Macro Ops

The Consilience Report

The winds and waves are always on the side of the ablest navigators. ~ Edward Gibbon

The Rise of eSports

eSports is becoming the largest content creating/entertainment channel in the world. Many US investors remain unaware of the surge in hours played and watched. The esports industry is at the start of its revenue capability. A major inflection point in its growth curve.

In This Issue:

This creates a massive opportunity for investors… A chance to piggyback on the companies that will benefit the most from this growth.

In this report, we'll focus on eSports as an industry, break down the main players, and then determine where we as investors can put our money to profit from this global trend.

The Stats…

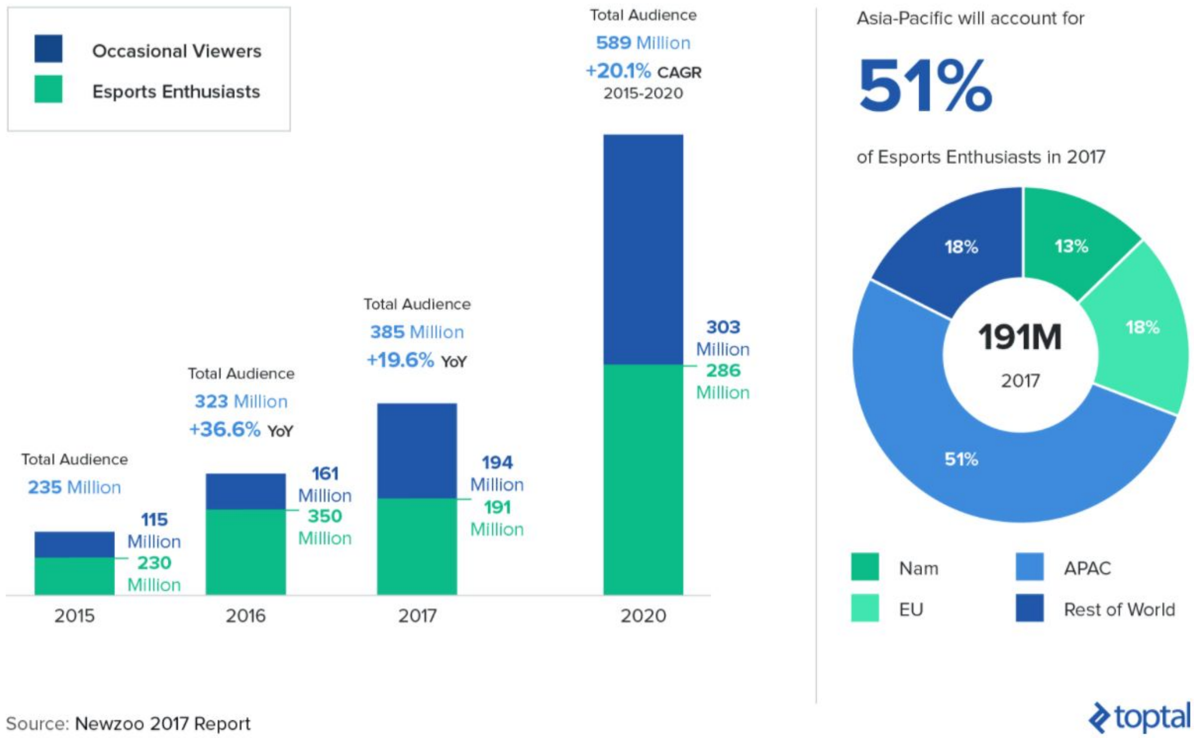
Understanding the eSports industry on a deeper level means knowing its main players:

- Media Platforms & Advertising
- Third-Party Event Coordinators
- Team Organizations
- Consumer Products
- Developers (Game Publishers)

Don't worry, we'll cover all these in more detail later.

Before we dive in, let's review some of the incredible stats that go with this booming industry.

Check out the graph below from a *Newzoo 2017 Report:*



eSports total audience has grown 20% per year for the last five years. The industry now reaches over *half a billion* people worldwide. Asia accounts for 51% of eSports enthusiasts.

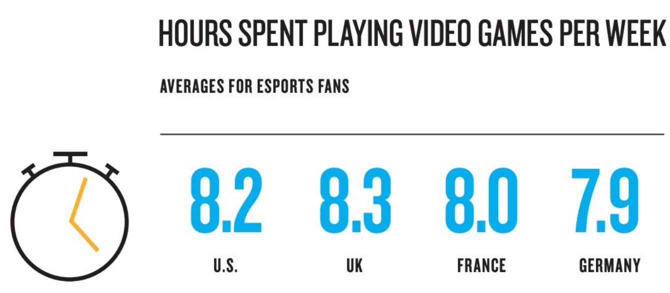
50 US colleges now recognize eSports as a legitimate varsity sport. There's also talks to get eSports into the 2024 Paris Olympics.

The eSports audience is growing 20% per year. With that type of growth one might think, "how soon will the industry saturate its market?" Well, according to a recent Goldman Sachs report, the runway is very long for this industry.

> *"We estimate the total online population is over 3.65bn people globally, to go along with 2.2bn gamers, but eSports viewers represent just 5% of the online population TAM, which suggests that there should be plenty more runway for audience growth."*

The massive growth in both gaming enthusiasts and occasional fans is impressive. But it's not even the most intriguing stat.

The most impressive number is the *amount of time* fans spend watching and playing the games.



In the U.S., eSports fans spend (on average) 8.2 hours per week playing video games. That's 32 hours a month and nearly 400 hours a year in front of the screen.

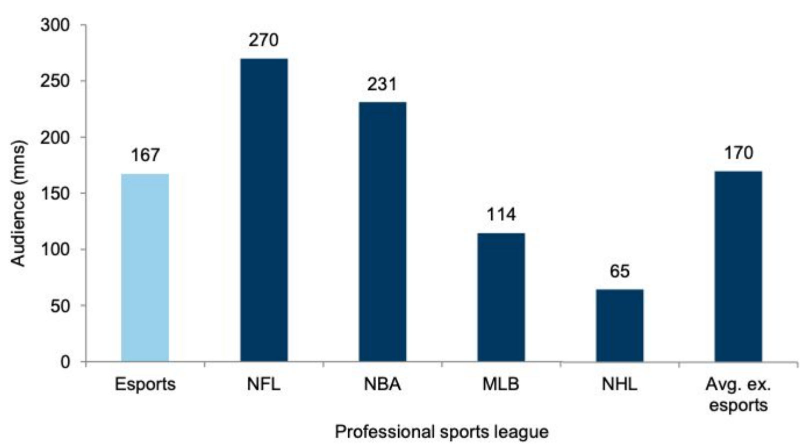
It's this timeshare that creates a massive money-making opportunity. The number of fans as well as the amount each fan consumes continues to grow.

A recent study on the emergence of eSports offers some insight:

- *49% of American adults play video games either on a computer, console, TV, or a mobile device.*
- *The world's 2.3 billion gamers will spend close to $138 billion on games in 2018, a +13.3% lift from 2017's numbers.*
- *"American male millennials (age 21 to 35),* ***esports is just as popular as baseball or ice hockey, with 22% watching it*** *... In North America, the most popular sport in the region, football, is only 2x as popular as esports among male millennials. For male viewers between the ages of 36 and 50, football is only 3x as popular."*

eSports reaches more viewers in the US than major professional sports leagues. Take a look at the graphic below:

Exhibit 3: The eSports audience is similar to the average of large professional sports leagues
Audience size by sports league (2017A)



Source: Nielsen, CBS, ESPN, Goldman Sachs Global Investment Research eSports has a larger audience than MLB and the NHL. That was in 2017! Now eSports' audience eclipses MLB and NHL combined.

Review

1. **eSports is growing its audience over 20% per year while penetrating a mere 5% of its total addressable market (TAM).**
2. **US gamers spend (on average) 8 hours a week playing video games and another 100 minutes watching others play.**
3. **Much of the eSports growth and viewership comes from Asia.**
4. **eSports will soon become more popular than any major league professional sport in the United States.**

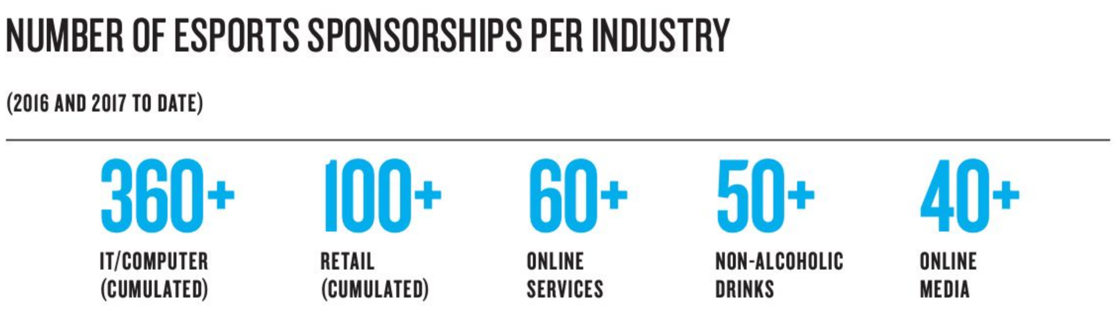
The Perfect Advertising Audience

Another reason we're excited about eSports is the advertising opportunities. The average eSports fan is an advertiser's dream-come-true.

- Ages 18-35 makes up 65-75% of gamers
- Mostly males
- 43% of eSports enthusiasts have an annual household income of $75K+
- 31% have an annual household income of $90K+

The above characteristics describe one of the hardest-to-reach consumers in the world. Yet eSports commands their time, attention, and wallet share.

Take a look at the graphic below highlighting the number of sponsorships per industry in 2016-17:



Source: Nielsen Market Intelligence

Lifetime Value & Customer Acquisition Cost

Advertising comes down to two things: Customer Acquisition Cost and Lifetime Value. If you can optimize one (or two) of those variables, you can make a killing. In the case of eSports, **Lifetime Value is the money-maker**.

Here's thoughts on how to think about the Lifetime Value in eSports advertising via "*The Next Level", an eSports business commentator* (emphasis mine): *"Assuming a life expectancy of 80,* ***that's 65 years of potential revenue, with a ridiculous LTV (Lifetime Value)*** *and makes sense for CPG Brands to invest in eSports with its core male audience."*

That's the power of the eSports demographic. Brands can capture consumers at the forefront of their spending lifetimes.

It seems at first that non-endemic brands (not directly linked to the esports industry) have no place in esports advertising. That's not true. A 2018 *Statistia* study found that adults between 18-44 were the highest consumers of chocolate in 2010. Who's to say Lindt or Hershey's shouldn't advertise on the next Fortnite release?

Ann Hand, CEO of Super League Gaming (SLGG) reiterates this idea, saying (emphasis mine):

> *"What has me surprised me at Super League the most is* ***how many non-endemics want to talk to us about our youth product.*** *It validates that* ***so many brands want to get on esports and talk to mainstream gamers****, but don't have a lot of positive access points to reach them."*

Review

We know how large the eSports industry could become: Over 2 billion gamers worldwide.

We know what type of person will likely engage in eSports: 18-35 year old males that make between $75K - $90K.

We know which region will provide the bulk of the growth: Asia-Pacific/China.

What we ***don't*** know is why eSports exploded in popularity. Let's find out.

What's Caused The Spike in eSports Popularity?

eSports is what every other sport dreams it could be:

- Online/cloud
- Low start-up costs
- Anyone can learn to play

- Doesn't discriminate (males and females same playing field)
- Easily scalable (100 person battle royale)

You can buy a PS4 or Xbox One for a few hundred dollars. After you download a game, you can immediately play against other players who love the game.

It doesn't matter if you're a seasoned veteran scooping the latest copy of NBA2K or a Fortnite *n00b*. What matters is that you can play without hesitation. You can learn and challenge yourself in the game with zero barriers to entry. Regardless of skill level.

No other game (or league) can say that. Take basketball for example. To play an *actual* game of basketball you need *at least* one other participant. What if you have nobody to play with?

Contrast that with NBA 2K. A player can log-in and within seconds match-up against an opponent.

Second, you don't have to be an athlete to play competitive eSports. eSports competitors come in all shapes and sizes. It's the most inclusive competitive sport there is. There's no difference between gender and skill level. It's the perfect playground for inclusive entertainment and competition.

Fortnite & The "Moneymaker" Effect

eSports viral spread is also a result of two other phenomena: Fortnite & the "Moneymaker" Effect.

Before getting to Fortnite, let's discuss the "Money-maker" effect. In short, the Money-Maker effect is the phenomenon that any lay-person can learn a skill and win big. We get the name from poker pro, Chris Moneymaker.

Moneymaker -- an accountant from Tennessee -- won the 2003 World Series of Poker on an $86 buy-in. That's like a high schooler beating Roger Federer in the US Open after qualifying due to three sick players.

Before Moneymaker, pros ruled the poker tables. And the winners of the million-dollar bracelets went to the pros. Moneymaker's victory destroyed that idea. This led to an astronomical rise in online poker's popularity.

Amateurs saw Moneymaker's success and started to believe that they too could be the next amateur winner. Money piled into online gambling sites. As the players increased, so did the winning pots. Which led to more players, and viola! The coveted flywheel.

Fortnite is experiencing that same effect through Tyler Blevins (aka, Ninja). Before Fortnite, Blevins was a normal guy -- not making millions and hanging out with Drake. But the release of Fortnite turned Blevins into a multi-millionaire. Blevins makes an estimated $18M/year through YouTube, live-streaming, and endorsements.

Riot's crown jewel is the perfect environment to create this 'Money-maker" effect for two reasons. First, it's a game that all skill levels can enjoy. You can play in the same match as the best Fortnite players in the world but still have fun. The maps are big. You can hide in the bushes. And now there are bots in the map for less-experienced players to practice their craft.

Second, Fortnite built the widest audience possible. This means that live-streamers (like Ninja) have millions of potential viewers at their fingertips. Beginners and advanced players can enjoy watching Ninja play Fortnite.

The Importance of The Metaverse

If we span out, we see eSports not as a place of pure competition, but of community and shared experiences. Matthew Ball (one of my favorite thinkers on the topics of games) writes about this in his post *The Metaverse*. In short, the metaverse is a place where gamers go to hang out, socialize and interact with their friends. They'll play games, of course. But the bulk of the experience centers around human interaction. Connection in a virtual world.

That's the metaverse. That's what's addicting about the future of eSports.

We're seeing examples of the Metaverse in various games from Fortnite to NBA 2K. Fortnite released a new "Creative" mode where gamers can meet-up with friends, build things, and play fun games. NBA 2K offers an online mode where players can meet-up on basketball courts and shoot around.

This phenomenon is backed by research. Baltezarević et al.show this in their white-paper *THE IMPACT OF VIDEO GAMES ON THE ESPORTS FORMATION* (emphasis mine):

> *"While playing video games such as eSports, players form social relationships and develop their physical abilities related to socializing with other media consumers (Hamilton et al., 2014) suggesting a resemblance to an offline sport, since socializing with peers has been shown to be of great importance in traditional sports (Dietz-Uhler et al., 2000)."*

Review

Alright, so far we've done the following:

1. Provided an industry overview
2. Presented data to show the tremendous rise in popularity of eSports
3. Offered insight into why eSports is growing as fast as it is

This next section answers three important questions:

- Who are the main players in the eSports industry?
- How does eSports as an industry make money?
- How can we profit from this industry growth?

Esports Big Players

There's six major players in the eSports industry:

- Publishers (Developers)
- Gamers (Professional and Live-Streamers)
- Leagues
- Organizations
- Teams
- Streaming Platforms

Each category has its own revenue models, unit economics and future growth paths. Let's break down each one.

Publishers

Publishers are video game developers. These are the Ubisoft's, Electronic Arts, Activision's of the group. We start with publishers because they're the most powerful and stand the most to gain from the rise in eSports.

Why are they so powerful? Here's Toptal's take from their eSports report (emphasis mine):

> *"The publisher's dynamic in the esports ecosystem can be considered "all powerful." Unlike traditional sports, which can be played by whomever and wherever,* ***publishers build and develop their games and subsequently own all rights surrounding them.*** *This means that they have rights around* ***where the game is played, who can host video game tournaments****, and more. At the end of the day,* ***publishers own the***

***intellectual property of each game**, and other industry participants (players, teams, tournament organizers) are keenly aware of this reality."*

They allow users to stream their IP and decide on which game gets a league and which one doesn't. This power has detrimental consequences for the rest of the eSports segments. Leagues, tournaments, and sponsorships are at the mercy of the video game publisher. To top it all off, video game developers get most of the revenue from leagues and tournaments.

There is a myriad of video game developers in public markets. Some common characteristics include:

- Relatively high gross margins
- Modest capital expenditures
- Lumpy sales growth (boom-bust cycle of games)

Matthew Ball writes in his essay, *Esports and the Dangers of Serving at the Pleasure of a King* (emphasis mine):

"All it takes is a publisher's copyright claim, cease-and-desist order, or policy change to shut them down. This is true even if the games are played online via location connections, too. And certainly, in the case of remote, online play, all gameplay is ultimately administered ("refereed", if you will) by the publisher's online services. ***This means the publishers are effectively co-running the tournament or league – even if they don't know it.****"*

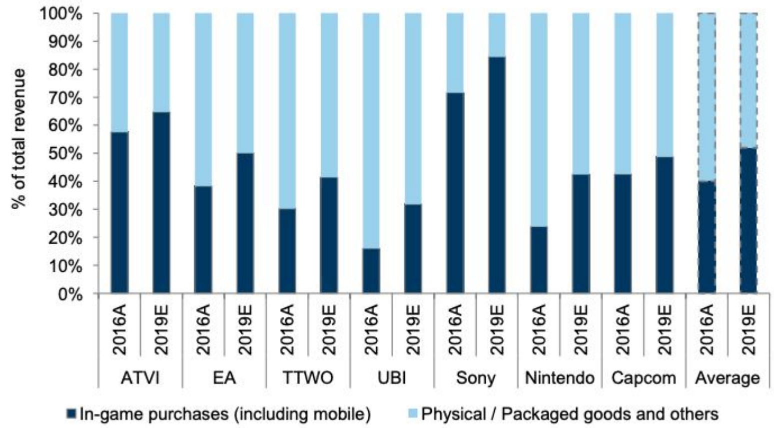
But it's deeper than that. Remember, you play the game within the confines of the developer's game engine. You can't play Call of Duty on something other than Activision Blizzard. Matt elaborates (emphasis mine):

"At a broader level, it's also important to emphasize that matches can only be played with the rules, options, gameplay, physics, items, and characters that the publisher offers. If your favorite "hero" is removed, you can't use them. If you loved a limited-time event that's no longer offered, too bad. If a rule, item, or map changed, you've no choice but to adapt. Because you can't "run" Call of Duty without Activision Blizzard; you can only play the specific versions of Call of Duty they allow."

It comes down to incentives. Game developers aren't focused on improving a league, tournament, or streaming platform. They care about one thing: improving the game quality and their company.

There's also evidence to suggest eSports improves the lifecycle of various games. The Goldman Sachs investment reports suggest (emphasis mine):

"The top eSports titles by prize pool have been around for an average of 5 years, and while this is largely because publishers are constantly updating these titles with fresh content to keep players engaged, we believe eSports also play a part. To the extent that eSports can maintain or grow player interest through regular tournaments and online viewership, ***we believe that can extend the life-cycle of games and in some cases can even accelerate in-game monetization.****"*



Source: Company data, Goldman Sachs Global Investment Research

Leagues

Leagues partner with game developers to host and run tournaments, teams, and prize pools. There's a number of leagues out there, but the most famous include:

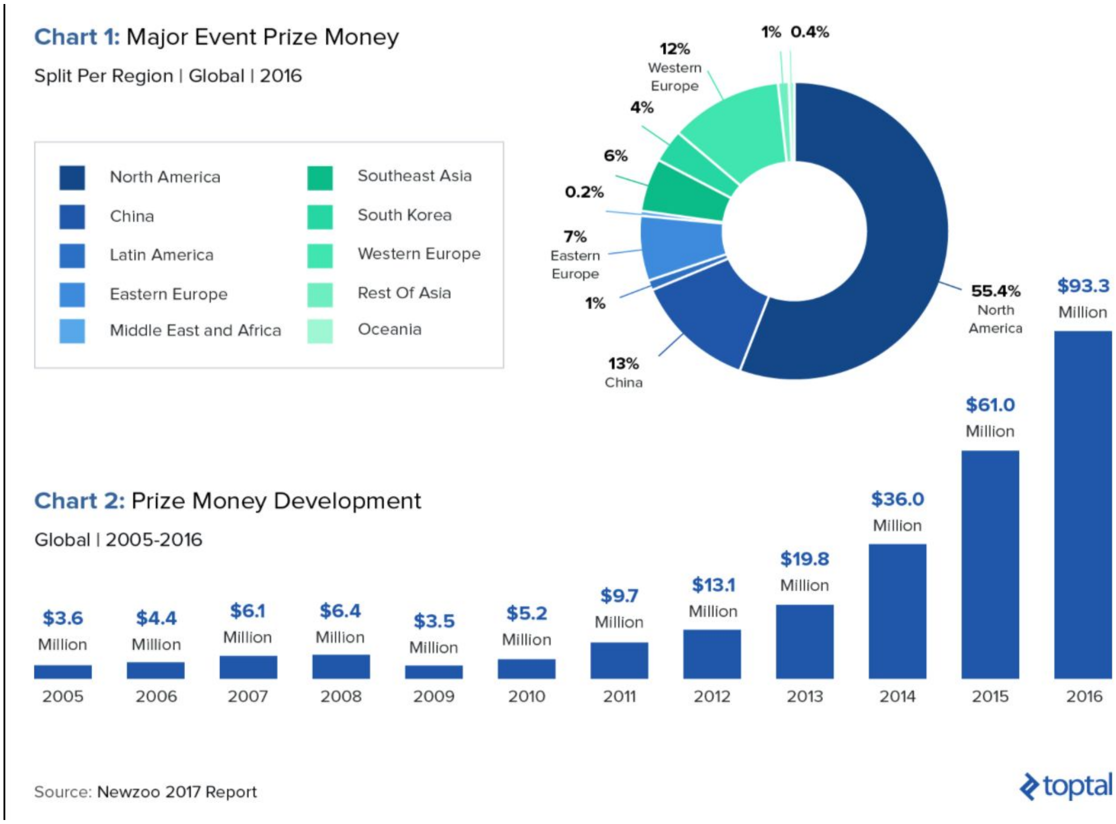
- Electronic Sports League (ESL)
- Major League Gaming (MLG)
- Dreamhack

ESL offers Overstrike leagues, Hearthstone Pro leagues, and Mortal Kombat X leagues.

There's big money in popular eSports leagues, like League of Legends. Toptal's article highlights how much money these league tournaments bring in (see below):

> *"In 2016, The League of Legends Championship sold out the 15,000-seat Los Angeles' Staples Center in an hour, then sold out the 40,000-seat World Cup Stadium in Seoul while drawing an online audience of 27 million. Earlier this year, the Intel Extreme Masters tournament, held in Katowice, Poland, drew 173,000 fans to the stadium over two weekends."*

Check out the graph below showing the growth in major event prize money.



Organizations

Toptal defines organizations as, "*an elite conglomerate of the teams playing a variety of video games. A few of the games are 1v1 while others are team-based and involve two squads competing against each other.*"

Comparing eSports organizations to a singular sports organization like the NFL or MLB isn't correct. A better way of thinking about it is a super-organization that houses both the MLB, NBA, and NFL. That's what an eSports organization looks like.

A perfect example is Team Liquid. Team Liquid is a conglomerate of various eSports teams that play different games. Each team combines to form the Team, with a capital T.

Teams

A team is the individual collection of players and coaches that play a specific type of game (League of Legends, Call of Duty, etc.).

Here's Toptal's take on what it means to be a team, *"each team specializes and competes in one specific game, such as League of Legends, Dota, or Counter-Strike. The teams that* *compete at these tournaments have millions of followers on Twitter, millions watching online, and tens of thousands of spectators following them to in-person tournaments."*

eSports teams look like other professional sports teams. Each player has a specific role. There's head coaches and a training regime in place to keep the players at the top of their game.

Let's take Call of Duty as an example. There are usually four players on any Call of Duty team. Players can choose one of four roles:

- Objective
- Slayer
- Support
- Anchor

eSports teams need sponsors to support the costs of tournament entry fees, coach's salary and players' salaries. When it comes to eSports, talent isn't enough. Teams need money to make it to the big stage.

Streaming Platforms

Everyone knows the popular platforms like Twitch and YouTube. But two others dominate the Chinese markets: Douyu and Huya.

The sheer amount of people consuming eSports streaming content is absurd.

InfluencerMarketing's eSports report noted (emphasis mine):

> *"Twitch and YouTube lead the race with 1.13 million active streamers and 432,000 active streamers per quarter respectively, according to a Streamlabs analysis. Twitch has also seen a steady increase in the number of people who view live streams through the platform.* ***In 2019, the increase so far has been 37%, with 56,700 average concurrent live channels.*** *So there is a ton of activity on these platforms, signifying that eSports fans are highly active and engaged with relevant content."*

Streaming remains an attractive sub-category for eSports investment. But the question reverts to game developers. Will developers continue to encourage streaming of their game IP? If that changes, streaming services would be left with nothing.

It's not only us at Macro Ops that think streaming will take off. Chinese tech giant Tencent invested over $1B in Douyu and Huya. According to the report, Tencent's investment proved two things:

a) The opportunity for live-streaming to monetize the growth in eSports in a way that few other eSports-related businesses can, and
b) the popularity of eSports in Asia in particular.

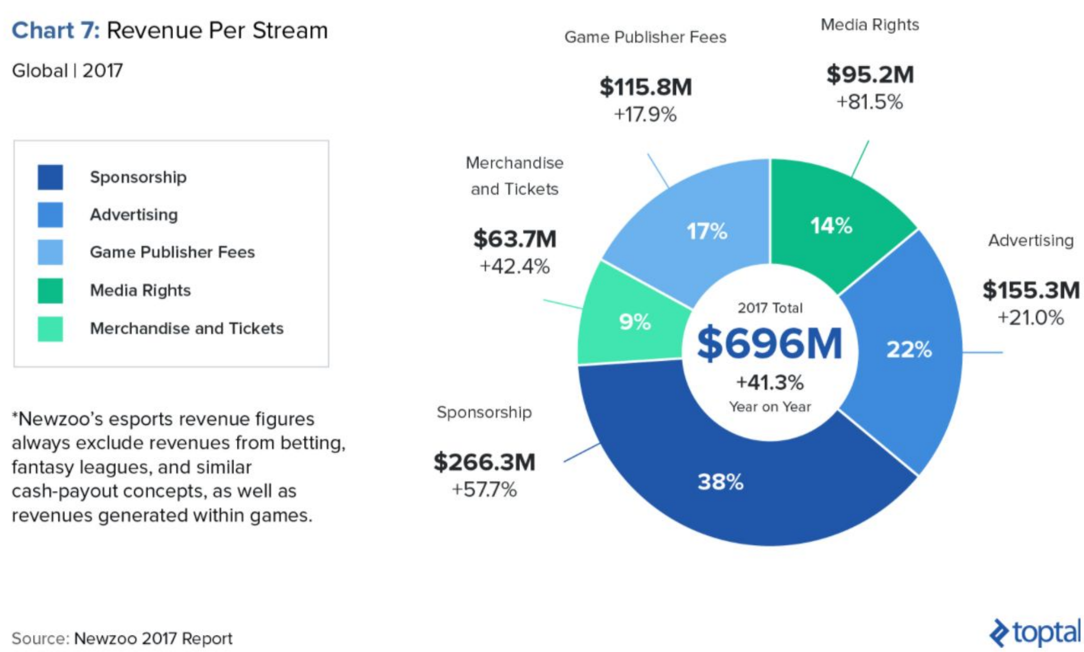
Huya, China's #1 live-streaming platform, has seen 100%+ 3YR revenue CAGR since its IPO. Clearly there's money to be made.

The Current eSports Revenue Model & How It Will Change

Until recently, video game companies lived and died by their hardware sales. These singular-focused revenue segments created massive boom-bust cycles.

That has all changed. Now, eSports companies look and feel like traditional media / professional sports companies. They generate revenue from advertising, ticket sales, media rights, sponsorships; and in-game purchases.

Newzoo's 2017 eSports revenue report shows the revenue breakdown:



We see five main revenue sources:

- Advertising
- Sponsorship
- Game Publisher Fees
- Merchandise & Tickets (self-explanatory, so won't cover)
- Media Rights

Let's break 'em down.

Advertising

Advertising in the eSports industry is like any other entertainment / media company. The more eyeballs you capture, the higher your CPM (cost per thousand impressions). That said, advertising is *real cheap* compared to other platforms. This makes sense as eSports as a viewing/streaming service isn't as accepted as baseball.

Advertising makes up 22% of the industry's revenue with a path towards $224M by the end of this year.

The reason advertising revenue should explode? The perfect demographic audience. Young, disposable income, millennial.

Sponsorship

Sponsorships are simple. Companies (endemic and non-endemic) partner with leagues, teams, or games to provide gear, incentives, or money in exchange for product placement and ad space.

As of 2017, sponsorships made up 38% of the industry's revenue. Going forward, sponsorships will command a major slice of the eSports revenue pie.

A recent EventMarketer article demonstrates companies engaging in the eSports space via sponsorships. The article profiles five companies:

- **Nike:** *"Nike just signed its first esports competition sponsorship, a four-year deal with League of Legions Pro League in China, a nation that's home to 125 million esports fans (according to Newzoo research). Each of the league's 16 teams will be outfitted with Nike sneakers, casual clothing and pro jerseys and, down the road, the brand will explore new physical training programs for esports athletes."*
- **Coca-Cola:** *"In early February, the soft drink company made another big move in becoming the official non-alcoholic beverage sponsor of the Overwatch League (OWL). Under the multi-year deal, Coca-Cola will get exclusivity with all 20 OWL teams, the Overwatch Contenders league, the open division, the Overwatch World Cup, BlizzCon and collegiate events."*
- **Mountain Dew:** *"Mountain Dew recently renewed its partnership with ESL on the Mountain Dew League, an initiative created for amateur teams vying for a spot to participate in the Counter-Strike: Global Offensive Pro League. Now in its third year, the league will feature additional fan experiences this time around, including an All-Star Match and a competition for the "Next Big Caster," both driven by fan voting."*
- **Totino's:** *"Totinos has become a founding partner for esports organization 100 Thieves' Call of Duty team for 2019. Among the content activations to come is a docuseries about*

the players' lives. The frozen pizza roll brand will provide fans "Hot Takes Pressers" from its Instagram account, as well."

- **State Farm:** *"State Farm has sponsored popular Fornite player and streamer Benjamin Lupo, aka "DrLupo." With more than 2.9 million followers on streaming platform Twitch and a penchant for philanthropic efforts through gaming, DrLupo is a very high-profile pick for this non-endemic insurance brand. The sponsorship will include branded replays, live in-stream stunts, remote streams at events, sponsored giveaways and more."*

Game Publisher Fees (GPF)

Leagues/tournaments pay game developers a fee for letting them use their game's IP. This is easy-money for game developers. Publishing fees are a high-margin source of revenue. There's no incremental cost to letting a tournament or league use your video game. You (the game developer) collect an annuity for allowing it to happen.

Here's Toptal's take on GPF (emphasis mine):

"GPF represents a large portion of industry revenues, ***but it's less attractive for investors****. Most of these fees involve marketing campaigns to extend the life of each game title. Newzoo estimates this segment will experience the slowest revenue growth over the next five years."*

GPF made up 17% of eSports' 2017 revenues.

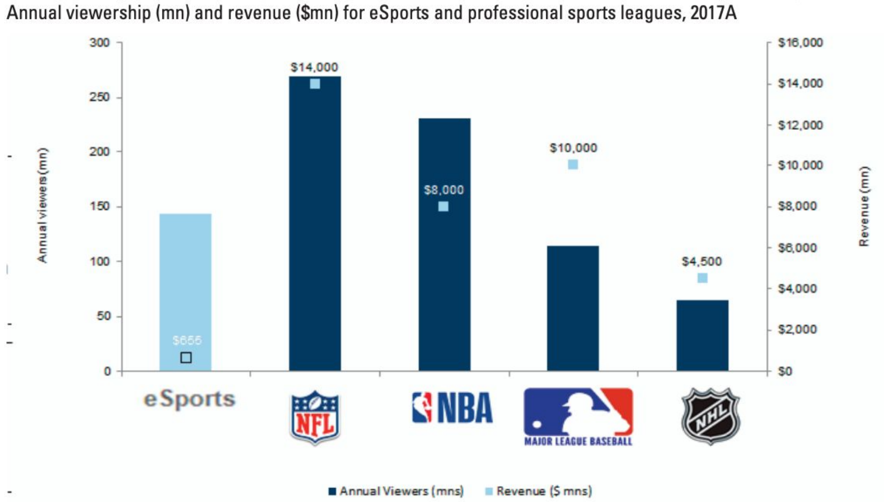
Media Rights

Media rights are the most exciting aspect of esports future revenue growth. Like professional sports charging TV stations for the right to stream their sport, esports media rights should take off. This segment's expected to generate $340M in revenue by 2020, up from $95M in 2017.

Why are we excited about media rights? As eSports shifts more to a professional league look, media rights will become a larger part of total revenue.

eSports is under-monetizing its audience in its current form. Most

Exhibit 15: eSports dramatically under-index on monetization relative to established sports leagues
Annual viewership (mn) and revenue ($mn) for eSports and professional sports leagues, 2017A



Source: eSports annual viewership and revenue from NewZoo; shows enthusiasts only, Marketwatch, CBS, Forbes, Goldman Sachs Global Investment Research of this under-monetization is due to smaller portions of media rights as a percentage of total revenue.

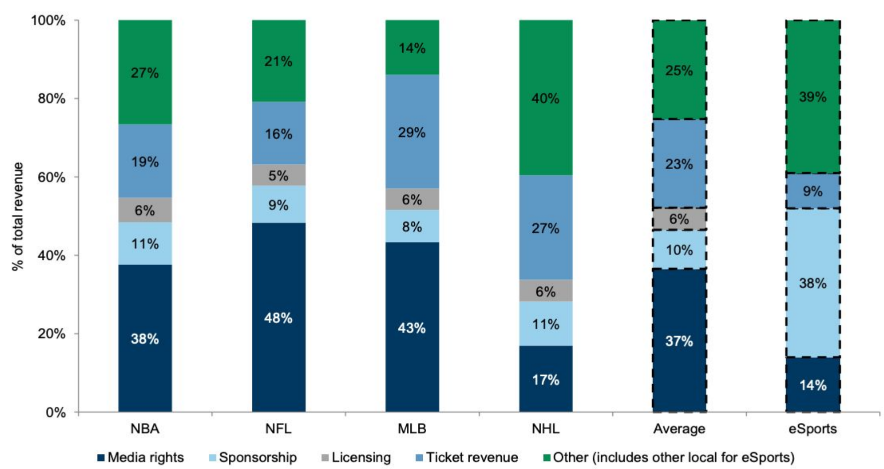
As the graph shows, **eSports boasts a larger audience than MLB and NHL but generates substantially less revenue ($656M vs. $10B for MLB and $4.5B for NHL).**

Traditional sports teams generate 37% of their revenue from media rights. Esports does 14%. There's *clearly* a long runway to expand that category. Moreover, media rights are higher-margin revenues with less direct costs (labor, etc.).

The media rights gap should close over the next few years. We agree with Goldman's assessment below (emphasis mine):

"By 2022, we believe eSports revenue streams will look much different than they do today. While sponsorships make up the largest percentage of global revenue today, we believe media rights will eventually become the largest source of eSports revenue, as massive audiences and associated ad revenue for established online video platforms like Twitch, YouTube, Douyu, and Huya will be able to support a growing pool of media rights fees paid to top publishers for their content."

Exhibit 16: 37% of revenue in traditional professional sports is derived from media rights
Revenue breakdown for the NBA, NFL, MLB, NHL (2017A), and eSports (2017A)



Source: Goldman Sachs Global Investment Research, Sports Business Daily, New York Times, Wall Street Journal, CBSSports, ESPN, Forbes, MLB.com, Liberty Media

Sources For Further Reading

I couldn't put everything I read into one report. In return, I've provided a list of all the reports and articles I read to prepare this monthly piece. Feel free to download and peruse at your leisure.

- https://arizonalawreview.org/pdf/57-3/57arizlrev823.pdf
- Why Invest in Esports - Games Market Growth & Opportunities
- The Incredible Growth of eSports [+ eSports Statistics]
- The World of Games eSports From Wild West to Mainstream [Redacted]
- (PDF) THE IMPACT OF VIDEO GAMES ON THE eSPORTS FORMATION
- eSports Betting The Past and Future
- Esports & Brands
- The Rise of a New Entertainment Category: Esports
- THE EMERGENCE OF ESPORTS & THE ADVERTISING OPPORTUNITIES WITHIN THE ECOSYSTEM
- EJ954495 - Comparison of eSports and Traditional Sports Consumption Motives, ICHPER-SD Journal of Research, 2011
- Success in eSports: Does Country Matter? by Petr Parshakov, Marina Zavertiaeva
- The rise of eSports investments Download the perspective
- MAXIMIZING YOUR INVESTMENT THROUGH UNDERSTANDING THE FANS
- Investor Deck - October 2019
- https://www.foley.com/-/media/files/insights/publications/2019/11/2019-esports-survey-report.pdf
- Special Report EVOLUTION OF MOBILE ESPORTS FOR THE MASS MARKET
- What to expect from the Esports sector in 2020
- The eSports User Manual -- Connecting Brands w/ The Fastest Growing Sport In The World

Public Companies in eSports Industry

Game Publishers

- EA Sports (EA)
- Cdprojekt (CDR.PL)
- Nexon (3659)
- Zynga (ZNGA)
- Ncsoft (0365)
- Konami Hodlings (9766)
- Capcom (9697)
- Netmarble (2512)
- Pearlabyss (2637)
- Ubisoft (UBI.FR)
- Netease, Inc. (NTES)

Gaming Hardware Products

- Micro-star International (2377)
- Turtle Beach (HEAR)

Conglomerates

- Modern Times Group (MTG_B)
- New Wave Holdings (SPOR/SPOR.W)
- Razer (1337)

Live-Streaming Services

- Douyu International (DOYU)
- Huya, Inc. (HUYA)
- Joyy, Inc. (JOYY)
- Afreecatv (0671)

Advertising Software

1. Versus Systems, Inc. (VS)

eSports Betting

- Esports Entertainment Group (GMBL)
- River iGaming PLC (RIVER_ME)
- Flutter Entertainment (FLTR)

- Points Bet (PBH)
- Betmakers (BET)

Integral Software

- Kambi (KAMBI.SO)
- Playtech (PTEC)

ETFs

- Global X Video Gaming (HERO)
- Roundhill Sports Betting & iGaming (BETZ)
- Vaneck Vector (ESPO)
- Roundhill eSports (NERD)

Appendix: Company Write-ups

Game Developer: CDProjekt (CDR.PL)

Business Description: CD Projekt S.A., through its subsidiaries, engages in the development and digital distribution of video games worldwide. It operates through two segments, CD PROJEKT RED and GOG.com. The company's product portfolio comprises The Witcher; The Witcher 2: Assassins of Kings; The Witcher 3: Wild Hunt, Hearts of Stone games, and Blood and Wine; Thronebreaker: The Witcher Tales; Gwent: The Witcher Card game; and Cyberpunk 2077, as well as online multiplayer games. It also distributes digital videogames through online channels directly to individual users; and its games for various hardware platforms using traditional distribution channels and digital distribution platforms. - *TIKR.com*

Financials:

- Market Cap: $9.57B
- Enterprise Value: $9.42B
- Shares Outstanding: 96M
- Gross Margins: 70%
- Operating Margins: 37%

Thesis: CDR's coming off a historical year for sales and profitability. The company will use this momentum to further bolster its line-up of gaming IP while investing in its most popular series' like *The Witcher* (over 50M copies sold). The company's net cash balance sheet is strong enough to withstand the boom-bust cycle of new game releases. CDR boasts extreme operating leverage, which we believe will continue over the next five years.

CyberPunk 2077 & GWENT: CyberPunk is CDR's most hyped new release. The game hits the shelves in September. You can check out the trailer here. Steven Petite wrote about CP2077 for DigitalTrends, saying (emphasis mine):

> *"Cyberpunk 2077, however, is **next-level stuff when it comes to player choice.** You can complete the entire game without killing a single enemy. You can pick an origin story that affects how NPCs perceive and speak with you. You can tackle objectives in a dazzling number of ways, mixing stealth with fast, **first-person shooting and a hacking mechanic that is undeniably wild.**"*

CDR's created an entirely new gaming genre with the release of CyberPunk 2077. It's a combination of Red Dead Redemption, Call of Duty and Halo all wrapped in one. *The Witcher* series is in a class of its own when it comes to RPGs and CDR expects nothing less with CyberPunk.

Then there's GWENT, CDR's *Witcher* card game. The card game was originally just that, a card game. But in April, CDR created an online mode and eSports tournaments for the otherwise in-person card duel. The card game is now available on Steam and the micro-transaction options seem endless. The company can release new editions (like expansion packs) for incrementally high margins.

Which brings us to CDR's greatest competitive advantage: obsessing over single-player gameplay

Competitive Advantage: Zero Micro-Transactions in Single-Player: CDR prides itself on having zero micro-transaction requirements in its single-player campaign/story modes. That's true of CyberPunk and all the *Witcher* series. *Not* having microtransactions built into single-player mode bucks the trend of nearly every video game developer. Rockstar made a *killing* with micro-transactions in Grand Theft Auto (GTA).

What CDR loses in additional revenue it makes up for in dedicated, hardcore customers. Customer reviews of CDR paint one picture: a company dedicated to making the absolute best RPG of all time. That's it.

Valuation: The company doesn't screen cheap on a quantitative metric. It trades over 100x P/E and 128x EV/EBITDA. I can hear traditional value investors howling at the moon.

Again, we're strapping onto a long-term secular growth trend. CDR's perfectly positioned to capture that growth. They have a dedicated base of super-fans and produce the highest quality games in their category. They're also *just now* beginning to monetize GWENT.

The company's anticipating over 500% revenue growth and 74% EBITDA margins next year.

Here's our assumptions post-2020:

(PLN in millions)		Input Projections				
Fiscal Years Ending	Dec-19	Dec-20	Dec-21	Dec-22	Dec-23	Dec-24
Revenue	521	3,593	3,593	5,030	6,288	6,917
% Growth	*43.6%*	*589.3%*	*0.0%*	*40.0%*	*25.0%*	*10.0%*
EBITDA	201	1,437	1,509	2,213	3,018	3,458
% of Revenue	*38.5%*	*40.0%*	*42.0%*	*44.0%*	*48.0%*	*50.0%*

We don't expect EBITDA margins to hit 74% next year. Our model anticipates a slow climb towards 50%. That's about what the company did in net profit margin for the most recent year.

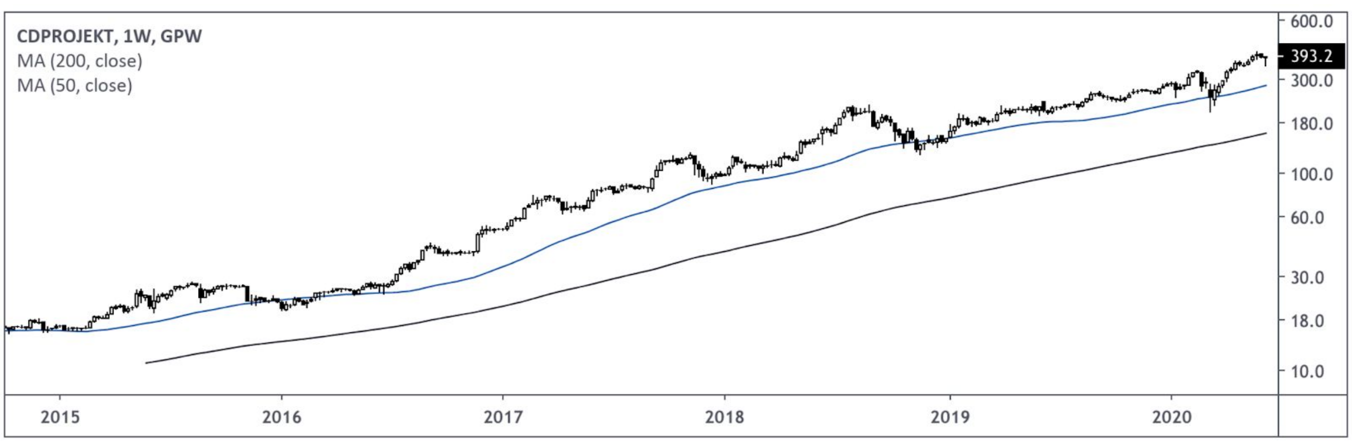
After five years we're left with 6.9B PLN in revenue, 3.4B PLN in EBITDA and 2.5B in FCF. That gives us around 31.5B PLN in Enterprise Value.

Add back the cash and subtract the debt and we're left with 32B PLN in shareholder equity ($334/share). That's less than the company's current stock price. But remember, we're long-term oriented and are fine with waiting for the right price.

Let's head to the charts.

Technical Analysis:

Weekly Chart



The weekly chart shows how reliable the 50MA is as a support level. Again, we're looking for a retracement to the 50MA with support. That would give us an optimal reward/risk entry point with a decent discount to our estimate of intrinsic value.

Risks:

- CyberPunk flops and sales come in flat.
- *The Witcher* series loses its dedicated super-fan base
- Rising labor costs in Poland
- Long delays in between game releases causes the company to burn through cash, leaving little for R&D.
- The stock runs and never retreats to a price we like
- Growth doesn't meet expectations causing overvaluation

Game Developer: Pearl Abyss (263750.SK)

Business Description: Pearl Abyss Corp. develops and sells PC/console games worldwide. The company was founded in 2010 and is headquartered in Anyang, South Korea. - *TIKR.com*

Financials:

- Market Cap: $2.09B
- Enterprise Value: $1.86B
- Shares Outstanding: 12.21M
- Gross Margins: 99.9%
- Operating Margins: 28%

Thesis: Pearl Abyss is a fast-growing game developer with two *very* popular game platforms (Black Desert & Eve Online). The company recently entered the console space and the Chinese market. Insiders own ~47% of the business. There's $224M net cash on the balance sheet and the stock trades for roughly 15x normalized FCF. At the current price you're paying less than 10x our estimate of 2022 FCF.

Core Gaming Platforms: Pearl Abyss has two core games: Black Desert and Eve Online. Black Desert is a sandbox-oriented (open world) fantasy MMORPG game. Since its Microsoft-only offering in 2015, the game's quickly gained traction. Pearl expanded Black Desert with offering a mobile and console version. The game had 3.4M players in 2017. By January of 2020 the game reached 30 million users. That's quite the growth rate.

Eve Online is Pearl's second core game offering. According to multiple gaming websites, Eve Online is a "one of a kind" open-world experience. The game features a space-odyssey/Star Wars concept where gamers pick spaceships and engage in intergalactic warfare.

While we've seen signs of reduced gameplay, Eve Online remains an open-world MMORPG icon. The game itself is 15 years old, going through a series of upgrades and added features.

That said, Eve Online officially launched in China back in April. This should increase the number of users on the platform, and in turn, drive revenue via in-game transactions.

The New Pipeline: The company's working on a few new games that should release in the coming quarters/years:

- Shadow Arena - 40 vs. 40 role-playing battle game.
- Crimson Desert - MMORPG prequel spin-off to Black Desert
- DokeV - MMORPG colorful game that reminds me of pokemon mixed with Club Penguin
- Plan 8 - MMO futuristic shooter that looks like a hybrid between Call of Duty and Rainbow Six Siege.

These games should hit the PC world over the next year and provide significant opportunities to scale and grow Pearl Abyss' total audience.

Valuation: Growing Into Scale

The company's highly profitable with nearly 100% of its revenue falling through to gross profit. They've cut operating margins in half -- thanks to rising SG&A costs. But over time, SG&A should normalize as the company fills out its hiring and develops its core team of developers.

Last year Pearl did $130M in operating income and $124M in free cash flow.

Here's our assumptions for the next five years:

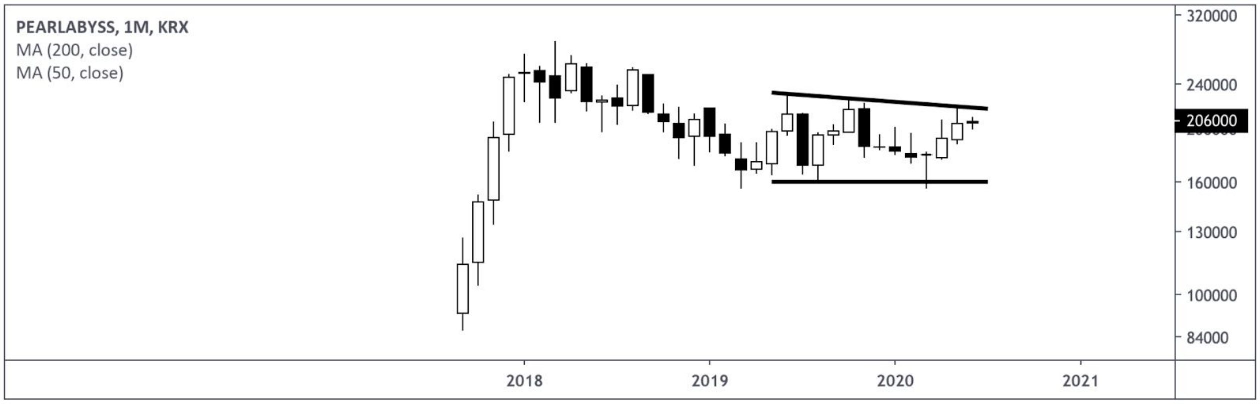
(KRW in millions)		Input Projections				
Fiscal Years Ending	Dec-19	Dec-20	Dec-21	Dec-22	Dec-23	Dec-24
Revenue	535,937	552,015	607,216	749,521	843,211	906,451
% Growth	*32.4%*	*3.0%*	*10.0%*	*23.4%*	*12.5%*	*7.5%*
EBITDA	167,973	176,645	206,453	269,827	320,420	362,581
% of Revenue	*31.3%*	*32.0%*	*34.0%*	*36.0%*	*38.0%*	*40.0%*

We're betting on continued success with the launch of Pearl's new titles (increased revenue) and normalized SG&A spending giving Pearl operating leverage as it grows its revenues (increased EBITDA margin).

Our assumptions give us $237M in 2024 FCF and a $2.9B Enterprise Value. Adding our cash and subtracting long-term debt gives us roughly $3.15B in shareholder equity ($258/share). That's around 50% higher than today's stock price of $171/share.

Technical Analysis:

Monthly Chart



The monthly chart shows a descending triangle with price trying to breakout to the upside. We're looking for bullish price action to confirm our underlying thesis (breakout to upside)

Weekly Chart

The weekly chart offers a more granular view on where price might breakout. Price is above the 50MA, a bullish signal. Also, notice *how long the price* has stayed above the 50MA: >8 weeks. There's *serious* selling pressure at the upper bound of the triangle. A breakout above to send prices to all-time highs.

Risks To Thesis

- Continued decline in EVE Online users
- New releases flop and fail to gain traction with fans
- Company fails to normalize SG&A spend keeping EBITDA margins low
- Cash-burn in between game releases causes the company to issue debt/equity
- Stalled growth in China

Advertising Software: Versus Systems (VS.CA)

Business Description: Versus Systems Inc (VS). operates a business-to-business software platform that allows video game publishers and developers to offer prize-based matches of their games to their players. Its Winfinite platform, an in-game prizing, and promotions engine that allows video game publishers and developers to offer in-game prizing to their players through mobile, console, PC games, and streaming media. **-** *TIKR.com*

Thesis: VS is about as close to venture capital in public markets as you can get. The company barely generates revenues, sports a history of operating losses and finances the company through equity/debt issuance. That said, VS' in-game advertising system is unlike anything on the market. In-game rewards-based advertising improves brand ROI >3x, increases gameplay time 34%, and leaves the user feeling better about their in-game experience. Insiders own 25% of the company. Interests are aligned.

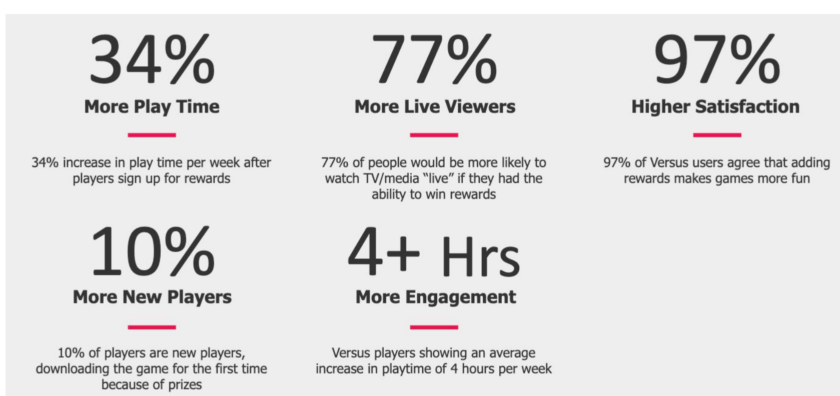
The Power of Rewards-Based Advertising

People love choice. They love the feeling of deciding the outcome of something. If there's one thing that we feel we have no control over, it's ads. We hate ads. Especially when we want to do something else (like crush those candies). Anecdotally this is true. Whenever I see an ad pop-up on an app or on a website, the first thing I do is find the "X".

Every ad is 100% opt-in. Players choose to experience the ad for the chance to win real-world company prizes.

That's why Versus' patented software *Winfinite* is so powerful. Now, brands can advertise in-game through achievement-based rewards programs. In other words, kill "x" amount of people in Fortnite and win a coupon for a free White Castle burger. The rewards are built into each specific game's regular incentive structure. NASCAR's Heat Mobile game is a good example. If you win the race, the rewards-based advertisement would reward you with whatever prize you chose. It's built-in to the mechanics of the game.

Versus is shifting the ad game from forced watching to voluntary selection based on a user's preference and taste. This is a big deal. Why? People *love* rewards. Who wouldn't want a free cup of coffee if they place



3rd or higher in a solo Fortnite match?

Rewards-based advertising creates a win-win-win for the advertiser, brand, and game developer. The advertiser wins through the gamer's increased engagement with their product/brand. The gamer wins because he/she wins real-world prizes on the things they *enjoy*. Finally, the developer wins because gamers now spend *more* time in the game and on their platform.

This win-win-win scenario creates a tremendous incentive for developers *and* advertisers to join the platform.

Increased ROI For Advertisers

Versus helps companies increase engagement on their advertising campaigns.

Versus' Rewards-based advertising prompted 36% of winners to travel to a company's physical store to redeem what they won in the game. Compare that to a <1% conversion rate for other ad platforms.

Second, advertisers receive 3.5x ROA on a single, geographically-targeted transaction within the Versus platform. In other words, advertisers receive $3.50 for every $1 they spend advertising in Versus.

Finally, 97% of gamers surveyed said a rewards-based ad actually *improved* the in-game experience.

Integration with HP Omen & Chinese Market

The real growth driver for Versus is their integration with the HP Omen gaming laptop series. The company signed a multi-year contract with HP making Versus' *Winfinite* software the *default* rewards-based advertising platform in each Omen laptop/desktops.

Omen users can opt to play in the Omen Rewards platform. This platform allows users to win real-world rewards from games they already were going to play. And the list of rewards-enabled games is big:

- Overwatch
- Fortnite
- League of Legends
- PUBG

The HP integration matters for one big reason: **Switching costs.** Gamers can't opt-out of using Versus' system *if they want* in-game rewards. Also, it'll be hard to replace Versus' system after the initial deal runs course.

If players grow accustomed to the in-game rewards and hardware sales rise, why would HP opt for another in-game rewards system? Again, it goes back to switching costs. Even if another competitor had a cheaper software solution, it's expensive to rip software out of every gaming laptop and desktop.

HP Omen is also expanding into China. Normally it makes me cringe when I hear micro-caps mention "China" in their pitch decks. But this one makes sense. China is the leader in esports/gaming.

Transaction-Based Revenue Model

The company operates a cost-per-engagement (CPE) pricing model. This is different from a standard cost per click (CPC) model used by companies like Facebook and Google.

CPE models offer advertisers tangible returns on their spending that CPC programs can't match. The difference between CPE and CPC models lies in what the advertiser pays for.

- CPE: Advertisers pay when a user *engages* with the ad (hitting like, entering an email, sharing the ad on social media)
- CPC: Advertisers pay when a user clicks on the ad

Versus charges $0.50/engagement. Much lower than Facebook's $1.74 CPC offering. Yet Versus delivers a much better engagement proposition with advertisers.

According to VS' financials, the revenue model breaks down to this:

> *"Versus sells the opportunity to place in-game prizes to advertisers who wish to place product ingame, sharing a certain portion of the gross receipts with the content and game owners. Current agreements range from 50% to 60% of revenue being shared with the publisher/developers, with the remaining 50% to 40% of gross receipts belonging to Versus."*

Here’s some stats to back up that claim:

- 44% more sessions per player on Winfinite than standard gaming mode
- Gamers interact with advertisements an average of 14.8 minutes per campaign
- Email open rates of 54%

Thinking About Revenue Growth

The company is still in its developmental stage with barely any revenue coming through the door. Like we mentioned, it’s as close to venture in public markets as you can get. That said, what would revenues look like over the next 3-5 years?

The company generated over $700K in TTM 2019 revenues. But that was before integrating with HP and entering the Chinese markets.

An honest answer to the question: “how much revenue can they generate in five years” is **I have no idea.** That’s the trouble with developmental-stage companies. But let’s try. The company did $700K in receipts form TTM 2019. Given their revenue splits, that means they generated $1.4M in sales split between the publisher and Versus. That’s for two (small) games: NASCAR Mobile and Emoji Charades.

Editor’s Note: As of writing this I am trying to get in touch with VS investor relations to better understand the unit economics of its business. Will update with new information.

Now, HP’s Omen series provides Versus an audience of over 100M monthly users. The best part, Versus pays $0 for these customers. Game developers and publishers spend all the acquisition cost to get the user on their game.

Analysts expect $10M in revenue for 2020, a gigantic leap. But given the recent developments, it’s not too hard to imagine that.

Going forward, we think VS can double revenue in 2021 and reach $30M in top-line by 2024. If that happens (and again, a **huge** if), you’d pay around 1x sales for a company growing top-line over 100% CAGR.

Risks

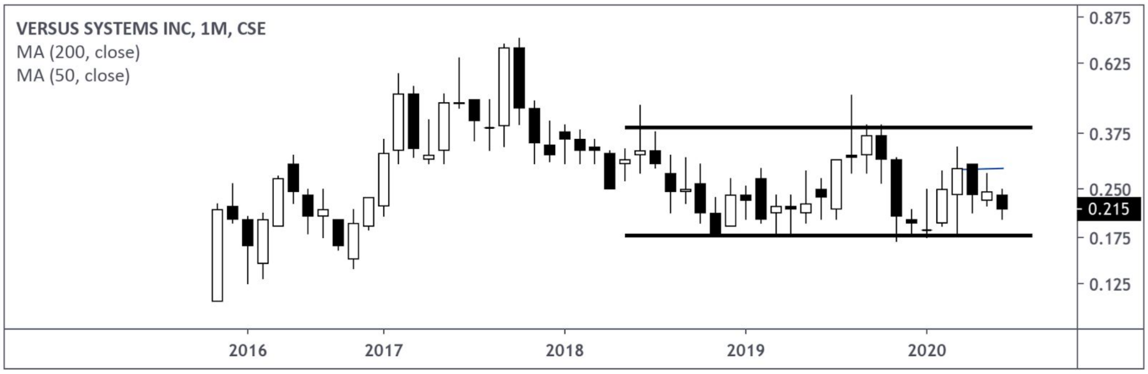
Where do we begin with risks? The company’s barely made revenues, generates massive operating losses, and needs equity/debt markets to fund its operations. VS also trades on the Canadian exchange, flying under the radar of most US-based investors.

If the company doesn’t **massively** grow top-line revenue then there’s a non-zero chance this is worth $0.

That's where position size comes in. Treat VS like a call-option. We recommend no more than 1-2% of capital at this stage.

Technical Analysis

Monthly Chart



VS is range-bound between $0.375 and $0.175. If we get a retracement to the lower-bound of this rectangle it would create an ideal reward/risk initial set-up. We're also looking for the breakout to the upside of the pattern.

Weekly Chart

Stock remains below its 50MA on the weekly chart. This gives us a higher probability chance we'll see the stock test its support level.

That's it for this report. Thank you for reading and please shoot any comments/questions you may have to me at Brandon@Macro-Ops.com.

Your Value Operator,

Brandon