b>13.0</b>	<b>10.8</b>	<b>11.8</b>	<b>5.2</b>	<b>4.6</b>	<b>17.4</b>	<b>16.9</b>	<b>0.7</b>	<b>0.7</b>	<b>4.5</b>
<b>Diff-% to median</b>		<b>-85 %</b>	<b>-47 %</b>	<b>-83 %</b>	<b>-72 %</b>	<b>-68 %</b>	<b>-43 %</b>	<b>-78 %</b>	<b>-31 %</b>	<b>-100 %</b>	<b>-100 %</b>	<b>-68 %</b>

Source: Refinitiv / Inderes

# Summary

Income statement	2020	2021	2022	2023e	2024e	Per share data	2020	2021	2022	2023e	2024e
Revenue	118	126	128	669	370	EPS (reported)	-0.28	-0.14	-0.08	0.26	0.09
EBITDA	49	6	66	581	287	EPS (adj.)	-0.28	-0.05	-0.08	0.27	0.09
EBIT	11	-54	7	455	140	OCF / share	-0.05	0.12	0.09	0.23	0.20
PTP	-130	-105	-54	405	139	FCF / share	-0.28	-0.06	-0.14	0.12	0.09
Net Income	-130	-103	-60	405	139	Book value / share	0.49	0.17	0.08	0.72	0.81
Extraordinary items	0	-69	0	0	0	Dividend / share	0.00	0.00	0.00	0.00	0.00
Balance sheet	2020	2021	2022	2023e	2024e	Growth and profitability	2020	2021	2022	2023e	2024e
Balance sheet total	709	674	746	1,264	1,400	Revenue growth-%	-58 %	7 %	2 %	424 %	-45 %
Equity capital	228	123	57	1,129	1,268	EBITDA growth-%	-141 %	-87 %	959 %	776 %	-51 %
Goodwill	39	42	48	48	48	EBIT (adj.) growth-%	-102 %	37 %	-55 %	6642 %	-69 %
Net debt	135	293	271	-533	-665	EPS (adj.) growth-%	-77 %	-83 %	72 %	-430 %	-68 %
Cash flow	2020	2021	2022	2023e	2024e	EBITDA-%	41.7 %	5.0 %	52.0 %	86.9 %	77.6 %
EBITDA	49	6	66	581	287	EBIT (adj.)-%	9.2 %	11.9 %	5.3 %	68.0 %	37.9 %
Change in working capital	-72	13	-8	-219	20	EBIT-%	9.2 %	-42.7 %	5.3 %	68.0 %	37.9 %
Operating cash flow	-23	87	65	362	307	ROE-%	-111.0 %	-58.9 %	-66.6 %	68.3 %	11.6 %
CAPEX	-89	-112	-151	-171	-173	ROI-%	2.7 %	-10.1 %	1.4 %	58.0 %	11.7 %
Free cash flow	-130	-42	-102	187	134	Equity ratio	32.2 %	18.2 %	7.6 %	89.3 %	90.6 %
						Gearing	59.2 %	238.7 %	478.0 %	-47.2 %	-52.5 %
Valuation multiples	2020	2021	2022	2023e	2024e						
EV/S	5.5	8.1	11.7	1.6	2.6						
EV/EBITDA (adj.)	13.1	>100	22.5	1.9	3.4						
EV/EBIT (adj.)	59.5	68.2	>100	2.4	6.9						
P/E (adj.)	neg.	neg.	neg.	3.8	11.7						
P/B	2.2	5.9	21.6	1.4	1.3						
Dividend-%	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %						

Source: Inderes

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## Recommendation history (>12 mo)

Date	Recommendation	Target price	Share price
30.05.2023	Accumulate	1.15 SEK	1.03 SEK



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