



**Stockholm
Gaming Investor Guide
2022**

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Stockholm: A game development leader

The greater Stockholm region is considered one of the foremost European regions for game development, with everything from leading AAA development to mobile games and indie developers present in the city.

This paper is formulated as an extension and follow-up to the Investor's guide: How to invest with confidence published in 2021. It is aimed at investors with basic knowledge of the gaming industry who are eager to explore ways to get involved as an investor.

The goal is to present how Stockholm's landscape for games investment is constructed and detail the institutions and initiatives that exist to bolster this fast-growing industry. The paper's purpose is to empower and inspire investors to explore different investment options and to be able to make well-informed decisions on which investment opportunities are right for them.



The global gaming industry in 2022

After a year of unprecedented growth in revenue, earnings and user activity, the gaming industry would not sustain its YoY growth trajectory in 2021. However, considering 2020 as the outlier it was, the industry is still on an CAGR trajectory of 10% through 2019-2021 in global game revenue (\$175.8Bn for 2021)¹.

The lockdowns of 2020 influenced all ways of living, working, and socializing. In 2021 it became apparent that the adoption of remote working might have been more difficult than first expected in many segments. This had a negative influence on the productivity of game developers, and a rising number of high-profile game releases were postponed from second half of 2021 into first half of 2022.

As a result, numerous companies had to adjust their earnings forecasts, contributing to the weak share price development of listed companies in the gaming industry. For example, the Embracer Group cut their outlook on the pipeline of finished games for FY 2021/2022 by around 50% in conjunction with their quarterly report in November, but raised their earnings forecast for FY 2022/2023 and onwards. Though 2022 is looking like a significantly busier year for almost all major gaming companies and potentially one of the biggest years for major AAA titles in over a decade, a similar jargon was present throughout the industry ahead of 2021. With the pandemic a part of life for two years now however, companies should be more adapted to new working environments and hence statements about their pipeline can now be expected to be more precise.

From a macroeconomic perspective, lockdowns have had a negative impact on global supply chains and production, resulting in chip shortages and other obstacles for producers to meet the demand for gaming hardware such as consoles, computers, and gaming peripherals. Corsair Gaming and Fractal are two examples of hardware manufacturers that suffered and as a result, delivered weak quarterly reports and pushed forecasted earnings deeper into 2022. In general companies have a positive outlook for 2022 however, predicting a brighter future for component supply and shipping costs in 2022.

As lockdowns eased during 2021 consumers went back to more normal working and socializing routines. This shift in behavior cooled off the glowing hot gaming market, likely temporarily, as consumers adopted a pre-pandemic approach towards gaming. The boost in overall consumer activity and spending following 2020 however is believed to have sustained effects going forward, and the role of gaming is thought to have changed forever. The lessened stigma around games and gamers did not start in 2020 but that change accelerated, and the acceptance of gaming as a more mainstream source of entertainment has increased rapidly. Gaming is now seen as a more natural way of finding new acquaintanceships and as a meaningful tool used to connect, communicate, and socialize with friends and family¹.

¹ Global Games Market Report – The VR & Metaverse Edition. Newzoo, 2021.
Available at: <https://newzoo.com/insights/trend-reports/newzoo-global-games-market-report-2021-free-version/>

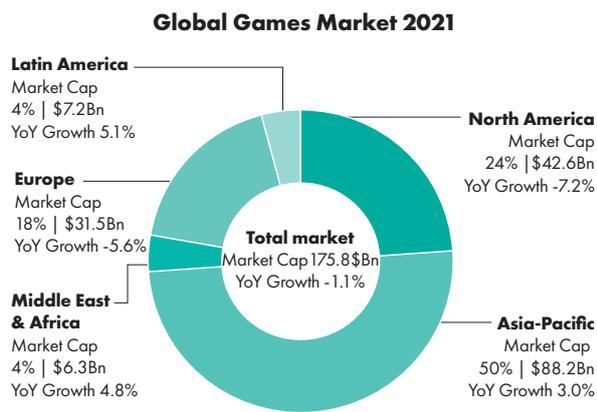
The industry in numbers

The global games market is estimated to show a slightly negative growth of -1.1%, generating 175.8 \$Bn in revenue, in 2021. The mobile games segment was forecasted to show a growth of 4.4%, generating 90.7 \$Bn in revenue, meaning it would account for 50% of the total games market. The growth is driven by the regions of Asia-Pacific, Middle East and Africa, and shows the mobile segment's insensitivity to hardware shortages caused by the pandemic. This contrasts the console and PC market segments which were forecasted to show negative growth of -8.9% and -2.8% respectively in 2021.

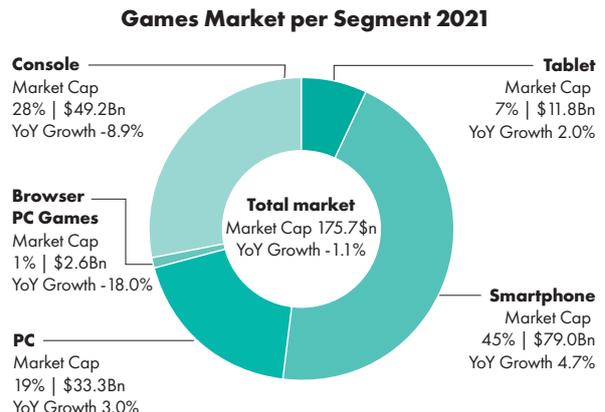
Globally, 2021 was a landmark year for investments in gaming with a total value of \$85 billion split between 1159 deals across all segments, representing a 200% increase compared to 2020. Among the most prominent actors driving this increase, Embracer was the "winner"

with a total amount of 22 deals. Other notable actors are Tencent, EPIC, Take Two, Sony, Stillfront, Zynga, EA, ByteDance, Devolver, and MTG as well as PE firms. More specific information about the most significant transactions can be found in Drake Star Global Gaming Report 2021.

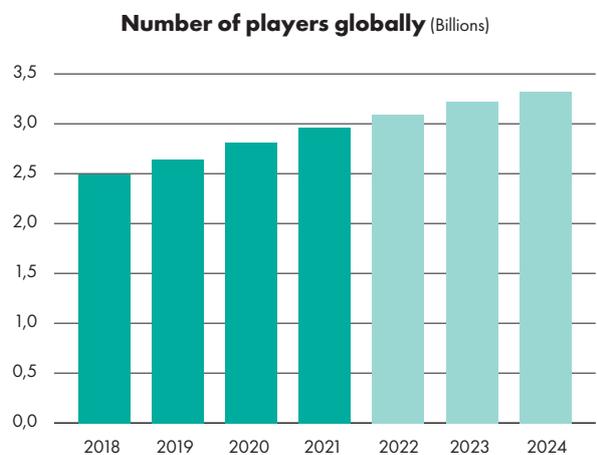
VCs and strategics invested \$13B in private companies through 718 disclosed deals in 2021. Big rounds were raised by Epic, Dream11 and JamCity. Galaxy, Bitkraft, Makers, a16z, Play Ventures and Griffin were the most active gaming VCs². Bitkraft and Galaxy were the most active VC investor with 27 investments each, followed by Makers Fund and PLAY ventures with 25 and 23 deals respectively. The three biggest gaming funds announced in 2021 were Galaxy's \$325 million, Vgames \$141 million and PLAY Ventures \$135 million fund.



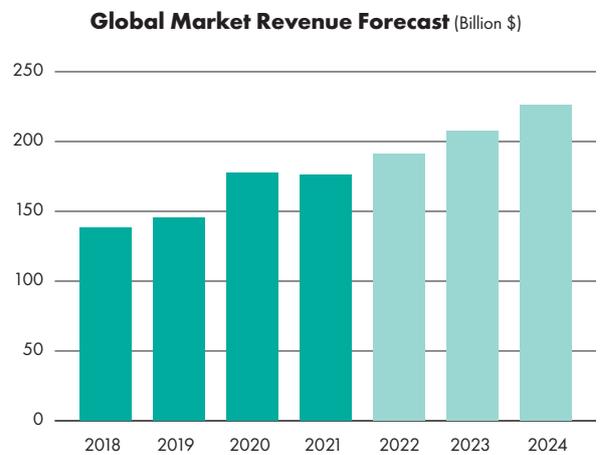
Source: Newzoo, 2021 Global Games Report



Source: Newzoo, 2021 Global Games Report



Source: Newzoo, 2021 Global Games Report



Source: Newzoo, 2021 Global Games Report

2 Global Gaming Report 2021. Drake Star, 2021. Available at: <https://www.drakestar.com/news/global-gaming-report-2021>

Key gaming industry trends for 2022: what investors need to know

This section compiles the most noteworthy gaming trends at both a broad and more narrow level, as well as estimations for 2022 and beyond.

- The growth of mobile will likely result in a PC market share decrease in the coming years. However, content from the maturing new console generation will catalyze growth for console's share of global games revenues toward 2024. Many titles originally announced for launch in 2021 will launch in H2 2022.
 - Mobile's revenue growth will likely continue to outperform both console and PC towards 2024, driven by growth in emerging regions, continued innovations in mobile monetization, and big console and PC publishers bringing their IPs to mobile devices.
 - Asia-Pacific and North America will account for around 50% and 24% of game revenues in 2021, respectively. Both shares will shrink marginally until 2024, as markets in Latin America and the Middle East and Africa continue along their growth trajectories³.
 - All major games companies are evaluating the commercial potential of using blockchain technology to support in-game cryptocurrency, tokens, NFTs and new business models such as play-to-earn. It is clear that there will be a lot of new games using blockchain in 2022 and increasing amounts from traditional games companies, which will expose more consumers to cryptocurrency and NFTs. But questions remain over the sustainability of play-to-earn games and the ongoing value of in-game NFTs against a backdrop of zero or minimal interoperability.
- With lots of titles flooding the market it's inevitable that many will underperform commercially. While funding for blockchain gaming companies is currently hot and valuations are high, with many existing companies pivoting into this space, expect the situation to cool down in the second half of 2022⁴.
- Major games franchises are now hugely important wider entertainment IPs that are driving original video content, spin-off music acts and successful merchandising businesses. Expect games IP adaptations in the video space to increase once again in 2022 and for game publishers to increasingly lay out their strategic visions as they broaden into entertainment companies⁴.
 - In 2020 and 2021, accurately dating the launch of blockbusters was so hard that every new game arriving on time was a surprise. Even the very conservative Nintendo was affected. Studios are now getting a lot more cautious when it comes to communicating release dates for the big titles and they are getting better at gauging the effects of the pandemic on their production. As such, more robust pipelines and fewer delays can be expected from the bigger studios in 2022⁵.
 - The Nintendo Switch will likely remain the best-selling hardware platform of 2022 in units sold, but a year-on-year decline is expected as it comes off its cyclical peak. Fortunately, the supply of PlayStation 5 and Xbox Series consoles should improve, helping the overall console market to single-digit percentage growth in the year. This, combined with continued growth in subscription, mobile and VR content spending, should help the video game industry continue its long-term growth trend⁵.

3 Global Games Market Report – The VR & Metaverse Edition. Newzoo, 2021. Available at: <https://newzoo.com/insights/trend-reports/newzoo-global-games-market-report-2021-free-version/>

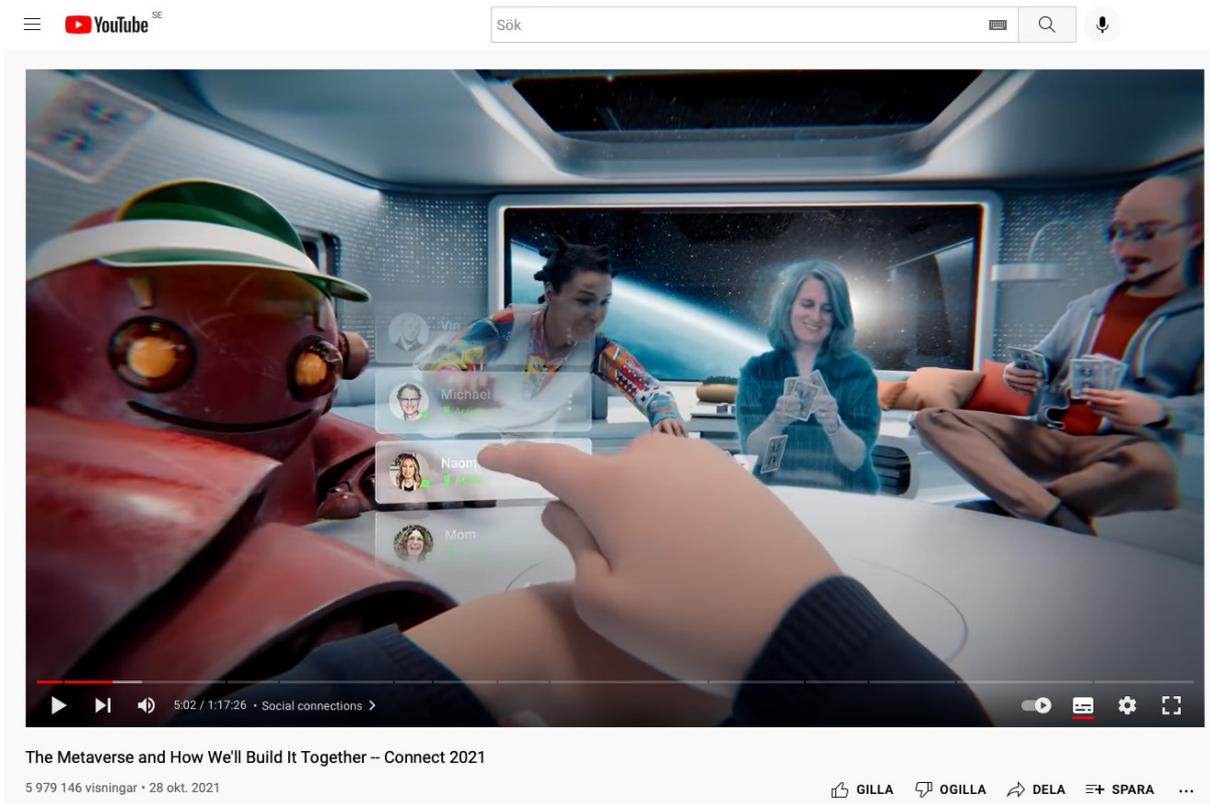
4 www.gamesindustry.biz/articles/2022-01-05-what-happens-to-gaming-in-2022-analysts-offer-their-predictions

VR: Tech's big bet and the future of gaming

Interaction and gaming through VR and AR platforms is more relevant than ever with the “metaverse” being on almost everybody’s lips in 2021 and early 2022. Facebook’s aggressive move to change its name to Meta Platforms Inc and their flashy presentation⁵ on changing their whole identity to a metaverse company caught many off-guard and accelerated the hype and buzz around the phenomenon. When the tech giant’s share value dropped significantly in early 2022, blamed in part on Apple’s privacy changes impacting their ad-targeting capacity, and in part on TikTok drawing users away, the urgency to make VR a key part of their future business model was only further emphasised. The race among companies wanting to claim a stake in VR and AR is on, but how will the metaverse look? How will we interact with it? What will we do in it? Who will create it? What even is it, to start with?

Opinions on what the metaverse is and can become vary, but on a fundamental level it can be described as a virtual reality that we interact with through technological means. Digital “worlds” where people represented as avatars can interact, exchange assets, and entertain themselves. This description sounds a lot like the basis for any MMORPG sandbox game, in other words, nothing new for gamers. What is new however is the idea of “stepping” into the world, entering a three-dimensional space with the help of VR technology. At least if you ask Meta Platforms Inc.

But VR technology is not new either. The first VR-like technology was developed and patented in 1956, 66 years ago, when Cinematographer Morton Heilig created Sensorama, the first VR machine. A large booth that could fit up to four people at a time, it combined multiple technologies to stimulate all the senses: full colour 3D video, audio, vibrations, smell, and atmospheric effects, such as wind.



The Metaverse and How We'll Build It Together -- Connect 2021

5 979 146 visningar • 28 okt. 2021

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VR headset development was accelerated during the 80s and 90s. Financed by NASA, these VR technologies were designed for maneuvering robots on other planets and other industrial and scientific applications. In 1991 The Virtuality Group launched Virtuality – VR arcade machines where gamers could play in a 3D gaming world. This was the first mass-produced VR entertainment system⁶. The biggest breakthrough for the technology came in 2012 when “Luckey” (later Oculus VR) launched a Kickstarter campaign for the Oculus Rift and raised \$2.4 million for development. Facebook bought the Oculus VR company for \$2 billion in 2014 and by 2017 HTC, Google, Apple, Amazon, Microsoft, Sony and Samsung were developing their own VR headsets.

So if VR is not new, why is it any different this time? Where does VR stand today? The Oculus Quest 2 was released by Meta in 2020 and is today the best-selling VR headset⁷. The platform is estimated to have had an installed base of 5-6 million units as of summer 2021, growing by 1.6 million units between April and June 2021⁸. Globally there are more than 171 million consumer VR users and the number of sold devices per year is expected to grow from 14 million in 2019 to 68 million in 2023⁹. The success is based on a general tailwind in demand thanks to lockdowns and a growing gaming market but also the fact that the modern VR device has overcome many previously present obstacles for consumers.

Devices today are lighter, more powerful, have better graphics performance and are less expensive than their predecessors. The main issue for a broader VR adaptation in gaming has been a catch-22 scenario where consumers wanted more and better games available to be convinced to buy and try VR. Game developers on the other hand needed a bigger installed base for it to be worth investing in VR game development. This catch-22 situation may finally ease in 2022 now the installed base is large and growing fast.



PHOTO: SHUTTERSTOCK

The global VR headset market is expected to surge between now and 2030, reaching \$84.46 billion in revenue in 2030 from just shy of \$5 billion in 2021, registering a revenue CAGR of 28.2% over the forecasted period, according to the latest report by Reports and Data¹⁰. Rapid digitalization, the increasing application of VR in the retail sector and a surge in adoption of head mounted devices in various industries is driving VR headsets’ market revenue growth. The largest contribution to the market growth however comes from non-gaming applications. In regard to VR gaming revenue, it is forecasted that the global revenue will reach \$2.4 billion in 2024, registering a CAGR of 14,4% from \$1.4 billion in 2021¹¹.

Investments in VR and AR is booming. Nearly \$1.9 billion of venture capital rolled into startups in the virtual and augmented reality software and hardware space in Q4 2021 – more than any quarter ever, according to Crunchbase data¹². The record breaking quarter contributed to making 2021 the second best year ever (trailing only 2018 during which nearly \$4.4 billion was invested, largely driven by significant rounds by companies like Magic Leap and SenseTime) according to Crunchbase numbers for VR/AR investment, with close to \$3.9 billion of capital rolling into startups. VR has been “the next big thing” for quite some time but today the future looks brighter than ever.

6 <https://virtualspeech.com/blog/history-of-vr>

7 www.statista.com/statistics/987701/vr-unit-sales-brand/

8 <https://nwn.blogs.com/nwn/2021/07/oculus-quest-2-install-base-july-2021-facebook.html>

9 <https://techjury.net/blog/virtual-reality-statistics/#gref>

10 www.reportsanddata.com/report-detail/virtual-reality-headsets-market

11 www.statista.com/statistics/499714/global-virtual-reality-gaming-sales-revenue/

12 <https://news.crunchbase.com/news/metaverse-augmented-reality-virtual-reality-investment/>

The IP gold rush: Consolidation accelerates gaming's content arms race

Consolidation of the video games industry has been going on for many years. We have gotten used to companies buying other gaming companies to diversify their portfolio by acquiring IP, complementing their business model to include new operations or with the goal of acquiring competent talent and workforce. Today it is fair to say that the M&A arms race has not shown any sign of slowing down, quite the opposite. Just one month into 2022 has already seen a couple of major acquisitions in the video games industry. By far the most eye-catching, impactful, and valuable is Microsoft's record \$70 billion bid on the American game developer and publishing giant Activision Blizzard. Two other notable acquisitions are Sony's \$3.6 billion purchase of Bungie and Take-Two's \$12.7 billion deal for mobile giant Zynga.

Those three deals alone total \$85 billion, which matches the mergers and acquisitions total for all of 2021, itself a record for the industry¹³. This is an uncharted scenario where platform holders such as Sony and Microsoft target the top of the market, whereas other companies such as Embracer focus on smaller and mid-sized gaming studios. The industry is now getting squeezed from two sides but what does this mean for the actors of the industry and the consumers?

There are many opinions on the effects of the increased M&A activity on the video games industry and the pros and cons vary depending on whose perspective is taken. It is hard to reason around this without going into specifics on certain companies and deals, and it can quickly get very technical and detail oriented when you start discussing game portfolios, valuations, and business models. Below are some key facets of note from the increased M&A activity.

- The large platform companies are acquiring popular game IPs with large player bases with the goal of controlling the valuable content in the form of games. By doing this they might or might not be able to have platform exclusivity for games and hence increase the value of their subscription-based games service.
- Antitrust issues are likely to arise as consolidation continues and fewer and fewer companies control larger and larger portions of the industry.
- Growing competition in M&A raises prices, making it harder for relatively smaller actors to acquire smaller companies.
- Increased acquisition activity at premium prices in listed companies means the acquiring company thinks there are valuable assets in the acquired company. This can increase in valuation should in theory spill over to peers.
- On the same topic as the previous point, industry consolidation should accelerate the development of new products and investment into new products when the overall value of IP in gaming increases.

¹³ www.gamesindustry.biz/articles/2022-02-03-we-are-not-even-in-the-final-stage-yet-analysts-on-consolidation

The Swedish Gaming Market

The history of Sweden's video games industry is long and impressive with Mojang, King and Dice arguably the most well-known exports.

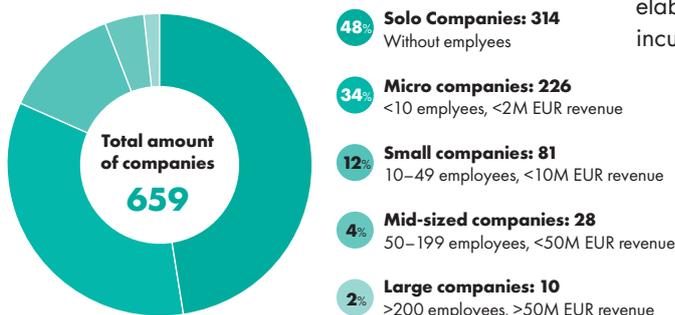
It is estimated that in total, Swedish-developed games have been downloaded nearly six billion times and that one in four people globally has at some time played a game created in Sweden. These are impressive numbers for a small nation with 10 million residents. The industry is still growing substantially and 2020 marked the 12th consecutive year showing profitable growth. In the last ten years, the total turnover in the Swedish video games industry has gone from €130 million to \$3.3 billion in revenue, a 43% YoY growth including revenue from international subsidiaries. In a European context Sweden has the second largest revenue share, second only to France and just ahead of Finland¹⁴.

A majority portion of the revenue growth is unsurprisingly attributable to large companies like Embracer Group, King, Mojang and Stillfront. In light of the fact that these four companies accounted for 64% of the total market revenue, it is uplifting and promising to see that the number of newly registered gaming companies is growing as well. In 2020, 81 new games companies were registered in Sweden representing an increase of 14%, up to a total of 659 companies.

With this growth in newly established companies, the need for regional support and engagement as well as cooperation with higher education and the local economy is large. In the last few years, several regions have focused on game development and local enterprise establishment, often led by local enthusiasts and industry veterans. These initiatives do not only create new companies and employment locally but also help shine light on the industry as a whole and the opportunities it presents, both for aspiring people aiming at a career in the industry and private investors¹⁴. Arctic Game Lab¹⁵, NEXT¹⁶, Norrskan¹⁷ and Game ON Mid Sweden¹⁸ are examples of such initiatives.

On the M&A and investments side Sweden stands out when it comes to the former in particular. The most notable actor in recent years is undoubtedly Embracer, a company that made 22 deals in total during 2021, two of which were above the \$1 billion mark including the \$3.1 billion acquisition of Asmodee and the \$1.38 billion acquisition of Gearbox. Each of the acquisitions were the largest in the world in their respective segment, namely PC/Console and Esport/Platform. Besides Embracer there are other gaming companies of varying sizes that have built their growth strategy mainly or to a large part due to M&A including Stillfront, Enad Global, Zordix and most recently Thunderful Group. When it comes to investments from VCs and PE firms, Sweden and the rest of the Nordics have not been as prominent and innovative, but things are changing. This topic is elaborated on later in the report, including initiatives like incubation and acceleration.

Number of companies by size



¹⁴ Spelutvecklarindex 2021. Dataspelsbranschen. 2021. Available at: <https://dataspelsbranschen.se/spelutvecklarindex>

¹⁵ <https://arcticgamelab.com>

¹⁶ www.mynewsdesk.com/se/boden-business-park-ab/pressreleases/fantastiska-ideer-tar-plats-i-spelinkubatorn-next-3105241

¹⁷ www.norrskan.vc

¹⁸ www.gameonmidsweden.com

How video game funding models work

Game development is very capital intensive requiring large amounts investment, sometimes during a long period of time, before any revenues can be realized. It should be pointed out however that there is a large discrepancy in the span between game development budgets and that very successful games can indeed be produced with relatively small means. One example is the mega hit “Valheim”, a single and multiplayer sandbox survival game developed by only around five developers at Iron Gate Studios and published by Coffee Stain Publishing in February of 2021. The game sold over eight million copies in its first six months post-release which is a huge success, and widely exceeded any sales projections. This puts pressure on the studio to make well-informed decisions regarding how and from where to raise the capital needed. Different options are detailed in the following section.

It is important to first make a distinction between two general types of investments into the gaming industry. Company funding is when an investor (investment company, private person, or an acquiring gaming company) through issuance of new shares, makes a capital contribution to a company. This makes the investing body an owner of the investment target. The other common form of investment type is project funding through publisher participation or other structure, meaning a publisher, wholly or in part, funds the development of a new game. Publisher participation is explained further below.

PHOTO: VALHEIM – IRON GATE STUDIOS



“Valheim”, a single and multiplayer sandbox survival game developed by only around five developers at Iron Gate Studios and published by Coffee Stain Publishing in February of 2021.

Internal funding

Internal game development funding means allocating access capital generated from ongoing operations into new game development. This option is only available to established developers with a profitable business model. From a shareholder perspective, internal funding is in a couple of ways less risky than other options: for the opportunity to even exist there must be an underlying,

profitable business that can limit the potential economic downside following failures or postponements increasing capital requirements. In contrast to a newly started game developer, if an established developer is developing either a completely new IP or a sequel an investor can look at the past performance and history of the company to evaluate the risk of the new project with more certainty.

Publisher participation

There are many different business models in the video games industry. Some companies are solely game developers, some companies are only publishers of video games, and some companies are distributors of video games. Many of the large conglomerates such as Activision Blizzard, Take-Two Interactive and the Embracer group cover two or more of the aforementioned functions (multiple organizations of each function), embodying a majority of the video games value chain. In the case of a company being “only” a game developer, the company need to establish a partnership with a publisher for newly developed games. A publisher can do various things and might, depending on company strategy, specialize in different operations. A publisher is likely more interested in financing individual game development projects rather than investing capital into game development studios.

The operations of a publisher can include overseeing and orchestrating the following:

- game marketing and advertising
- market planning and pricing strategy
- game development financing
- co-development

Under a publisher participation model, a publisher pays for part of the development cost of a new game. The payment is done in advance in its entirety or as continuous payments during the development cycle. These payments are often subject to fulfillment of certain milestones to be achieved by the developer.

Once the game releases, the publisher recoups the payments along with other auxiliary expenditures like localization testing, marketing, or promotion fees. The publisher

will also take a share of future revenue in perpetuity. Usually, the game developers hold on to the intellectual property rights to their game and assets, allowing them to control production rights to sequels or future versions of the game. They do not have to give up equity in their company to the publisher. The publisher adds value to the entire game development lifecycle (in marketing the game, facilitating distribution, and more) but this model of funding indie games works best when developers understand the compromise they’re making between long-term rewards and cash up front.

Publisher participation in game financing can be favorable from several aspects. Firstly, if a publisher co-finances a game they have “skin in the game”, meaning they are incentivized to assure a successful launch and sales of the game. This is namely because the structure of a co-financing deal often includes some type of “performance-based” compensation after launch.

Secondly, publisher participation likely increases the total amount of funds and resources available for game development project, increasing the quality and success rate of the new game. Often a financing deal will be structured to include several capital contributions during the development process, lowering the initial financial hurdle at the early stages of game development, when a lot of uncertainties around a new game are present.

Thirdly, co-financing splits the financial risk between multiple actors, lowering the individual risk to be borne by the game developer. Inevitably this also lowers the potential upside since a publisher will receive a cut on future sales. Lastly, a publisher will be involved in the game development process to some degree and have valuable insights for the development of a successful game.

Public funding

Public funding is government backed initiatives aimed to foster growth of certain industries. These initiatives aim to increase studios' access to capital, promote the development of IPs and encourage growth and risk taking, and are geared towards younger companies. Usually there are eligibility criteria associated with granted funding and companies are selected by a jury following scrutiny of development projects, business plan and the team.

It is rather difficult for game companies to search for public funding in the Nordics – Finland being the exception with Business Finland. Between 2006 and 2015, the “Nordiska Dataspelesprogrammet” (The Nordic Program for Computer Games) paid SEK 65 million to 112 Nordic gaming projects. The program was funded by the Nordic Council of Ministers, and among Swedish companies that received support from the program are Tarsier’s “Little Nightmares” and Starbreeze’s “Brothers”. Both games were praised by critics, and for Tarsier, the support was a contributing factor in being able to retain ownership of IP and invest in development of its own titles later¹⁹.

Today there are no public funds focusing fully on game companies in Sweden. However, a game start-up can fit the requirements for some public funding supporting start-ups in general. These funds often assess companies based on their level of innovation, something rather complex when it comes to games, so games start-ups often need added value (e.g. a diverse team, a focus on education/health, etc.).

In general interest in the video games industry has increased among European authorities in recent years²¹. There are more and more public investment programs being launched to foster creation and growth of start-ups and young companies within the industry. Some examples of countries with strong public support are France,

Germany, Norway, and the UK. Broadly speaking public funding can come from two different angles: investments with cultural focus comes from the ministry of culture and is aimed at promoting national culture and protecting intellectual property, while investments with a commercial focus comes from sponsors with a business ambition. The best examples of the latter form of investment in Europe are Business Finland (BF) and PBI France²⁰.

BF is the government organization for innovation funding and trade, travel, and investment promotion in Finland. Between 2012 and 2017 private investments injected €100 million into game companies; BF exists to share the risk with the investors and to attract more private investments. The funding provided by BF is either grants or loans which can be applied for at any time. One main benefit for the applicants is that they do not have to give up ownership through this type of investment, allowing them to keep control over their company and enjoy the potential financial upside²¹. The funding from BF can be used for development of new game concepts, game platforms or game development tools, as well as new operation and business models, cross media concepts and formats, and for gamification in development of new products and service concepts.

There is also a European initiative called “Creative Europe” that annually announces a European development aid for game development. The requirement is that the applicant company has previous experience of making games, that the game project is a narrative game and that it maintains a high level of originality, innovation, and creativity. The end product must be commercially viable. The supplied funds may not exceed 50% of eligible costs, and the amounts paid out is between 10,000-150,000 Euros. In 2017, nine Swedish companies applied for the program, with one project granted financing.

19 Faith. Dataspelesbranschen. 2019. Available at: <https://dataspelesbranschen.se/faith>

20 Spelutvecklarindex 2021. Dataspelesbranschen. 2021. Available at: <https://dataspelesbranschen.se/spelutvecklarindex>

21 www.businessfinland.fi/en/for-finnish-customers/services/funding/tempo-funding/game-business-funding

Types of public financing tools

Subsides & loans – The most common form of funding, either in the form of a grant, usually with constraints, or as a reimbursable loan.

Tax rebate – Tax reduction on projects, offering the ability for smaller studios to generate cash at a higher rate in order for it to be used for internal development.

Guarantees – Public structures sometimes offer guarantees on loans for traditional banks.

Acceleration programs – In addition to financing, acceleration programs are run in several places, with the aim of professionalizing smaller game studios. These studios often need help with financial issues, strategy, and internationalization.

Venture Capital and Private Equity

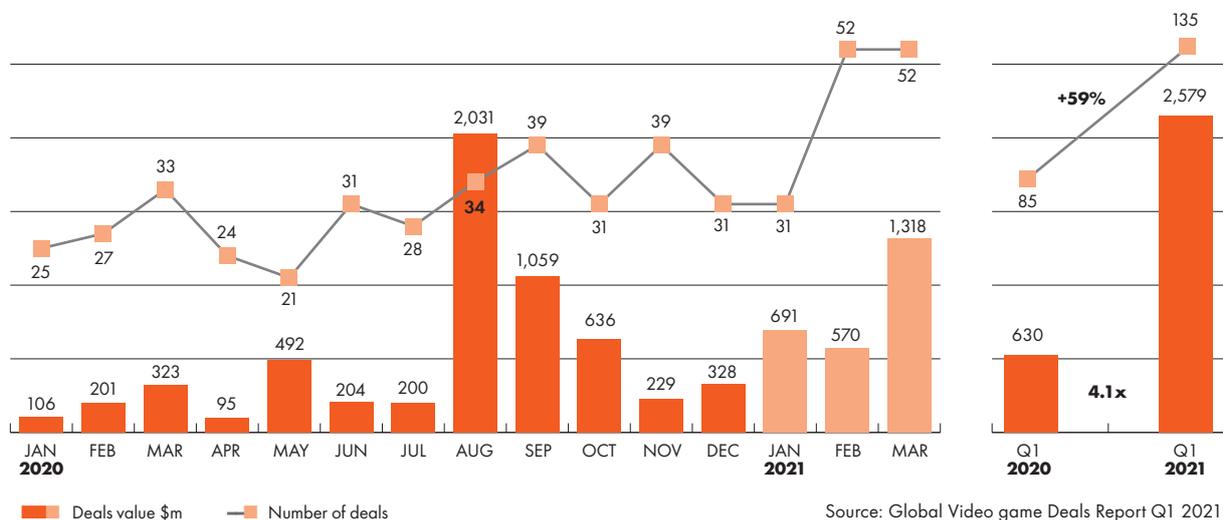
If one of the previously presented ways of financing game development is not available to, or preferred by a studio they might want to explore the possibility of bringing on board a VC or PE-firm.

Early-stage investments into the gaming industry can seem very attractive and many of the success stories that make it to the front page have produced outsized returns in relatively short periods of time. Private investments into the gaming industry have seen a steady growth in the last couple of years both from established VC firms but mainly from newly incorporated specialist VC firms. According to the Global Video Game Deals Report Q1 2021²² a clear acceleration of investments is observed following spring/summer 2020.

The main difference between VC and PE in gaming is the maturity of the investment targets. VC usually invests in earlier stages into studios that may have yet to release a game, or at least release a successful game. This is risky with a higher potential ROI upside.

PE screens the market and invests into gaming companies with one or more hits under their belt and a clear strategy. A clear growth trajectory is important and with an outspoken strategy to be acquired down the road.

Private Investments in the Video Game Industry



22 Global Video Game Deals Report Q1 2021. Invest Game, 2021.
Available at: www.dropbox.com/s/m94bfnerlpyt5nj/Q1%202021%20IG%20Report.pdf?dl=0

The options available

Now that the ways gaming companies seek funding has been detailed, it is possible to explore the perspective of investors seeking to get involved in video games investment activities. Depending on resources, different options are available.





Public companies

For retail investors the fastest and easiest way to claim a stake in gaming companies is, unsurprisingly, through stock markets. The number of publicly listed companies is large, and the landscape might come across as cluttered. Gaming companies are highly cyclical and the volatility in gaming stock is relatively high. Financial transparency can be low since stock markets are forward looking and gaming companies' future revenue can be hard to accurately judge because they are highly dependent on the success of upcoming game releases. The difficulty in valuing a game release pipeline differs. For an established company with a great track record and original IP, past games can be good comparisons, and their underlying sales data can be a good foundation for judging future potential. For smaller companies with less track record, mainly developing new IPs, accurately establishing a realistic earnings scenario can be very challenging and risky.

There are 19 Swedish game companies listed on the Swedish stock market, fourteen of which have been listed for less than five years. The business models differ, some are game developers only, some are also publishers and Thunderful Group for example has a great majority of their turnover from distributions of hardware and merchandise. Five of the companies presented a turnover of over €100 million in 2020 and the aggregated revenues was €2 billion (up 100% YoY). The stock price performance differs significantly from case to case. Looking at performance it becomes clear that there is a great spread between the best and the worst performers and finding the best yielding gems is hard. An investor should research the targets deeply and preferably have a well-diversified portfolio.

Share price development for Swedish gaming companies listed on the Swedish stock exchange:

Company name	Year of listing	Market	Stock price performance	
			Since listing	Last year
Starbreeze AB	2000	Nasdaq Stockholm	-84.22%	-32.30%
G5 Entertainment AB	2006	Nasdaq Stockholm	8472.24%	-26.70%
Star Vault AB	2007	Nordic SME	-30.14%	127.17%
Safe Lane Gaming	2010	Nordic SME	-97.13%	-14.55%
Stillfront Group AB	2015	First North Stockholm	544.89%	-51.02%
Embracer Group AB	2016	First North Stockholm	1865.78%	-9.73%
Paradox Interactive	2016	First North Stockholm	315.54%	-22.15%
Jumpgate AB	2016	Nordic SME	-97.88%	-36.04%
Gold Town Games AB	2016	Nordic SME	-53.47%	72.79%
Enad Global 7 AB	2017	First North Stockholm	171.56%	70.34%
MAG Interactive AB	2017	First North Stockholm	-51.20%	-40.96%
Goodbye Kansas Group AB	2017	First North Stockholm	-86.51%	-87.68%
Qiiwi Games AB	2017	Nasdaq First North Growth Market	37.10%	-75.36%
Beyond Frames Entertainment AB	2018	Spotlight Stock Market	274.39%	59.07%
Zordix AB	2018	Nordic SME	-48.18%	-48.18%
Adventure Box Technology AB	2019	First North Stockholm	-47.97%	-60.23%
Thunderful Group AB	2020	First North Stockholm	-36.43%	-47.21%
Sozap AB*	2021	Nasdaq First North Growth Market	-51.51%	-51.51%
Wicket Gaming AB*	2021	Spotlight Stock Market	164.48%	164.48%
Median			-36.43%	-32.30%
Avg.			587.44%	-5.78%

*listed less than 12 months



PHOTO: WANDS — BEYOND FRAMES ENTERTAINMENT

Beyond Frames Entertainment are passionate gamers and game creators.
Stock price performance +274.39 percent since listing and +59.07 percent during the last year.

The summarized recommendation for a retail investor picking stocks to lower organizational risk is:

- Research the past performance by looking into existing games portfolio
- Research the team and their track record
- Analyze the pipeline of upcoming games to land in your own opinion of potential success
- Diversify your portfolio by investing into a handful of companies
- Diversify your portfolio between different segments (console, PC, mobile, etc.)

To successfully perform stock picking and overperform the market in the long term requires substantial researching effort and time. If that time to research and stay updated on a couple of dozens of different companies isn't available, then funds, ETFs, and other publicly traded instruments might be an option. Many tech funds and others have been investing in the gaming industry for a long time. The history of instruments solely focused on the video games industry, however, is relatively short and the supply has been scarce. It should be noted that a fund/ETF that only invests in the video games industry is considered a highly niche fund. Some might argue that it is not possible to reach an acceptable level of risk diversification by narrowing down the investment targets into one specific industry. Today, investors seeking exposure into the video games industry can find several exchange-traded funds (ETFs) that hold baskets of gaming stocks. It should be noted however that many of these products include different levels of exposure to gambling and eSports companies as well.

Co-Investment

Stock picking and investing into publicly traded funds and other instruments provide access to many, but far from all, companies within the video games industry. For private persons it might seem difficult and challenging to invest into privately owned companies in the video games industry, and that suspicion is accurate.

Obstacles for investments into games

Historically the interest from VC and PE has been low mainly because a lack of knowledge and gaming expertise, but also because of a high perceived risk of investments into the industry. This perception is a result of a combination of issues in accurately valuing gaming companies due to the cyclical nature of revenue and how the value is packed in intangible assets to a relatively high level. Furthermore, useful data is normally scarce for younger gaming companies which makes peer comparison hard to make use of. On the game developer side, professionalism, and experience of talking to investors and presenting the company and its vision in a satisfactory manner has also not helped to counteract the disconnect between “the money” and the developers. Investors in gaming need to understand how developers work and thrive and developers need to understand how to talk to investors. Industry veterans have witnessed the existence of skepticism towards “suits” in game developer communities²³. Read more about gaming ETFs here²⁴.

Early stage gaming investments

Luckily the landscape is changing and today the interest from both traditional VC, tech-oriented VC and newly incorporated gaming specialist VC firms is increasing rapidly. Specialist VC firms and their kind are working hard to establish a financial ecosystem and breeding ground to foster investments into games. Co-Investment is a way to overcome many of the perceived obstacles for investing in games. Co-investment is a broad term used widely in investment in general. In essence it means that multiple investors go together and invest in one or multiple companies. There are plenty of VC funds with different agendas and expertise that focus on companies in different stages of maturity, segments, and business models. For example, GTR are game-style agnostic but only invest in early stage, 2-20 employee studios while Play Ventures invest in later stage companies but focusing solely on studios with business models built around free-to-play games. As an investor you will need to inform yourself about the strategies of the VC firms and how it fits into your investment style and your beliefs in the market.

Money is not the only reason a young company might want to bring on a VC. Specialized VC firms are almost without exception started by people who have been in the industry for a long time. They might be developer veterans that have founded one or multiple companies in the past, or they have worked at companies in the industry. A VC can and should make a great contribution to the team, not only through monetary support but also by acting as mentors and business developers to guide the aspiring, oftentimes young, entrepreneur in the right direction. The experience from VCs can help with everything from avoiding making costly mistakes in the development of games, to assisting in composing financial documents and forecasts. Looking further ahead VCs also come with a very valuable networks of established relationships in the industry that can be used to facilitate publishing agreements for example, or in latter stages, further capital infusion or exit opportunities.

Co-Investment is also a way to mobilize private money that would not be invested otherwise, with a purpose of complementing public investment initiatives. Spiel Fabrique is an example of an initiative that stems from the need to complement private investments as a result of the EIF/EC guarantee facility for the creative industry. Spiel Fabrique aims to support at least five German and French start-ups per year and their goal is to support around thirty companies within five years.

Based in Helsinki and Malmö, Nordic Game Ventures is an organization that invests into early-stage game development and games ecosystem SME companies in the Nordic region, namely Denmark, Finland, Iceland, Norway and Sweden. Founded by ten Nordic games entrepreneurs and gamer entrepreneurs, NGM has a diversified and balanced portfolio, from startups to follow-on, is internally supportive across sub-sectors, and has a disciplined, no-leverage approach to fund composition and risk management.

Our goal is to make it possible for Nordic pension funds and similar investors to invest in the hugely successful Nordic games sector. They haven't been able to do that before, especially early-stage investments, because they need funds and managers that operate under financial supervisory authority oversight. We can offer them that today, and that is unique – being focused on the Nordics, on games and games ecosystem, while being a “proper” fund²⁵.

²³ www.di.se/digital/spelmiljonarer-startar-nytt-investmentbolag/

²⁴ www.investopedia.com/articles/investing/010616/top-4-entertainment-etfs-2016-pej-xly.asp

²⁵ <https://nordicgame.com/exclusive-nordic-game-ventures-co-founders-interviewed/>

PHOTO: SHUTTERSTOCK



How to get started

In November 2021 the Baltic Sea Game Incubation (BSGI), together with Invest Stockholm and Arctic Game Lab, hosted an investor workshop with a purpose to increase seed and pre seed investments into the game industry.



The event can be viewed in its entirety [here](#).

The event includes interesting presentations and panel discussions from some of the key actors driving and fostering investments and innovation in the industry.

Below is a short summary of some of the recommendations from the experts on how to get started with early-stage co-investments in the video games sphere.

Get involved

It might sound like a cliché but consider it an important one. If you want to get involved in co-investments in early-stage game development, you need to talk to people. Expand your network by attending events and reach out to one of the established actors. Get your name out there!

Consume media

There is a lot of information available online. Read, listen, and watch to develop your expertise and view of the industry and the actors.

Show who you are

Money does not invest into companies – people invest in people. This is particularly important in early-stage game investment when the product is in an early stage and the future is unknown. Demand that you know who you invest in and who you are as an investor.

Team up

Surround yourself with people with similar agenda and vision as you and co-invest. This lowers the risk, brings more expertise to the table, and hopefully increases the rate of success.

The actors of the ecosystem

Below is a list of several actors that you might want to establish a relationship with or read more about.

Funds with incubators and accelerator programs

Mind Detonator

A pre seed investor and a physical community located in the north of Sweden. Mind Detonator is a game catalyst that operates outside the major cities. It is an initiative to complement the gaming industry and broaden it and show the opportunities in smaller towns where there are good chances for a good life with a high quality of life and low overheads, which provides the opportunity for a focused game production with high quality. The offer consists of investment capital through liquid assets and provided services, coaching, food and accommodation and office space.

Global Top Round

GTR is an interactive accelerator program dedicated to support small studios globally. Through the GTR acceleration program, studios will receive both funding and the help they need to improve their games and identify & negotiate with potential publishers from all over the world. GTR organizes an annual conference for game developers, publishers, and experts during which the annual selection and announcement of the 10 program-eligible studios are.

Spiel Fabrique

Spiel Fabrique is an accelerator program for start-ups and young entrepreneurs on the gaming market—the first of its kind in Germany. The program is based on a comprehensive mentoring package and a first-class network of companies, gaming experts, investors, and established creative industry partners. The initiative aims to facilitate needed private investments into the gaming industry, complementing the public funding initiative by the German government.

Game Hub Scandinavia

Game Hub Scandinavia is an entry point and one-stop-shop for both budding and weathered game developers. GHS has an extensive network of partners in the games industry who support startups, developers, publishers, and investors match up.

Funds dedicated to the video games industry

Play Ventures

Invests early into the most promising free-to-play game studios and games services startups from across the globe. Play Ventures was founded by gaming entrepreneurs and supply support within recruitment, design, fundraising and more through a vast industry network.

SISU Game Ventures

Sisu Game Ventures is an early-stage game venture capital fund that prefers to be the “first money in”. Established in 2014, run by veteran game developers with a mission to help other developers realize their dreams. Sisu has its roots in the Nordic Region with a global network. Over the past three decades the Sisu team members have built 16 game companies and invested in over 60 game startups.

London Venture Partners

LVP invest into early-stage companies at angel, pre-seed, and seed stages. LVP has been actively investing into games since 2021 and have since made 54 investments and 16 exits.

GAMESEER

Gameseer was founded by a group of friends and investors united by their love for video games. They have created a fully boutique venture fund exclusively for indie PC & consoles licenses. Gameseer will act solely as an investor but can also help facilitating publishing through their network.

Initial capital

Initial Capital is an investor in seed and early-stage technology companies with a focus on games, consumer services and technology enablers. They are group of serial entrepreneurs who invest our own money and actively partner with world class teams to build global category winners.

HIRO CAPITAL

Hiro Capital invests in UK, European and North American innovators in Videogames, Esports, Streaming and Digital Sports. They invest both in front-end Game Content creators and in back-end Platform, Technology and Service innovators.

Nordisk Games

The Nordisk Games team includes experienced game developers, entrepreneurs, and people with financial expertise. They fund and support creators in the games industry by taking a minority stake in companies with which they share vision and take a seat on the board to actively support business development.

Kowloon Nights

Kowloon Nights is a video games fund, dedicated to independent developers globally, featuring a mix of business professionals and seasoned studio heads.

Bitkraft

Built by founders for founders, BITKRAFT is a global investment platform for gaming, esports, and interactive media focusing on Seed, Series A, and Series B investments in gaming content and IP, interactive platforms, and horizontal technology.

The Games Fund

TGF is an early-stage VC fund founded by video games industry veterans.

By investing in future leaders: game developers, gaming technologies, and services, they share best practices and offer our experience and personal touch.

Griffin Gaming Partners

Griffin Gaming Partners is a leading venture capital firm singularly focused on investing in the global gaming market. Griffin invests in gaming startups of all stages including Developer & Publishers, Software & Infrastructure, Web3 Gaming and Platforms.

Invest Stockholm is the official investment promotion agency of Stockholm, owned by the City of Stockholm. The Stockholm region covers 56 municipalities and attracts more than 50% of the total foreign direct investments into Sweden. Our team will provides tailor-made information and advice for companies wanting to establish a new business in the region, as well as for companies wanting to expand an existing business. For investors we assist you to identify relevant investment opportunities within the region.

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