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ADVISORY & INVESTMENTS

Omba Advisory & Investments Ltd



Thematic Trends eSports & Video Gaming

“The Korean football team were playing in the World Cup. To motivate the Korean football team to play better they brought in StarCraft Brood War professional gamers into their locker room... so they got to meet what were their heroes (sic)”

– James Harding, eSports Personality

December 2020

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1. Executive Summary

In this publication we dive into the world of video games and eSports. Our assessment is that video game-related stocks demonstrate a strong investment thesis that is supported by strong fundamentals and attractive valuation metrics. After assessing the [Current State of Play](#) of the global industry in terms of revenues and number of players, we look to the future to understand what will drive continued user adoption and revenue growth. Although the industry globally has grown from US\$ 73 bn in 2014 to US\$ 129 bn in 2019, a whopping 76.7% increase, the market is expected to continue growing to US\$ 200.8 bn in 2023 (a further 55.7% upside in as little as 4 years). We see global revenue growth as being underpinned by a variety of factors, all of which are explored in depth in the section [Looking Ahead \(No Signs of Slowing\)](#). These drivers are:

- **Young people love gaming: A fast-growing user base**
- **Changing spending habits: Younger players spend much more (even those not yet in the workforce)**
- **The eSports revolution: Adoption across age and region**
- **Evolving business models: Games-as-a-Product shifts to Games-as-a-Service**
- **Going mobile: A rise in “casual” gaming and increased low-cost penetration**

Later, we look more closely at the eSports industry: what comprises [the Ecosystem](#) and how businesses make money. We look at specific [Teams](#), such as FaZe Clan, which has more social media followers than the Dallas Cowboys and New York Yankees combined. Some other eSports teams are valued at as much as US\$ 400 mn! The most popular [Leagues and Events](#) in the space now rival prize pots and viewership rates of traditional sports. For example, the League of Legends 2017 Worlds had over 200 million viewers compared to c. 100 million for the NFL Super Bowl. We also look at major [Game Publishers](#) to learn about the most popular games in eSports.

Finally, in [Investing in eSports and Video Gaming](#), we look at eSports benchmarks and what makes for an appropriate investment in the space. We find that eligible stocks, as defined by various video games benchmark providers, can include the likes of Chipmakers and diversified technology conglomerates in addition to traditional Media & Entertainment companies and Game Publishers. Being ETF specialists, we then do a deep-dive into one of the many available ETFs that we like in the space - the [VanEck Vectors Video Gaming and eSports ETF](#). We look at important data for the ETF and largest stock holdings, and compare it to the MSCI All Country World Index. We find that this ETF is comparable to the MSCI All Country World Index in terms of traditional valuation multiples although is actually much cheaper when adjusting for growth forecasts! We proceed to compare this eSports ETF with the global equity benchmark in terms of sector, region, and company size allocation. We then briefly discuss some [Example Stocks](#) from different sectors that are held in the ETF.



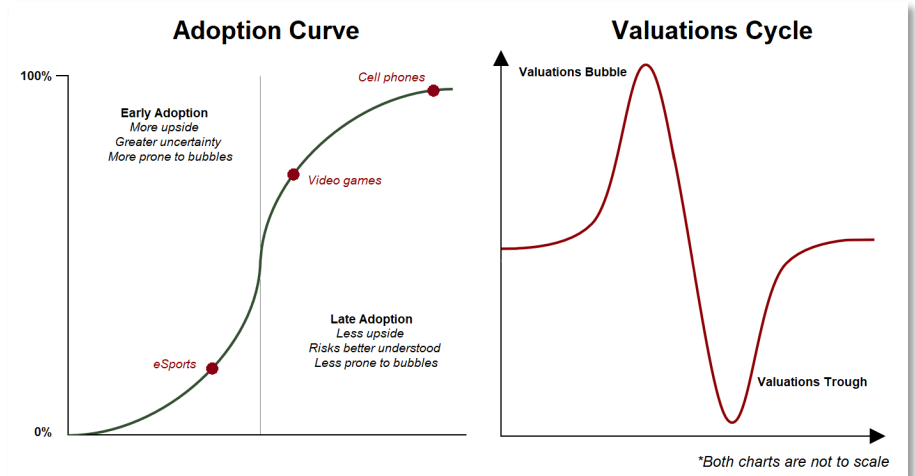
2. A Growing Market

2.1. What Makes a Good Thematic Investment?

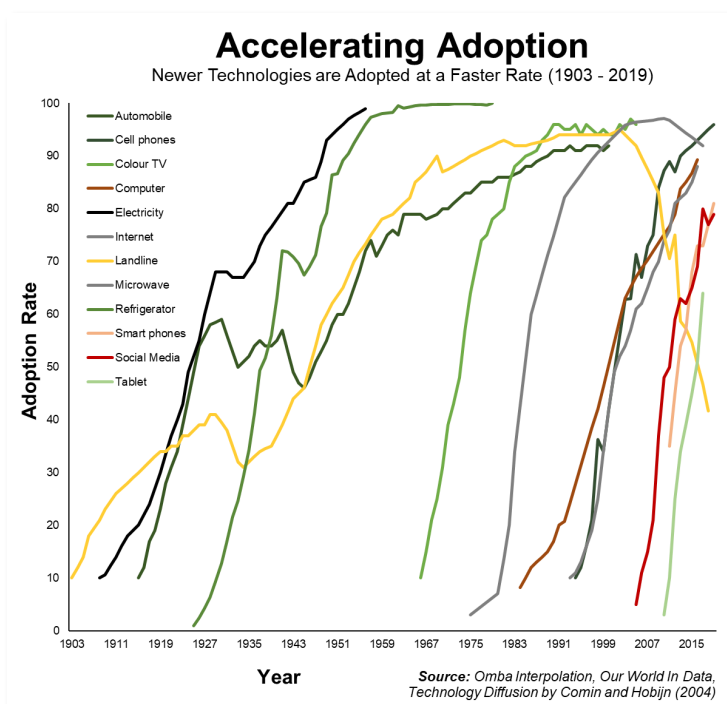
The world is changing - and faster than ever¹. New technology and adoption trends are continuously redefining our place in the world: how we communicate with loved ones, how we spend our free time, even how we see ourselves in the context of society and form our political beliefs. The adoption of thematic trends brings clear changes to our day to day lives, and in the background comes a changing economic landscape. While our personal computers, smart phones, and social media are always front of mind, the companies that facilitate such revolutions – the likes of Microsoft, Apple, and Facebook – are seldom as well understood until after the fact. In this piece, we dive into the thematic trend of eSports and Video Gaming.

What makes for a good thematic investment? There are two important components to consider:

- **The Adoption Curve**
- **The Valuations Cycle**



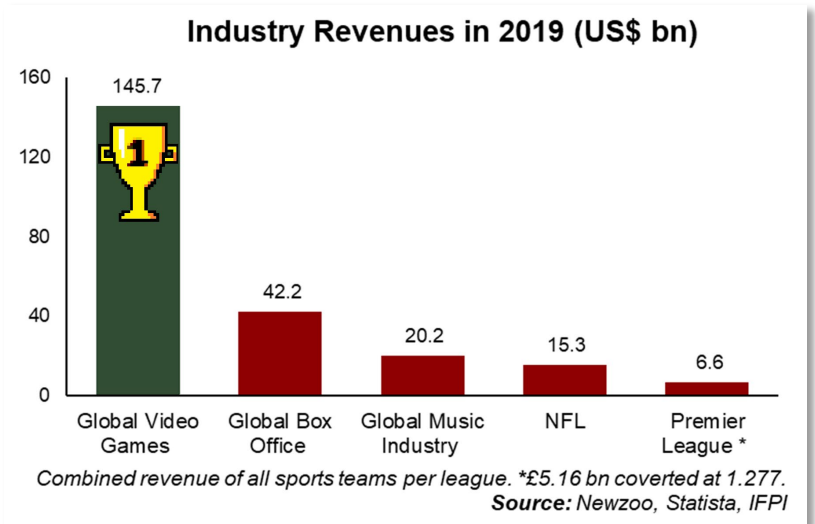
Investing early on the Adoption Curve comes with greater risk and, sometimes, greater potential return. The Valuations Cycle – to some degree – overlaps the adoption curve. In this publication, we explore the numerous facets of the eSports and Video Gaming ecosystem to better understand existing adoption versus future upside. With 64% of American adults and 70% of children already playing video games², some facets of the gaming industry have already seen widespread adoption. However, we see untapped upside in the more nascent areas of the industry whilst other, more mature areas, make for a more stable investment thesis and can act as a ballast (whilst still enjoying capacity for continued growth).



Some of the most exciting opportunities include **eSports** as an industry – which is yet to go mainstream in the West – and **Mobile Gaming**, the fastest growing platform. At the same time, the investment universe also encompasses more mature technology sectors such as **Chipmakers**, which leverage dynamics of continued technology adoption. Traditional **Game Publishers**, which are relatively mature, may still see compelling adoption growth as well as a shift to more valuable business models that extend the sales cycle (e.g. in-game purchases and a shift from “Games-as-a-Product” to “Games-as-a-Service”). We also look at companies which we like to describe as “Asian Giants”.

2.2. Current State of Play

American adults are estimated to have spent a combined daily average of over 7 hours on TV and mobile devices in 2019 – marking the first year that portable devices won more screen share than TV at about 3 ½ hours³. As technology has evolved, the media (both traditional and “social”) has shifted from a model of *high quality paid-for content* to one of *abundant free content* solely designed to grab our attention (read: screen time) – sometimes at the expense of factuality and/or mental health considerations. Whilst the societal impact of a changing media landscape is out of scope of this publication, the point is clear: despite the clear abundance of consumer screen time, the competition is fierce. Video games are in direct competition with other media platforms. ***Even Netflix, in their 4Q 2018 Shareholder Letter, flagged that the company “compete[s] with (and lose to) [video games like] Fortnite more than HBO”⁴.***



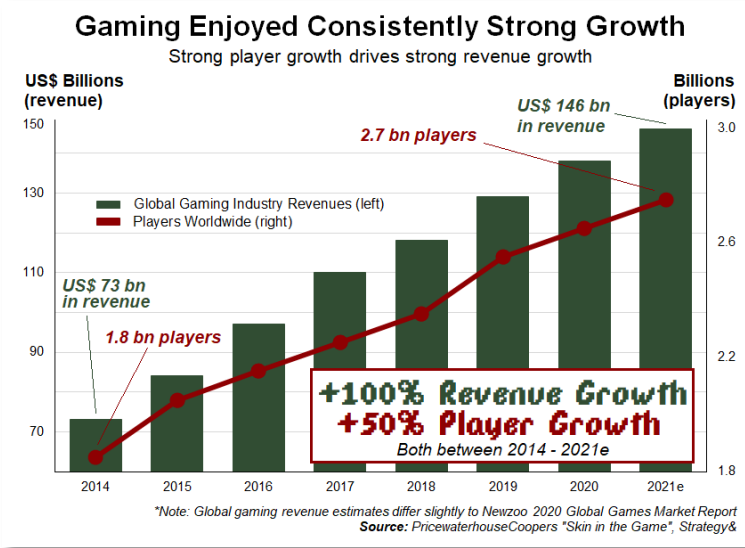
Top 3 Grossing Franchises: Film versus Gaming

Ranked by lifetime revenue of primary vertical (i.e. excludes merchandise)*



How then do video games stack up to other media platforms? Well, global revenues for the gaming industry - at US\$ 152.1 bn in 2019 - already dwarfs film, music, and even traditional sports (shown above). Many readers may also be surprised to hear that the top gaming franchises also beat the top film franchises in terms of lifetime gross sales. Super Mario, the all-time top grossing video game franchise at US\$ 30.3 bn, far outperformed the all-time top grossing movie franchise Marvel Studios (film only) at US\$ 22.6 bn in lifetime sales (shown above).

Despite global gaming industry revenues breaking US\$ 100 bn as recently as 2017, both annual revenues and the global player base have demonstrated consistently exceptional growth rates for an extended period of time. PricewaterhouseCoopers (PwC) estimated that revenues for the global gaming industry will grow +100% (doubling) from 2014 to 2021⁵. As we can see from the chart on the next page, global revenue growth is driven

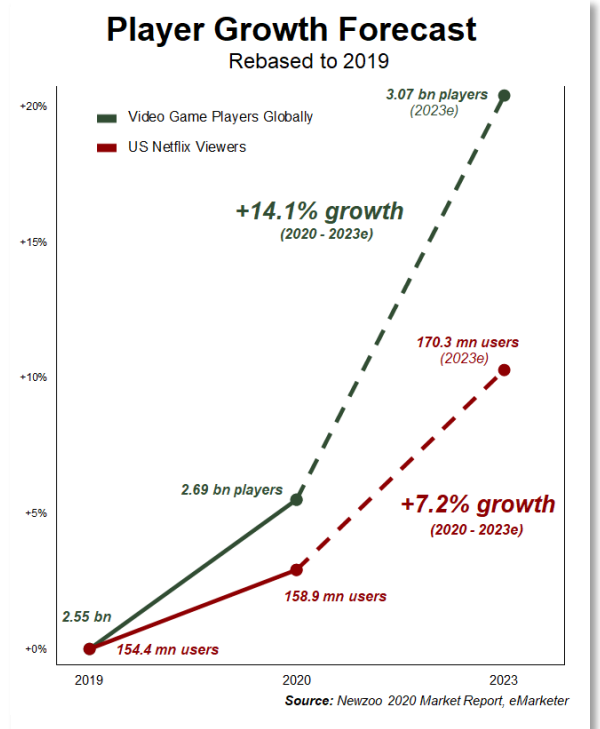
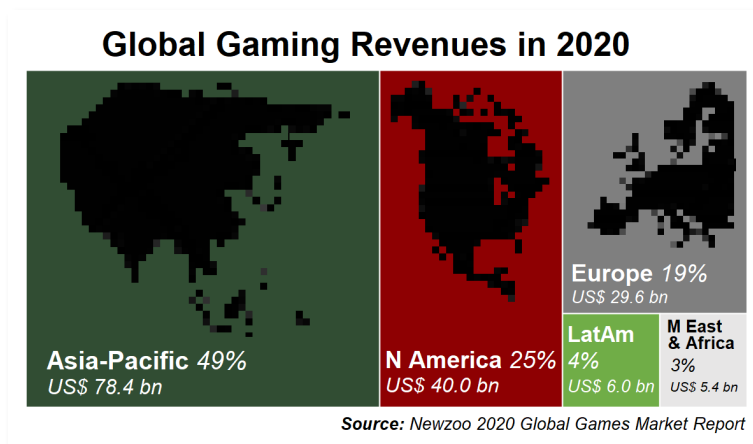


by a rapidly expanding player base – and PwC forecasts the number of gamers globally will increase +50% over the same 2014 to 2021 period. Their optimistic revenue outlook is not only underpinned by the continued expansion of the customer base, but by evolving business and monetisation models. ***In short, the video gaming industry is expected to reach US\$ 200.8 bn in global annual revenue by 2023⁶ - more than doubling in as few as 7 years*. How can such an already-large industry continue to grow at such a pace? We discuss the drivers of this outlook in the following section.***

2.3. Looking Ahead (No Signs of Slowing)

Young people love gaming: A fast-growing user base

As the previous chart showed, PwC estimated the global player base increased c. 140 million each year between 2014 and 2019. That seems pretty fast – and it is – at an average of +7.8% annual growth. Global player growth rates are expected to moderate, modestly, to reach a total player base of 3.07 billion in 2023⁷ or about 38% of the global population⁸. Compared to Netflix – a hallmark *Growth Factor* stock – the number of video gamers globally is expected to rise +14.1% between 2020 and 2023 versus US Netflix viewership growth at “only” +7.2% over the same period (see the chart on the right)[†]. Further supporting player growth forecasts is the demographic composition of gamers. With each gamer being a potential customer, it is worth noting more than 1 in 5 gamers in the US are below the age of 18. We also see scope for increased market saturation in the West, taking cues from Asia-Pacific which accounts for 49% of global video gaming revenues⁹. The Asian eSports industry is much more mature than in North America or Europe –more on this [later](#).



* Global video gaming revenues were US\$ 97 bn in 2016. As previously mentioned, revenues surpassed US\$ 100 bn in 2017.
† We want to highlight limitations in this comparison, given that we compare the global video gaming audience to a regional Netflix audience. This audience segment was selected due to the availability of medium-term growth forecasts (2023e).

Changing spending habits: Younger players spend much more (even those not yet in the workforce)

The sharp historical rise in global revenue growth has partly been driven by consumer adoption across Teens and Millennials[‡]. However, just as important as the expanding user base is the shifting spending habits of customers. Millennials - the first “digital natives” – entered the workforce over a decade ago; marking a shift of increased wallet share for gaming within entertainment spending. In fact, Millennial gamers in the US spend an



21% of US gamers are under 18 years old

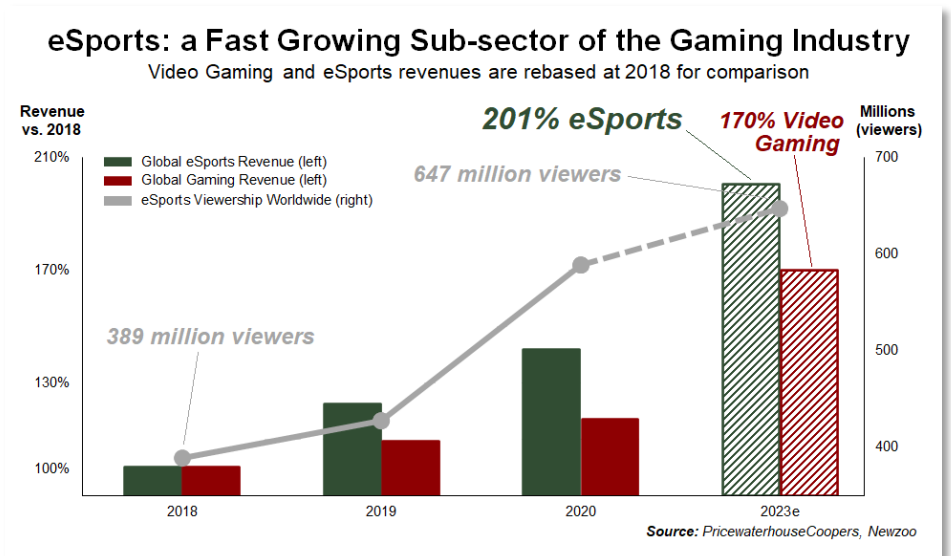
Each gamer is a customer, 1 in 5 are still minors

Teens show a higher wallet spend on gaming vs. older generations

average of US\$ 112 on video games every month - nearly twice as much as older “Gen Xers”¹⁰. However, it doesn’t stop there - surveys have also shown a large rise in spending habits across the Teens demographic. One such survey by PwC shows that most Teens claim to spend “much more than their adult counterparts claim to spend!”¹¹.

The eSports revolution: Adoption across age and region

eSports is one of the fastest growing subsectors of the gaming ecosystem. According to forecasts shown on the chart to the right, global eSports revenues will more than double (+101%) between 2018 and 2023 – compared to a more “modest” +70% increase for the broader video gaming market (in which eSports is included). Like global gaming revenues, eSports revenues are driven by engagement and a growing fan base. Global eSports viewership



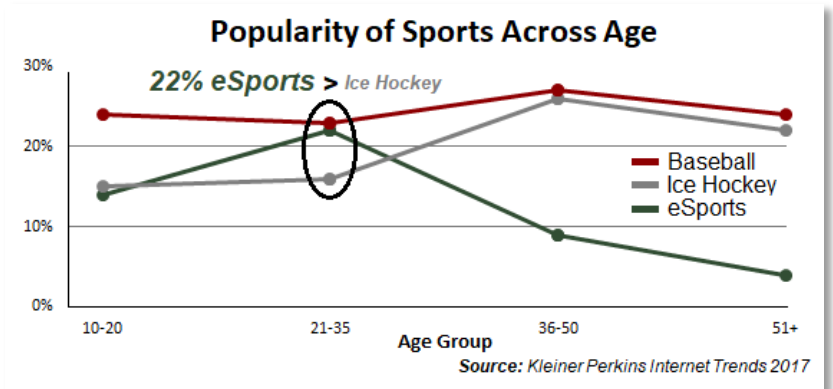
is expected to reach 647 million by 2023 whilst broader gaming *video content* reached an audience of 944 million people in 2019¹². That said, Millennials are already very engaged: 71% of Millennial gamers watch online gaming *video content*¹³. Within that audience, an average of US\$ 54 is spent each month in support of their favourite content creators via donations and subscriptions[§]. Like traditional sports, video content includes eSports *leagues* and other *live game* streaming.

[‡] See here for an interactive timeline of different major Generations in the Western world: https://upload.wikimedia.org/wikipedia/commons/3/3e/Generation_timeline.svg

[§] Among those who spend. Overall average spending data is not available.

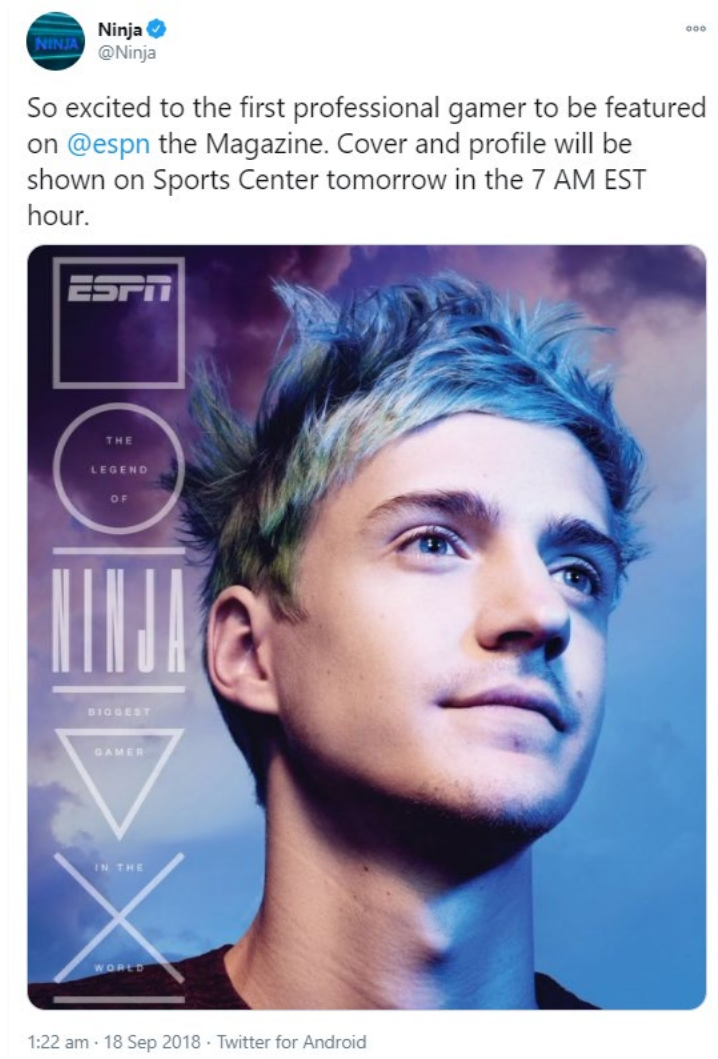
As you can see from the chart on the right, the 21 - 35 year old age bracket is the first demographic profile in history to poll eSports as being more popular than some traditional US sports – beating ice hockey and

polling very similarly to “America’s pastime” baseball. This adoption of eSports in the West represents a slow cultural shift and the evolution of a new market. eSports competitions can transcend cultural differences more easily than most other sports. Furthermore, a shift to mobile gaming may help eSports transcend socioeconomic barriers thanks to cheap hardware and free-to-play models. Video games and eSports may one day be “the world’s pastime”. **Much more on this later when we look at [The eSports Ecosystem](#).**



Video content is often hosted on live-streaming platforms like [Twitch](#)** and YouTube. Amazon bought Twitch for US\$ 970 mn in cash in 2014¹⁴. At the time, twitch already had 55 million users and accounted for nearly 2% of all US internet traffic - only Netflix, Google, and Apple saw more web traffic during peak hours¹⁵. By 2020,

average concurrent viewership had increased to 2.03 million viewers¹⁶ – far exceeding Fox News (1.5 million), MSNBC (885’000), and CNN (783’000)¹⁷. Between 2014 and 2020, average concurrent viewership increased by an average of +82% every year¹⁸.

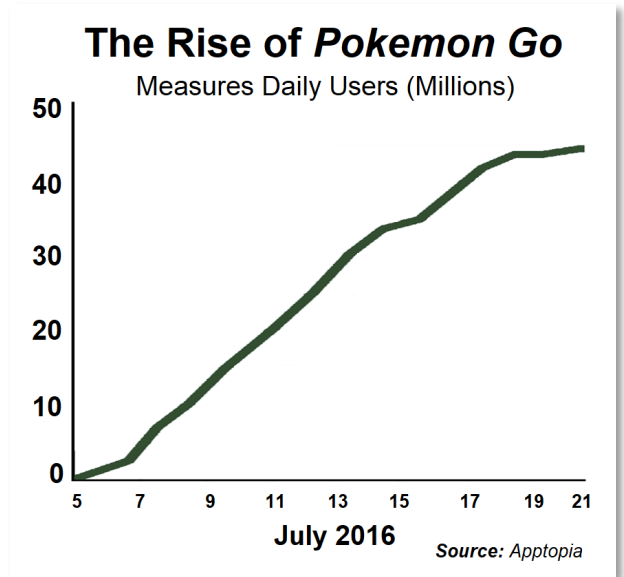


One such popular streamer is Ninja, a Fortnite player with 24.1 million subscribers on his YouTube channel¹⁹, 16.1 million followers on Twitch²⁰, and 6.4 million followers on his Twitter account²¹. Ninja was collectively watched for 226.85 million hours on Twitch in 2018, personally streaming over 3’800 live hours – equating to 95x 40-hour work weeks²²! Ninja was also the first professional gamer to be featured on the cover of ESPN magazine. In fact, The Walt Disney Company (which owns ESPN, ABC, and the Disney network) signed a multi-year broadcast deal with Activision Blizzard for the media rights over Overwatch League (an eSports league)²³. ESPN now has a dedicated eSports section on its website²⁴. PewDiePie, who made headlines for hosting the most subscribed YouTube channel worldwide (and which earned him a net worth of US\$ 45 mn), also started as a video game streamer.

** Watch Twitch at <https://www.twitch.tv/>

Evolving business models: Games-as-a-Product shifts to Games-as-a-Service

Game publishers have also benefitted from evolving business models that increase the lifetime of the sales cycle and extends the time horizon in which publishers can generate revenue from a single game release. This marks a shift from the traditional “Games-as-a-Product” model to one of “Games-as-a-Service”. These shifting business models are illustrated by a growing component of revenue generated from in-game purchases and subscriptions. A hallmark example of this new phenomenon is the success of Fortnite - a free-to-play shooter game that earned a record breaking US\$ 2.4 bn in 2018²⁵. Fortnite, published by US-based Epic Games (40% owned by Tencent), was released in 2017 and is free to download and play²⁶. Fortnite generates part of its revenue through “microtransactions”, which includes



downloads generated through its US\$9.50 per day “Battle Pass” (i.e. subscription) which allows players to access the most up-to-date game features. Fortnite currently has over 250 million players.

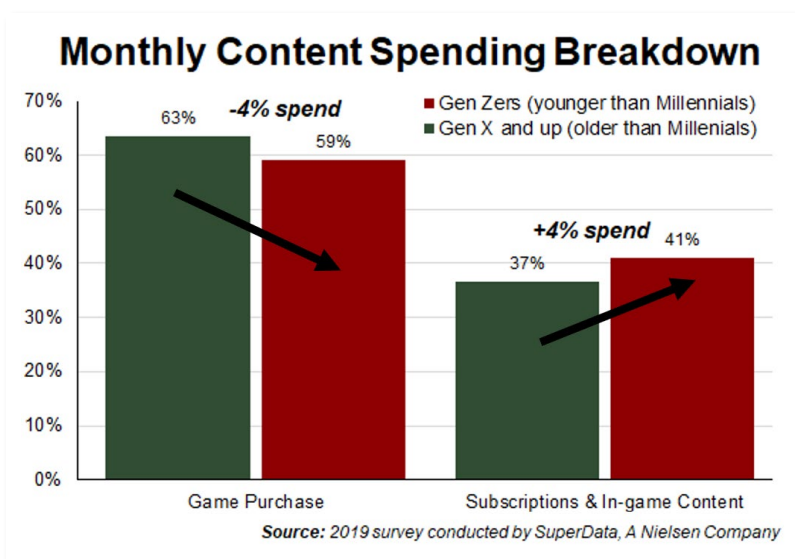
**45 million new players
in 16 days!**



Pokemon Go leveraged a free-to-play model to achieve incredible customer acquisition

What is more impressive, however, is that its “freemium” revenue model allowed Fortnite to amass over 125 million players within the first 10 months after release²⁷. Another great example where the “freemium” model facilitated impressive customer acquisition numbers is Pokémon Go – which reached c. 45 million daily users within 16 days.

A “freemium” model not only allows for (i) significant customer acquisition and market penetration but also (ii) extends the lifetime of the sales cycle and hence improves the scalability of revenue generation relative to game development sunk costs.



Meanwhile, despite all demographic profiles demonstrating a secular shift to free-to-play game models, the chart on the left further shows that younger gamers have a preference to spend more on subscriptions and in-game content (versus game purchases) than older players. This is true proportionally and in absolute terms.

Top 5 Games By 2019 Revenue: Free-to-play vs. Pay-to-play

Free-to-play				Pay-to-play			
Title	Publisher	Genre	Revenue	Title	Publisher	Genre	Revenue
Fortnite	Epic Games (40% Tencent)	Shooter	US\$ 1.8 bn	FIFA 19	Electronic Arts Inc	Sports	US\$ 786 mn
Dungeon Fighter Online	Nexon	RPG	US\$ 1.6 bn	Call of Duty: Modern Warfare	Activision Blizzard Inc	Shooter	US\$ 645 mn
Honour of Kings	Tencent	MOBA	US\$ 1.6 bn	Grand Theft Auto V	Take Two Interactive	Action	US\$ 595 mn
League of Legends	Riot Games (Tencent)	MOBA	US\$ 1.5 bn	FIFA 20	Electronic Arts Inc	Sports	US\$ 504 mn
Candy Crush Saga	KING Digital Entertainment	Puzzle	US\$ 1.5 bn	Call of Duty: Black Ops III	Activision Blizzard Inc	Shooter	US\$ 487 mn

Source: SuperData, A Nielsen Company

In the table above we compare the top 5 games in each category (free-to-play vs. pay-to-play). As one can see, (i) the headline revenue numbers for all successful video games are staggering but (ii) the revenue of free-to-play games dwarf even the most successful pay-to-play counterparts.

The table on the right shows how a shift to a free-to-play/freemium model will unlock new customers (and hence revenue) through more dynamic game content pricing arrangements. Notably, by allowing for “microtransaction” and/or a scaled subscription service, a freemium model could unlock *Customers 1-6* as marginal players of the game as they otherwise would not have spent

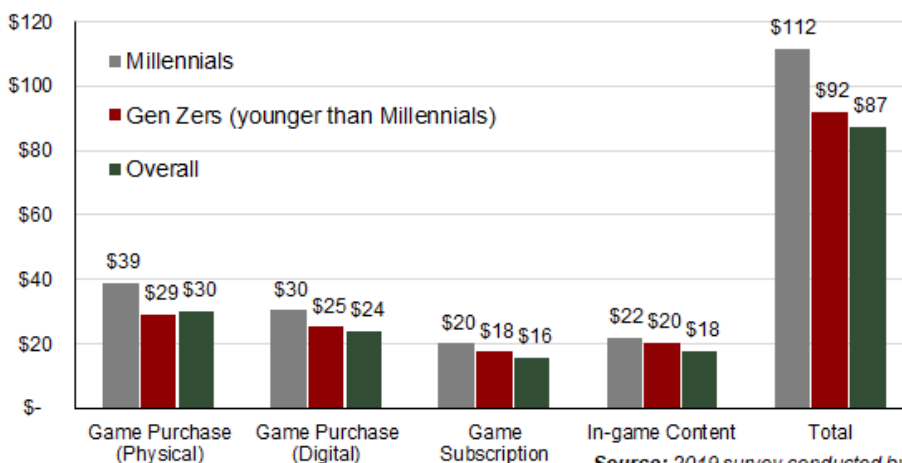
Max. Spend Propensity	Traditional pay-to-play model (US\$ 60 full-price game)			Progressive free-to-play model (Freemium game)		
	How much does each customer spend?	Customer X is now a:	How much does each customer spend?	Customer X is now a:		
Customer 1	\$ -	-	\$ -	-	Casual gamer	
Customer 2	\$ 10	-	\$ 10	10		
Customer 3	\$ 20	-	\$ 20	20		
Customer 4	\$ 30	-	\$ 30	30		
Customer 5	\$ 40	-	\$ 40	40		
Customer 6	\$ 50	-	\$ 50	50		
Customer 7	\$ 60	60	\$ 60	60		Hardcore Gamer
Customer 8	\$ 70	60	\$ 70	70		
Customer 9	\$ 80	60	\$ 80	80		
Customer 10	\$ 90	60	\$ 90	90		

Data is hypothetical and for illustrative purposes only.

the minimum US\$ 60 for a typical full-price full-content game (due to personal spending propensity). Note that *Customer 1* still has no propensity for spending and will not generate any revenue for the game publisher (and will more likely be a net cost). However, *Customer 2-6* will generate additional marginal revenue for the game publisher whilst *Customers 8-10*, the more serious gamers, will be empowered to spend more on in-game content. Fundamentally, the product being sold is shifting from the game itself to a broader category of in-game content.

The chart on the left shows the monthly spending breakdown for a typical US gamer surveyed in 2019.

Monthly Content Spending Breakdown



Source: 2019 survey conducted by SuperData, A Nielsen Company

The information above highlights:

A secular shift across all generations from “Games-as-a-Product” to “Games-as-a-Service” - proving to be a higher value revenue model.

Younger players favour the “Games-as-a-Service” model, over and above the secular trend that applies across all demographics.



21% of US gamers are under 18 years old

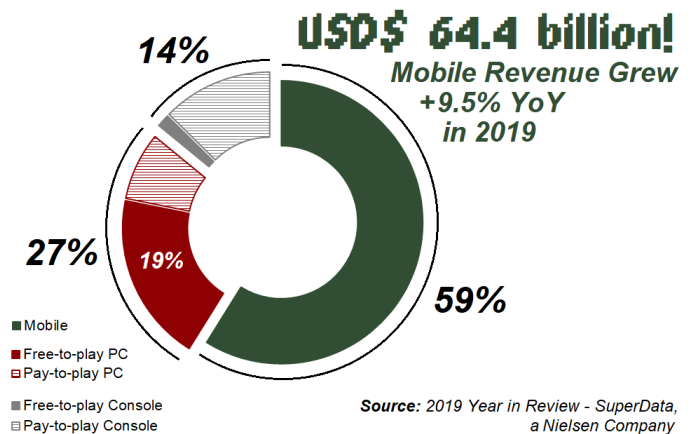
Each gamer is a customer, 1 in 5 are still minors

Teens show a higher wallet spend on gaming vs. older generations

Going mobile: A rise in “casual” gaming and increased low-cost penetration

Video gaming has not only gone mainstream, but it has also gone mobile; opening up the industry to a new “casual” player base and allowing for increased market penetration as some users cannot afford dedicated gaming hardware like a console or PC (particularly players in EM and EM Asia). Mobile gaming now represents both the largest and the fastest growing portion of the industry - and is redefining what it is to be a gamer. According to SuperData, mobile revenues have grown at an annualized rate of 22% since 2015, outpacing the total gaming revenue growth rate of 15%. The chart on the right shows the large size of 2019 global mobile gaming revenues (both relative and absolute). It is also interesting to note that free-to-play PC revenues exceed the sum of all console revenues. No breakdown of free-to-play versus pay-to-play is available for the mobile platform.

2019 Revenue By Platform



In summary, the historic trend in strong revenue growth is expected to remain resilient due to:

- Young people love gaming: A fast-growing user base
- Changing spending habits: Younger players spend much more (even those not yet in the workforce)
- The eSports revolution: Adoption across age and region
- Evolving business models: Games-as-a-Product shifts to Games-as-a-Service
- Going mobile: A rise in “casual” gaming and increased low-cost penetration



US\$ 2.4 billion:
2018 revenue of *Fortnite*,
a **free-to-play** game!

Fortnite exemplifies the evolving business models of game publishers

Google Play: Thoughts on Monetisation Strategies



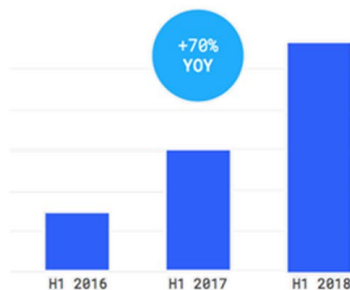
IAP = one-time transaction



Subscriptions = experience that evolves

Google Play employees see the modern video gaming experience in a different light

“This correlation (right) shows that \$1 each out of 100 players is more sustainable than trying to earn \$100 from one high-value user. Thus, unlocking new ways to monetize more users is crucial for the sustainability of a game.”



“The momentum of subscriptions in mobile games has accelerated in recent years. On Google Play, we’ve seen global growth in game subscriptions of 70% year-over-year (left).”

Source: “Rethinking your game monetization strategy”, a Medium.com blog series posted by Business Development employees at Google Play

3. The eSports Ecosystem

3.1. A Teaser

What do Michael Jordan, David Beckham, Will Smith, Drake, and Shaquille O’Neal have in common? They have all invested in eSports... but that isn’t the exciting part! The institutionalisation of eSports in the West has so much momentum that the Premier League (ePL²⁸), FIFA (FIFAE World Cup²⁹), Formula One (F1 eSports Series³⁰), and NHL (NHL Gaming World Championships³¹) have all officially endorsed eSports leagues – to name a few.

These leagues aren’t just trivial side projects. The NBA 2K League³², a joint venture between the NBA and Take-Two Interactive, is televised on ESPN2, has signed sponsorship deals with mainstream companies like AT&T, Snickers, and Tissot, and (most importantly) the affiliated gaming teams are owned by *private investors* and *NBA teams* alike. For example, Gen.G – a Seoul, South Korea-based eSports team listed in the NBA 2K League roster – is estimated to be worth US\$ 100 mn and is reportedly valued at 10x its 2018 sales (compared to Manchester United, which is valued at a comparable multiple of 5x)³³. Gen.G is the 7th most value eSports team in the world, but more on [Teams](#) later.

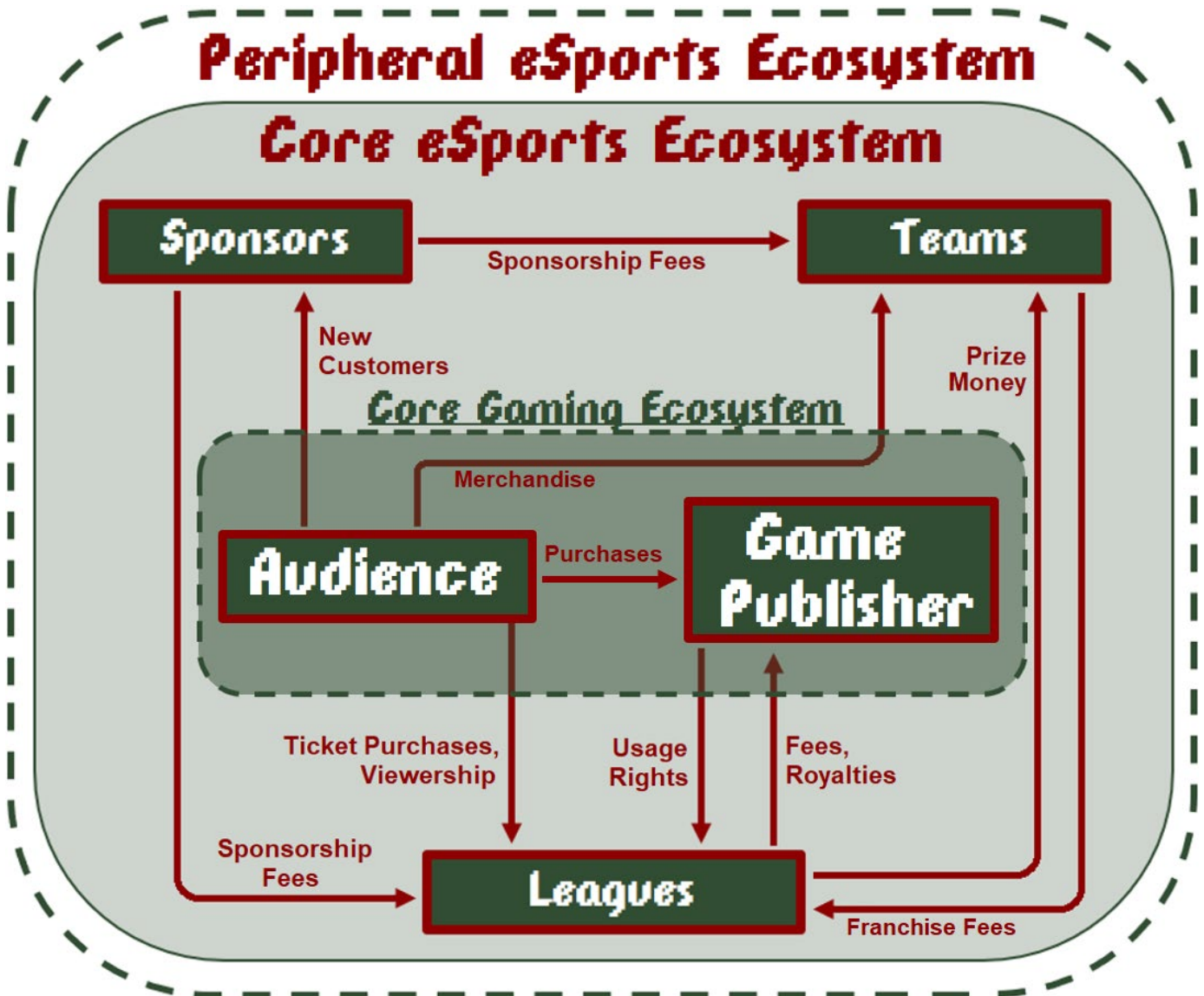
NBA 2K Team	Owner
76ers GC	Philadelphia 76ers (US)
Warriors Gaming Squad	Golden State Warriors
Tigers of Shanghai	Gen.G (Korea/China)
Mavs Gaming	Dallas Mavericks (US)
Cavs Legion GC	Cleveland Cavaliers
Heat Check Gaming	Miami Heat
Celtics Crossover Gaming	Boston Celtics

Likewise, the NFL has the affiliated Madden Championship Series (MCS)³⁴ where **“millions competed and we achieved record viewership”** – according to the Madden NFL Competitive Gaming Commissioner³⁵. The Pizza Hut also set a historic precedent by sponsoring the first virtual stadium – Pizza Hut Stadium – which will be the host venue for all live MCS NFL tournament games. With this in mind, it might not be surprising to learn that Activision Blizzard hired the former ESPN and NFL Network CEO to chair their new eSports unit³⁶.

We have purposely introduced eSports in the context of Western professional sports given the regional bias of our reader base. We want to remind our audience that eSports – as its known in the West, including the aforementioned examples – are in their infancy relative to Asia-Pacific. In the following sections we explore eSports from a more holistic point of view.

3.2. How eSports Makes Money

In this section, we take a closer look at how the various facets of the eSports ecosystem fit together and they make money. *In essence, video Game Publishers create content (games) to which they own the rights. Publishers then license the rights of their games to Leagues, who operate events where professional players – employed by Teams - compete for monetary incentives to the pleasure of a paying Audience base. Sponsors work directly with Teams and Leagues.*



Source: Omba

At the heart of the ecosystem lies two entities: fans (the Audience) and Game Publishers. These two groups were all that existed before the institutionalisation of eSports. The genesis of eSports can be traced to the 1997 Asian Financial Crisis, when high unemployment in South Korea existed alongside a changing landscape of low-cost internet and gaming cafes. The auxiliary industry of professional gaming - which will always revolve around the Core Gaming Ecosystem - has been developing for many years but is still nascent (and in its infancy in the West).

US\$ 34.3 million!

DOTA 2 "The Internationals" 2019 Prize Pot
Compared to the NBA 2018 Finals Prize Pot of US\$ 22 million

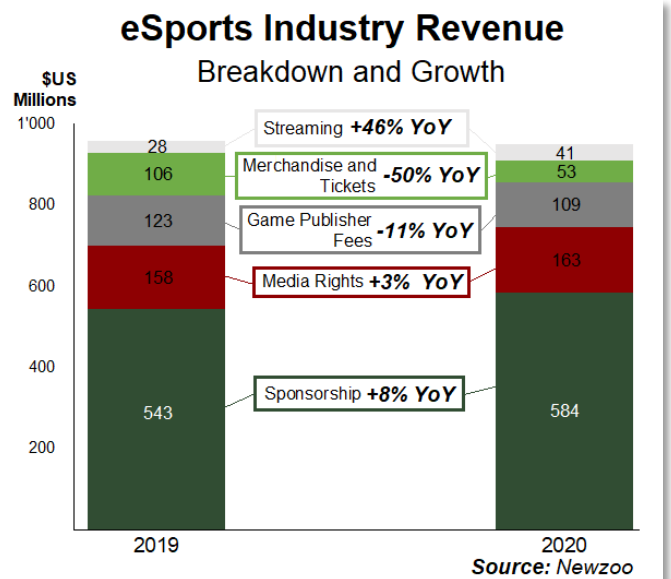


As you can see from the below right graphic, sponsorship drives the majority of the eSport industry revenues. Unsurprisingly, year-on-year growth for merchandising and tickets fell amid the locked-down climate of Coronavirus. However, broader video gaming revenues (i.e. non-eSports) were higher amid increased consumption. eSports tournaments are often in-person events and are hence still subject to the negative effects of reduced mobility and activity – especially as competing Teams often represent different continents. Streaming revenues partially offset reduced merchandise and tickets revenues.

As one might expect, the key to the growth of the eSports is viewership and audience engagement. Content distribution – ranging from traditional channels such as ESPN to Twitch – were omitted from Core Ecosystem described above due to various complexities. Having said that, Media Rights comprise 17% of the total eSports market in 2020 and hence are highly relevant. **Below we compare viewership of traditional sports to gaming (light green). Global eSport viewership is expected to rise 46% between 2019 and 2023³⁷.**

Sport/Tournament	Metric Type	Global Count (Millions)	Primary Region of Influence
Football (Soccer)	Following	4'000	Global
Video Game Players	Following	2'690	Global
Cricket	Following	2'500	UK, Commonwealth
Tennis	Following	1'000	Global
Generic Gaming Video Content	Following	944	Global
Basketball	Following	825	Global
Baseball	Following	500	US, Caribbean, Japan
eSports	Following	495	Global
2017 LoL "Worlds" Finals	Event Views	200	Global
Netflix Subscribers	Following	195	Global
2020 NFL Super Bowl	Event Views	99.9	US
2020 NBA Finals	Event Views	7.5	US
2020 LoL "Worlds" Finals (ex-China)	Event Views	3.9	Global (ex-China)
2020 UEFA Champions League Final	Event Views	2.1	Europe
2020 NHL Stanley Cup Final	Event Views	2.0	US, Canada
2019 DOTA 2 "The International"	Event Views	2.0	Global

Source: World Atlas, Statista, PricewaterhouseCoopers, CNBC, Newzoo, escharts, SuperData, Netflix 3Q 2020 Shareholder Letter



3.3. Teams

eSports teams have hit youth culture by storm. One such team, FaZe Clan has amassed more than 19 million social media followers, exceeding the Dallas Cowboys (7.2 million) and the New York Yankees (6 million) combined³⁸. Both traditional sports teams are clearly amongst the most popular in their respective leagues and internationally recognised. With a fan base of that size, sponsorship deals have started to flow: FaZe has reportedly signed million-dollar sponsorship deals with the like of Nissan and Gfuel - not bad for a 9-year old company.

Teams like FaZe Clan compete in professional leagues for prize money. The aforementioned League of Legends (LoL) Championship Series and Overwatch League are two such league examples. Both leagues began selling team franchises in 2017/18: Riot Games priced franchises at US\$ 10 mn per LoL team³⁹ whilst Activision Blizzard sold franchises for US\$ 20 mn per Overwatch team and US\$ 25 mn per Call of Duty (CoD) team⁴⁰. The franchising model, used by North American sports leagues like the NFL and NBA (with permanent team fixtures), differs to relegation and promotion-based eligibility (e.g. Premier League) and was hailed by Deloitte as being supportive for the eSports ecosystem⁴¹. Individual Overwatch League franchises, which would be owned by a team conglomerate, were valued as high as US\$ 80 mn in 2018⁴².

FaZe Clan, however, is just one of many professional eSports teams, ranking at the 4th most valuable in the world according to Forbes⁴³. As the table below shows, valuations are steep and have shown positive growth in recent years. Gen.G raised US\$ 46 mn in April 2019, according to Pitchbook, with CEO Chris Park saying “we were actually over-subscribed and had to reassess the right partners for us”.

But its not just fun and games! Cyberathletes often train seven days a week for 12-14 hours a day⁴⁴. Teams often have a dedicated manager, coach, and even team psychologist.

Team Liquid, for example, has a 10'000 square feet dedicated training facility for their eSports team and dedicated housing for their cyberathletes to live and train. Team CompLexity, the eSports team who shares an owner

Rank	Team Name	Franchise Teams	2019 Enterprise Value (US\$ mn)	Value Growth vs. 2018 (US\$ mn)	2019 Revenue Estimate (US\$ mn)
1	Team SoloMid	(1) LoL Championship Series	400	150	35
2	Cloud9	(1) LoL Championship Series, (2) Overwatch League	400	90	29
3	Team Liquid	(1) LoL Championship Series	320	120	24
4	FaZe Clan	None	240	na	35
5	Immortals Gaming	(1) LoL Championship Series, (2) Overwatch League, (3) CoD League	210	110	11

Source: Forbes

with the Dallas Cowboys, recently relocated to a Frisco, Texas campus so they can access the same resources as the NFL team. This co-housing model of “gaming houses” for eSports teams has existed for years, although the recently sponsored Alienware Training Facility is a milestone in a clear trend of institutionalisation⁴⁵.

3.4. Leagues and Events

The leagues themselves – sitting at the heart of the action – also boast impressive statistics. When it comes to viewership, eSports tournaments like the Dota 2 “The Internationals” and LoL “Worlds” can command better viewership than the likes of Wimbledon and the NFL Super Bowl. The 2017 LoL Worlds final had over 200 million viewers. Competitions are often hosted in sold out stadiums and feature live music and entertainment that would rival traditional tournament ceremonies.

Prize incentives are also respectable. The 2019 Dota 2 The Internationals prize pot was US\$ 34.3 million, exceeding the NBA 2018 Finals prize pot of US\$ 22 mn. Competitions can also be very competitive: 40 million players tried out for the Fortnite World Cup⁴⁶.

Official Sponsors of Worlds 2019
Mastercard
State Farm
Louis Vuitton
Red Bull
OPPO
Lynx/Axe
Alienware
Secretlab

Source: Gamepedia



3.5. Game Publishers

Epic Games

Epic Games, 40% owned by Tencent, is a US-based publisher that is best known for **Fortnite** (shown below right) and the **Unreal Engine**. The publisher is valued at US\$ 17.3 bn after a 2020 funding round that the likes of KKR, Sony, hedge fund manager David Tepper, and accounts managed by BlackRock and the Ontario Teachers' Pension Plan Board⁴⁷.

Fortnite is a shooter game with various game styles including a 100 player Battle Royale (i.e. last man standing), a hybrid tower defence/survival mode, and a sandbox-mode arena.

Epic Games' **Unreal Engine** is the physics engine that powers games like Fortnite, Gears of War, and the original Unreal Tournament game series.



Riot Games

Riot Games, 100% owned by Tencent, is a US-based publisher best known for **League of Legends**. League of Legends is a Multiplayer Online Battle Arena (MOBA) similar to Dota 2 (published by Valve) and Heroes of the Storm (published by Activision Blizzard).

MOBAs have been popularised as an eSports staple because they are **team-based**, require a high degree of **collaboration and strategy**, and hence can be more enjoyable to watch than solo-player games. Players - each using a different hero with unique attributes and abilities - cooperate on a 5v5 left-versus-right battlefield with the goal of infiltrating and destroying the other teams base. Players often take on dedicated roles such as healer, ranged-damage attack, or "tank". The picture below shows Korean Damwon Gaming (blue team) competing against Chinese Suning Gaming (red team) at the 2020 Worlds in Shanghai China.

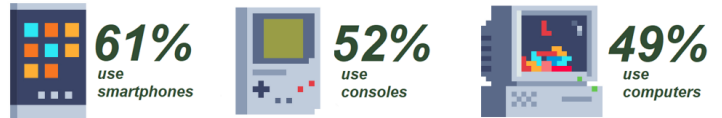


4. Investing in eSports and Video Gaming

The statistics previously cited in [A Growing Market](#) are dizzying – everything from global revenue, to player count, to growth rates. In this section, we look at the universe of investable assets to determine the appropriate expressions of this thematic view. We then analyse aptly expressive assets relative to broader global equity benchmarks to gauge the risk-reward characteristics (and other properties) that such an investment would entail. We start by looking at two gaming-related indices. **Indices, or benchmarks, can provide clues to the criteria of investment suitability and provide a measure against which an investor can measure performance.**

Anyone can be a gamer!

Platform usage in US adult players



Two interesting indices for this theme are:

- (i) Solactive Video Games & Esports Index⁴⁸
- (ii) MVIS Global Video Gaming & eSports Index⁴⁹

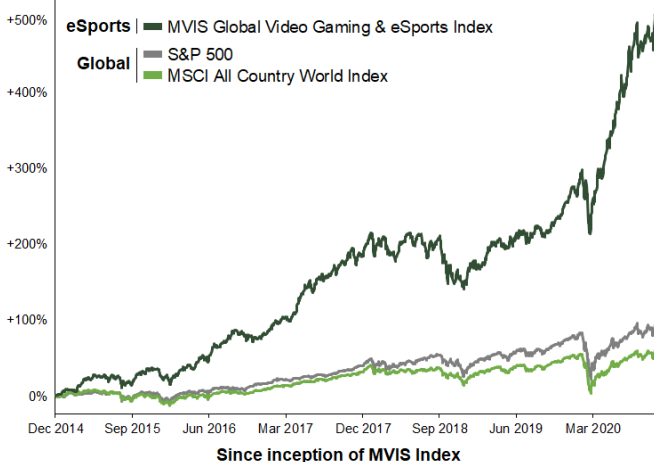
The charts below show the outperformance of the two considered gaming indices. Again, indices are typically used to benchmark asset allocation decisions of investment managers. Two key findings are immediately obvious. Firstly, stocks that capture the theme of video gaming and eSports have sharply outperformed global benchmarks on a historical basis (even versus the much-lauded S&P 500). Secondly, despite the various differences in benchmarking, there is very little difference between the performance of the two considered gaming indices. The table on the right compares similarities and differences between the two benchmarks⁵⁰.

Asset Universe Inclusion Criteria	Solactive Video Games & Esports Index	MVIS Global Video Gaming & eSports Index
Inception Date	October 2019	December 2014
Region	Developed Markets (incl. Korea)	Global
Revenue Breakdown	>50% from eSports/video games	>50% from eSports/video games
Weighting Cap	Positions capped at 6%	Positions capped at 8%
Min. Market Cap.	> US\$ 200 mn	> US\$ 150 mn
Number of stocks	40	25
Rebalancing	Semi-annually	Quarterly

Source: MVIS, Solactive

Total Return Performance Comparison

eSports stocks have outperformed global stocks

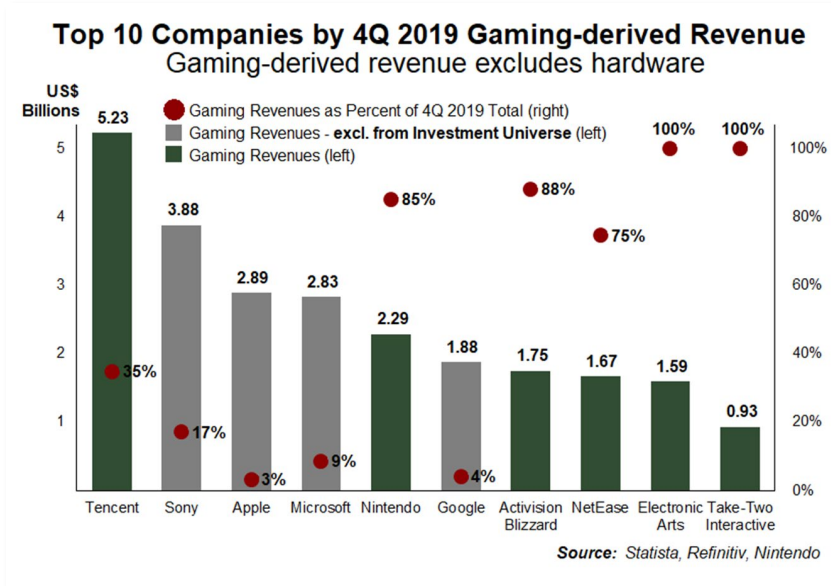


Both eSports indices boast comparable performance



Source: Refinitiv

The figure on the left shows the top 10 global equities sorted by 4Q 2019 gaming-derived revenues. Note that gaming-derived revenues excludes hardware sales in this example, but this definition is flexible (as we will see later given the inclusion of NVIDIA and other Chipmakers). Although the likes of Sony, Apple, and Microsoft all boasted 4Q 2019 gaming-derived revenue in the several billions, they are not considered within the investable universe of video gaming and eSports (and are coloured in grey). Google is excluded for similar reasons. Interestingly, Tencent would also not be included within the investment universe according to the example benchmarking criteria stated above although it is commonly included in practice. The red points show the percentage of total 4Q 2019 revenue that was generated from video gaming related business activities excluding hardware.

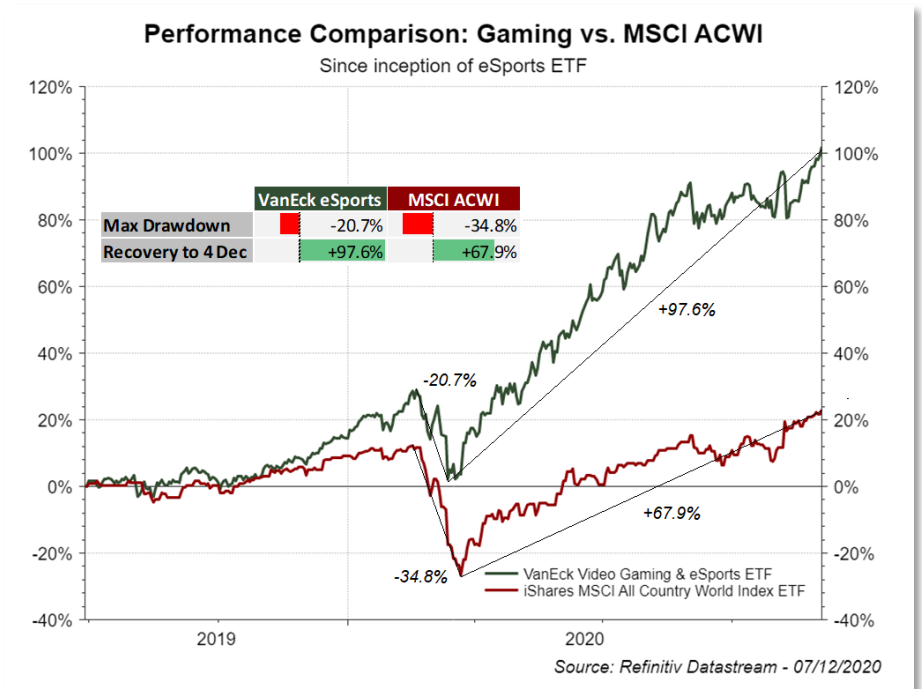


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4.1. A Video Gaming ETF To Consider

VanEck Vectors Video Gaming and eSports ETF

There are many Video Gaming and eSports ETFs available to choose from, but amongst our favourites is the **VanEck Vectors Video Gaming and eSports UCITS ETF (VanEck eSports ETF)**⁵¹ – which we use as an example for analysis. We compare this ETF to the global MSCI All Country World Index by using the **iShares MSCI All Country World Index UCITS ETF (iShares MSCI ACWI ETF)**⁵² as a proxy. For interest's sake, we show the relative performance of both ETFs on the right (rebased to the inception of the VanEck eSports ETF). Interestingly, the VanEck eSports ETF boasted both a smaller drawdown in 1Q 2020 and a better recovery through the rest of the year.



The two tables below summarise (i) the top 10 equity holdings of each ETF for comparative purposes as well as (ii) the weighted-average market capitalisation of all the individual companies held within each ETF. Omba, being ETF specialists, analyses ETFs in great detail by dissecting and aggregating data across every single underlying position. The aggregated market capitalisation of each ETF is weighted according to the actual position size of each underlying company held in each ETF. For example, the VanEck eSports ETF has 25 underlying equity positions and the iShares MSCI ACWI ETF has 1'576 underlying positions.

ETF Rank	Top 10 Underlying Companies (VanEck eSports ETF)	Ticker	Currency	Country of HQ	Sector	Industry	Market Cap. (US\$ mn)
1	Tencent Holdings Ltd	Hong Kong: 700	HKD	China	Communication Services	Media & Entertainment	708'505
2	NVIDIA Corp	Nasdaq: NVDA	USD	United States	Information Technology	Semiconductors	320'834
3	Sea Ltd	NYSE: SE	USD	Singapore	Communication Services	Media & Entertainment	87'392
4	Advanced Micro Devices Inc	Nasdaq: AMD	USD	United States	Information Technology	Semiconductors	102'315
5	Bandai Namco Holdings Inc	Tokyo: 7832	JPY	Japan	Consumer Discretionary	Consumer Durables	20'057
6	Nintendo Co Ltd	Tokyo: 7974	JPY	Japan	Communication Services	Media & Entertainment	69'548
7	Bilibili Inc	Nasdaq: BILL	USD	China	Communication Services	Media & Entertainment	21'833
8	Activision Blizzard Inc	Nasdaq: ATVI	USD	United States	Communication Services	Media & Entertainment	58'142
9	NetEase Inc	Nasdaq: NTESS	USD	China	Communication Services	Media & Entertainment	67'389
10	Nexon Co Ltd	Tokyo: 3659	JPY	Japan	Communication Services	Media & Entertainment	24'730
VanEck Video Gaming & eSports ETF		LSE: ESPO	USD	na	na	na	117'840

ETF Rank	Top 10 Underlying Companies (iShares MSCI ACWI ETF)	Ticker	Currency	Country of HQ	Sector	Industry	Market Cap. (US\$ mn)
1	Apple Inc	Nasdaq: AAPL	USD	United States	Information Technology	Technology Hardware	1'958'098
2	Microsoft Corp	Nasdaq: MSFT	USD	United States	Information Technology	Software & Services	1'616'888
3	Amazon.com Inc	Nasdaq: AMZN	USD	United States	Consumer Discretionary	Retailing	1'564'490
4	Facebook Inc	Nasdaq: FB	USD	United States	Communication Services	Media & Entertainment	788'749
5	Alphabet Inc	Nasdaq: GOOG	USD	United States	Communication Services	Media & Entertainment	1'194'791
6	Alibaba Group Holding Ltd	NYSE: BABA	USD	China	Consumer Discretionary	Retailing	757'470
7	Alphabet Inc	Nasdaq: GOOGL	USD	United States	Communication Services	Media & Entertainment	1'194'791
8	Taiwan Semiconductor Mfg. Co	Taiwan: 2330	TWD	Taiwan	Information Technology	Semiconductors	443'309
9	Tencent Holdings Ltd	Hong Kong: 700	HKD	China	Communication Services	Media & Entertainment	708'505
10	Tesla Inc	Nasdaq: TSLA	USD	United States	Consumer Discretionary	Automobiles & Components	526'445
iShares MSCI All Country World ETF		SIX: SSAC	USD	na	na	na	286'466

Source: Omba, Refinitiv as of 24 Nov 2020

The table on the right shows a summary of some key data metrics for both the VanEck eSports ETF and the iShares MSCI ACWI ETF. The measures were calculated by taking the average of each underlying company weighted by the position size in each ETF. The underlying position data was sourced from Refinitiv and aggregated by Omba. Return data is measured in US dollars and was calculated on the ETF level.

Aggregated Measures (Weighted Average)	VanEck eSports ETF	iShares MSCI ACWI ETF	Difference Between ETFs
Market Cap. (US\$ mn)	117'840	286'466	168'626
Fwd. P/E	29.2x	28.8x	0.4x
P/E/G	1.1x	6.8x	-5.7x
Earnings Surprise	+48.4%	+42.8%	+5.6%
Return vs. 52w High	-6.0%	-0.3%	-5.7%
Return vs. 52w Low	+126.8%	+63.4%	+63.5%
Price Return YTD	+102.1%	+67.6%	+34.5%

Return data is measured in US dollars and calculated on the ETF level.

Source: Omba, Refinitiv as of 24 Nov 2020

A few key points to highlight:

Market Capitalisation (US\$ mn)

- The average company market capitalisation for the VanEck eSports ETF is US\$ 168.6 bn smaller than that of the MSCI All Country World Index. At US\$ 117.8 bn, these companies are by no means small.
- The MSCI All Country World Index is heavily skewed towards mega-cap stocks such as Apple, Microsoft, and Amazon.

Forward Price/Earnings Ratio (Fwd. P/E)

- The VanEck eSports ETF trades at comparable valuation multiples to the MSCI All Country World Index on a forward Price/Earnings basis (0.4x absolute points more expensive) ††.
- Forward Price/Earnings is a standard valuations metric that indicates how expensive or cheaply a stock is trading relative to its earnings; essentially stating how many dollars investors are willing to pay per dollar earned.

Price/Earnings to Growth Ratio (P/E/G)

- The VanEck eSports ETF is meaningfully cheaper than the MSCI All Country World Index when accounting for expected earnings growth (5.7x absolute points cheaper). This reflects differing outlook expectations between the thematic basket and the broader equity market.
- Price/Earnings to Growth Ratio is an alternative valuations metric that factors historic growth in earnings-per-share as well as expectations of future earnings growth ††.

Earnings Surprise

- Whilst global equities boasted positive earnings surprise in the last quarterly earnings season, VanEck eSports ETF stocks beat analyst earnings forecasts by 5.6% (absolute points) more than the broader market.
- Earnings surprise is an important indicator that measures actual quarterly earnings-per-share relative to analyst forecasts and can provide clues as to momentum in profitability.

†† The aggregated Forward Price/Earnings calculation for each ETF capped at the data, source from Refinitiv, at 100.0x in accordance with standard market practice. Forward earnings, as opposed to historical earnings, is the market consensus estimate of earnings generated over the next 12-months according to Refinitiv.

†† The aggregated Price/Earnings to Growth Ratio calculation for each ETF using data provided by Refinitiv that did not cap Price/Earnings. EPS growth estimates provided by Refinitiv are the average of expected growth in EPS from Last Year to This Year, the expected growth in EPS from This Year to Next Year, and the expected long-term earnings growth rate.

Below we extend the analysis to the top 10 stocks held in each ETF^{§§}. As a reminder, the aggregated metric for the whole ETF is calculated using all underlying holdings, not just the top 10 holdings.

ETF Rank	ETF Weight	Top 10 Underlying Companies (VanEck eSports ETF)	Fwd. P/E	P/E/G	Earnings Surprise	Return vs. 52w High	Return vs. 52w Low	Price Return YTD	Return vs. 23 Mar 20
1	8.6%	Tencent Holdings Ltd	30.7x	1.2x	+0.1%	-7.7%	+81.3%	+56.3%	+67.9%
2	7.8%	NVIDIA Corp	45.9x	1.5x	+13.1%	-12.0%	+186.9%	+120.3%	+143.7%
3	7.2%	Sea Ltd	na	na	-29.8%	-5.8%	+401.2%	+339.9%	+360.1%
4	6.8%	Advanced Micro Devices Inc	48.4x	1.2x	+15.1%	-9.8%	+131.5%	+85.5%	+104.3%
5	5.9%	Bandai Namco Holdings Inc	31.0x	1.7x	+43.1%	-0.5%	+115.6%	+47.4%	+103.1%
6	5.8%	Nintendo Co Ltd	18.7x	0.7x	+52.0%	-9.8%	+78.2%	+30.4%	+54.9%
7	5.8%	Bilibili Inc	na	na	-12.3%	-2.5%	+284.3%	+237.5%	+210.2%
8	4.9%	Activision Blizzard Inc	21.3x	0.8x	+9.8%	-14.2%	+48.9%	+26.6%	+33.2%
9	4.7%	NetEase Inc	22.6x	2.6x	+108.3%	-5.8%	+83.4%	+59.0%	+63.2%
10	4.6%	Nexon Co Ltd	19.7x	2.3x	-11.4%	-9.7%	+128.8%	+102.1%	+94.2%
VanEck Video Gaming & eSports ETF			29.2x	1.1x	+48.4%	-6.0%	126.8%	+102.1%	+94.2%

ETF Rank	ETF Weight	Top 10 Underlying Companies (iShares MSCI ACWI ETF)	Fwd. P/E	P/E/G	Earnings Surprise	Return vs. 52w High	Return vs. 52w Low	Price Return YTD	Return vs. 23 Mar 20
1	3.6%	Apple Inc	28.7x	2.0x	+4.3%	-16.5%	+116.7%	+56.9%	+105.3%
2	2.7%	Microsoft Corp	30.4x	2.1x	+17.9%	-8.2%	+61.4%	+35.6%	+57.3%
3	2.4%	Amazon.com Inc	70.6x	2.2x	+66.9%	-12.2%	+91.6%	+68.7%	+63.9%
4	1.2%	Facebook Inc	27.0x	1.2x	+26.0%	-9.1%	+102.0%	+34.9%	+87.0%
5	0.9%	Alphabet Inc	29.3x	2.5x	+46.3%	-2.7%	+74.4%	+32.3%	+67.4%
6	0.9%	Alibaba Group Holding Ltd	24.1x	1.0x	+27.6%	-12.3%	+64.7%	+32.0%	+58.8%
7	0.9%	Alphabet Inc	29.3x	2.5x	+45.3%	-2.9%	+74.8%	+31.7%	+67.3%
8	0.8%	Taiwan Semiconductor Mfg. Co	23.2x	0.9x	+9.9%	-2.7%	+123.4%	+56.1%	+104.9%
9	0.8%	Tencent Holdings Ltd	30.7x	1.2x	+0.1%	-7.7%	+81.3%	+56.3%	+67.9%
10	0.7%	Tesla Inc	148.9x	0.1x	+29.1%	-0.8%	+748.9%	+563.8%	+539.4%
iShares MSCI All Country World ETF			28.8x	6.8x	+42.8%	-0.3%	63.4%	+67.6%	+84.9%

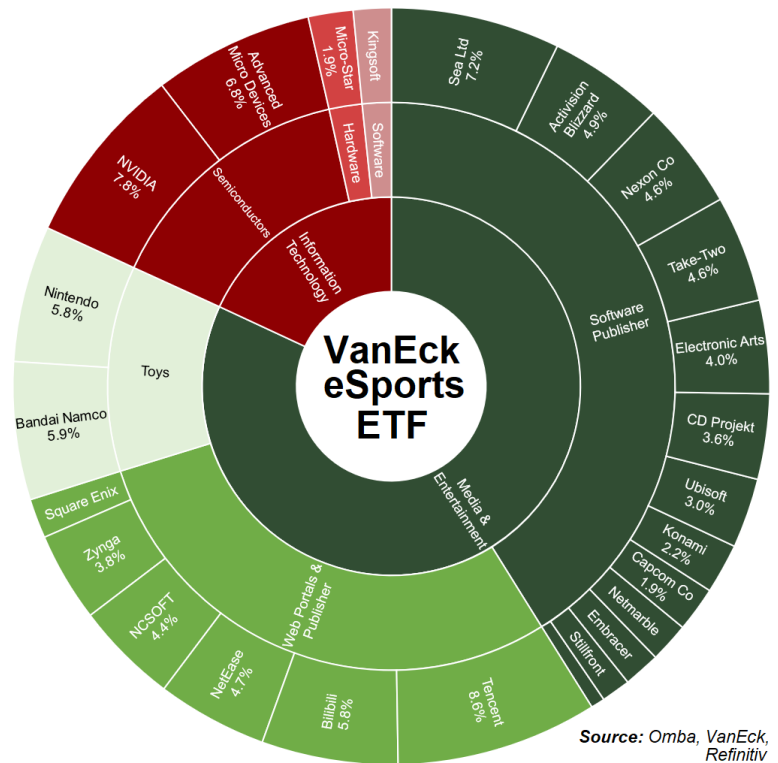
Return data is measured in US dollars and calculated on the ETF level. Source: Omba, Refinitiv as of 24 Nov 2020

Furthermore, we want to highlight the sector allocation differences between the two ETFs. The sunburst chart on the right shows the sectoral and industry allocation of the VanEck eSports ETF. Given that the MSCI All Country World Index would include too much data to plot on a similar chart, we have summarised an overview of the sector weights in the table below.

MSCI ACWI Sectors	Weight
Information Technology	21.2%
Financials	13.2%
Consumer Discretionary	13.0%
Health Care	12.0%
Industrials	10.2%
Communication Services	9.5%
Consumer Staples	7.5%
Materials	4.6%
Utilities	3.0%
Energy	3.0%
Real Estate	2.8%

Source: Refinitiv, iShares

Sector Overview of VanEck eSports ETF



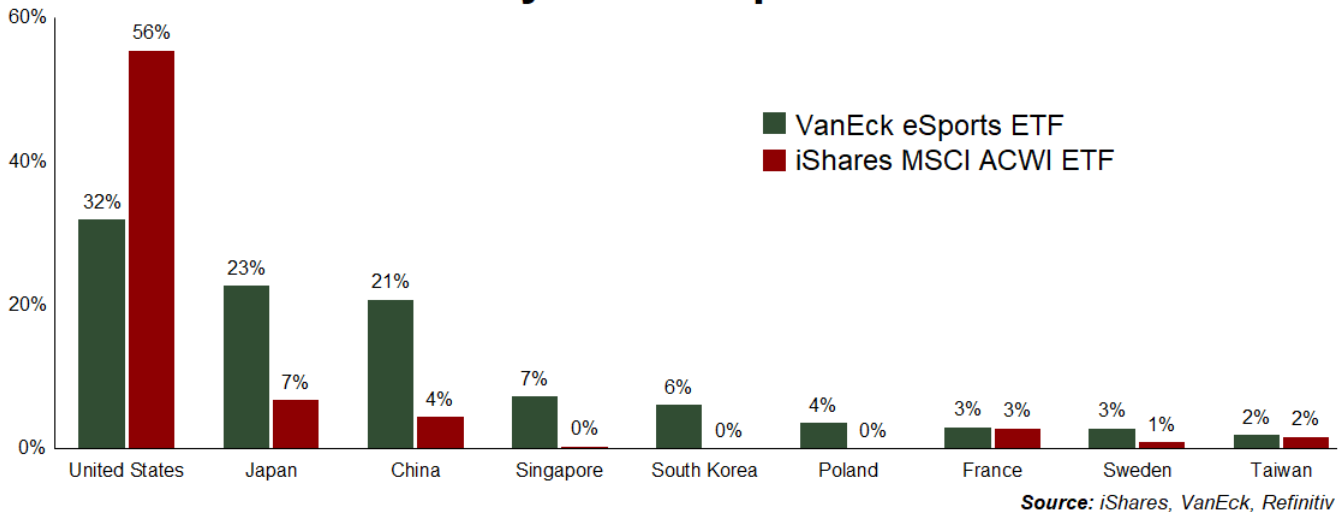
Source: Omba, VanEck, Refinitiv

§§ For illustrative purposes, Forward Price/Earnings ratios displayed for the top 10 companies is not capped at 100.0x as it was when aggregating across the entire ETF.

Both of the previous sector overviews were calculated based on the underlying holdings within each ETF. The key point to note is that the VanEck eSports ETF is made up of only 2 major sectors, Media & Entertainment and Information Technology, but the many sub-sectors provide diversification.

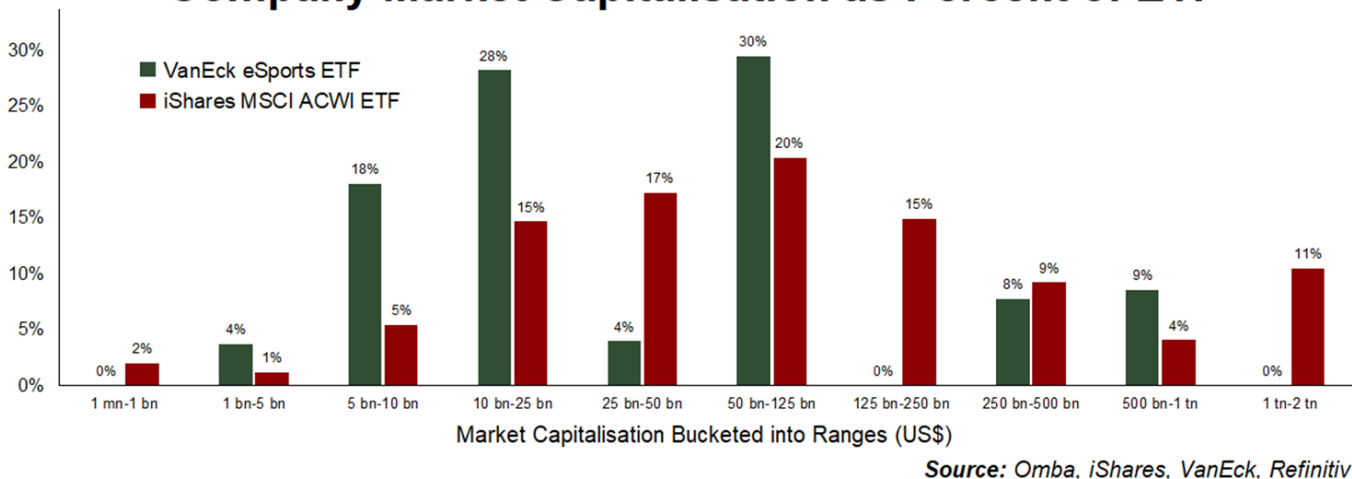
Below, using a similar methodology, we compare country of headquarters of each underlying equity position in the respective ETFs. We note that the MSCI All Country World Index is more US centric, whereas the VanEck eSports ETF is more heavily Asia-Pacific focused.

Country HQ Comparison



Below we illustrate the distribution of the market capitalisation of the underlying companies in each ETF. As you can see, the MSCI All Country World Index is skewed towards larger market capitalisation companies, with 11% of the total index falling within the mega-cap bracket greater than US\$ 1 tn.

Company Market Capitalisation as Percent of ETF

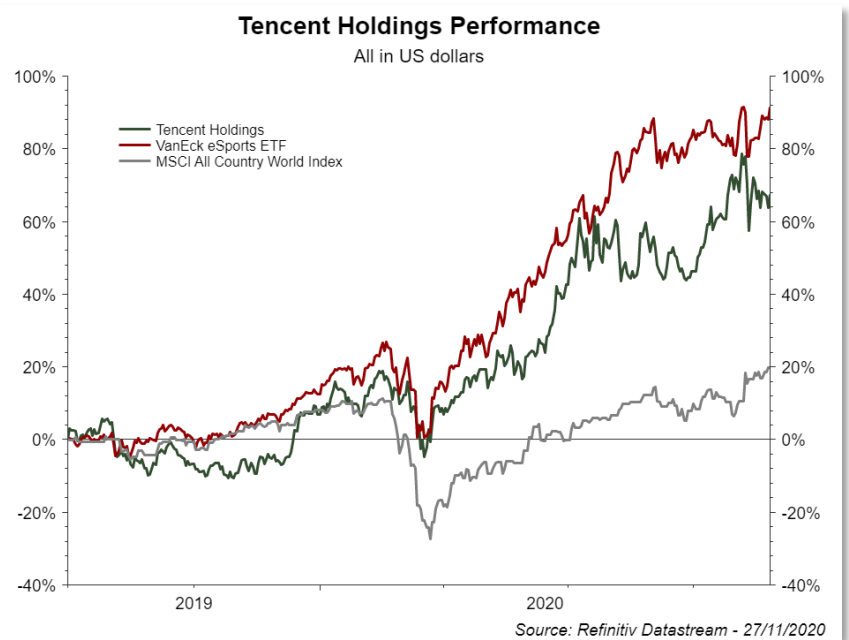


4.2. Example Stocks

Tencent (an Asian Giant)

Tencent is a Chinese technology conglomerate that is best known for being the creator of TencentQQ and WeChat. Tencent is the world's largest video game vendor and one of the world's largest social media, venture capital, and investment corporations. It is the second largest Chinese public company after Alibaba Group, and the 7th largest technology company in the world after Apple, Microsoft, Amazon.com, Alphabet, Facebook, and Alibaba Group (in order). TencentQQ and WeChat are both mobile based instant messaging software services.

There are several similar “Asian Giant” gaming companies that dwarf even the larger Western game publishers. This list of Giants includes NetEase Inc, Nexon Co Ltd, and Sea Ltd (some of which our readers may never have heard). Tencent, however, is larger than all three of these combined. These Giants operate on a very different model to Western peers – blurring the lines between gaming, gambling, social media, chat services, and payments – and are mostly mobile based! The reason the landscape is so different in China is socioeconomic: Chinese consumers' first foray into the internet age was via more affordable smart phones (as opposed to computers). This dynamic mapped the blueprint for the broad adoption of all-encompassing “super-app[s]” like WeChat that let you “socialize, conduct e-commerce, order dumplings for delivery, make hospital appointments, or simply pay your bills”⁵³. Interestingly, 87.7% of users use WeChat daily for work communications compared to 22.6% for e-mail⁵⁴.



As the table below shows, Tencent Holdings Limited is principally involved in the provision of Value-added Services and Online Advertising services. The Value-added Services segment is mainly involved in provision of

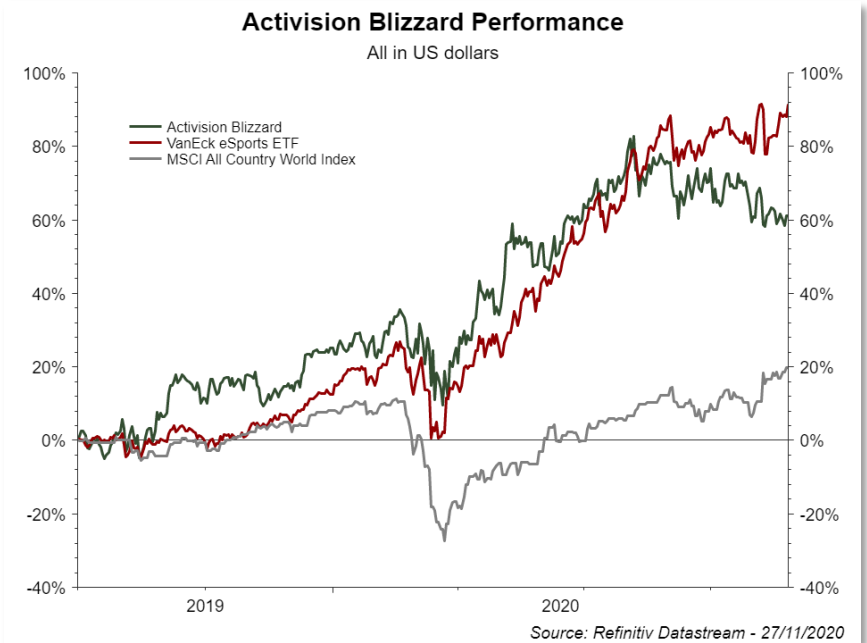
Segments in US\$ Millions	1Q 2020 - 3Q 2020	FY 2019
Value-added Services	57%	53%
Total Revenue	28'211	28'953
Gross Profit	15'512	15'345
Online Advertising	17%	18%
Total Revenue	8'243	9'879
Gross Profit	4'166	4'835
FinTech	26%	27%
Total Revenue	12'816	14'648
Gross Profit	3'618	3'976
Others	1%	2%
Total Revenue	564	1'090
Gross Profit	- 32	84
Consolidated Total	100%	100%
Total Revenue	49'835	54'568
Gross Profit	23'264	24'240

Source: Refinitiv

online/mobile games, community value-added services and applications across various Internet and mobile platforms. Revenues earned by Riot Games and Epic Games will be represented within this segment. As the table shows, the Value-added Services (which represents Tencent's video gaming operations) generated over US\$ 28 bn in revenue over 1Q 2020 - 3Q 2020, increasing year-on-year in both absolute (prorated) and relative terms. As noted, companies require a minimum of 50% of revenue to be generated from gaming to be considered eligible for the two aforementioned video games and eSports indices.

Activision Blizzard (a Game Publisher)

Activision Blizzard Inc. is the largest video games company in the US, and larger than any in Europe, in terms of revenue and market capitalisation. Activision Blizzard Inc. joined the S&P 500 in 2015 and, along with Electronic Arts, is only one of two dedicated game publishers in the index. The Company is a developer and publisher of interactive entertainment content and services. The Company's segments include Activision Publishing Inc. (Activision), Blizzard Entertainment Inc. (Blizzard), and King Digital Entertainment (King). Activision and Blizzard are both developers and publishers of interactive software products and content. King is a mobile entertainment company. Activision Blizzard Inc is also engaged in other businesses such as the eSports league Major League Gaming (MLG) and the film studio Activision Blizzard Studios.



Blizzard Entertainment Inc., although only comprising 24% of total Company revenue, has greater significance to the industry due to its role in the development of eSports. Blizzard created the StarCraft franchise, which is a real-time strategy game that revolutionised eSports as it was one of the first widely adopted competitive games. Blizzard also created Warcraft, the game-engine of which was “modded” (modified) to create “Defense of the Ancients” (DOTA) which inspired League of Legends and essentially created a new game genre called MOBA. Blizzard also released World of Warcraft (WoW) in 2004; a multiplayer online role-playing game where thousands of players play simultaneously in an “open world” by acting as a single character. Warcraft is one of the highest grossing game franchises of all time and WoW alone generated over GBP 100 mn per month with 10 million paying subscribers⁵⁵. Activision Blizzard's other top games include Call of Duty (CoD) and Candy Crush.

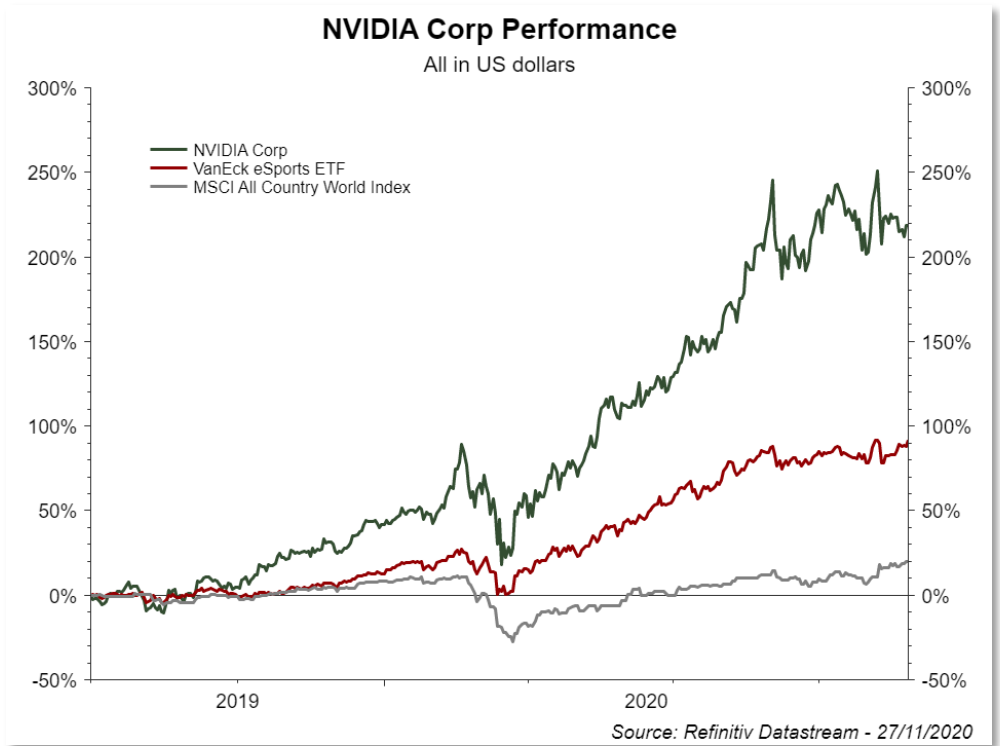
Segments in US\$ Millions	1Q 2020 - 3Q 2020	FY 2019
Activision	46%	34%
Total Revenue	2'594	2'188
Operating Income/Loss	1'088	851
Blizzard	24%	29%
Total Revenue	1'373	1'896
Operating Income/Loss	533	464
King	28%	31%
Total Revenue	1'588	2'029
Operating Income/Loss	616	740
Other	2%	6%
Total Revenue	119	376
Operating Income/Loss	-	-
Consolidated Total	100%	100%
Total Revenue	5'674	6'489
Operating Income/Loss	2'237	2'055

Source: Refinitiv

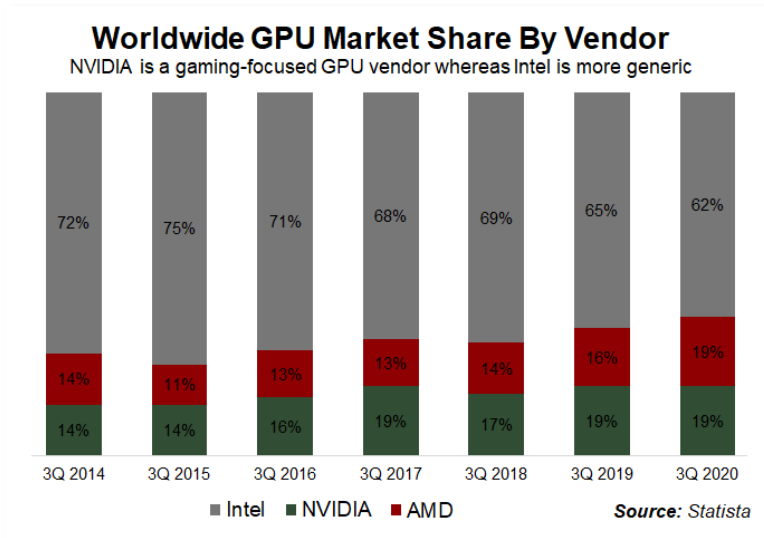
NVIDIA Corp (a Chipmaker)

Nvidia Corporation focuses on personal computer Graphics Processing Units (GPU) and artificial intelligence. It operates through two segments: **GPU product brands** and **Tegra Processors**.

Its **GPU product brands** are aimed at specialized markets such as GeForce for gamers, Quadro for designers, Tesla and DGX for AI data scientists and big data researchers, and GRID for cloud-based visual computing users. Its **Tegra brand** integrates an entire computer onto a single chip and incorporates GPUs and multi-core Central Processing Units (CPUs) to drive supercomputing for mobile gaming and entertainment devices as well as autonomous robots, drones, and cars.



As you can see from the chart above, NVIDIA Corp outperformed the broader VanEck eSports ETF. Furthermore, as the bar chart below shows, video gaming focused Chipmakers such as AMD and NVIDIA (both in the VanEck eSports ETF) have been winning market share from non-gaming specific chipmaker Intel. NVIDIA products are also used in cryptocurrency “mining” as the Arithmetic Logic Unit warehoused within GPUs are more effective at the specific hashing algorithm used to maintain a blockchain.



5. Conclusion

As we have illustrated, the eSports revolution is in full swing. Video game adoption has not only reached critical mass in recent years, but underlying drivers of growth remain robust and show no signs of slowing. The optimistic outlook is underpinned by supportive demographics, the rising popularity of eSports, changing business models and spending habits, and the adoption of mobile technology. Most importantly, however, we wish to highlight how these aforementioned, seemingly independent factors can be viewed together in the context of a single coherent thematic investment thesis.

Some of the most powerful shifts in markets (e.g. the rise of Apple, Amazon, Facebook, Microsoft, Ford) can be encapsulated by the adoption of a thematic trend (e.g. an inflection point in the adoption of the smartphone, eCommerce, social media, personal computers, automobiles). Hence, thematic trends are important concepts in identifying and explaining the changing world around us. A disrupted economic landscape thus gives rise to investment opportunities that, as we have explored, transcend region and sector. It is a testament to how technology has made our world so interconnected: video content created by a US streamer can drive in-game sales of a Chinese conglomerate; the release of a new video game character in Japan can impact the worldwide sales of computer chips. At Omba, we believe that understanding thematic trends is critical to long-term outperformance. We also look forward to publishing future pieces that illustrate some of the investment research we conduct internally; presented in an engaging and intellectually stimulating format.

Growth in the ETF landscape now means that many thematic trends - be it eSports, eCommerce, or eLearning - can be accessed through low cost and highly liquid instruments. This plethora of investment options allows us to express a nuanced yet still diversified view in portfolios. Investors now have the pleasure of choosing from multiple ETF providers, varying strategies, and different underlying benchmarks that track numerous unique trends - something that we are able to utilise at Omba and which reinforces our belief in ETFs as investment tools of the future. We hope you enjoyed this publication and we encourage our readers to thinking thematic!



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What's Happened to the Fed's ETF Purchases?

21 September 2020

The Fed's support for corporate credit has slowed drastically, but can they really afford to step back now that the market has rallied?



"Shapes" – Mapping the Recovery

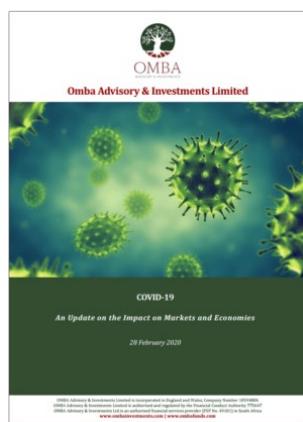
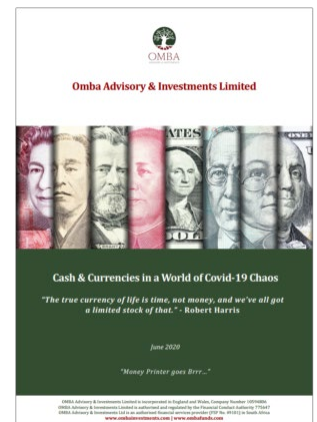
11 September 2020

A "V" Shaped recovery? A "U" Shape? We all hope that markets do not follow a "W" or "L", but a "K" might be the most appropriate. In "Shapes" – Mapping the Recovery, we explore the various trajectories that the global economic recovery could take by delving into some of the most important bullish and bearish risks that exist for the balance of 2020.

Cash & Currencies in a World of Covid-19 Chaos

24 June 2020

The publication discusses how investors view and respond to their foreign currency risk and its importance as part of the investing process.



COVID-19: An Update on the Impact on Markets and Economies

28 February 2020

Given the sharp movements in markets this week we thought we would take this opportunity to provide a short summary of the current state of markets and an updated commentary on Coronavirus (COVID-19) itself – attached above. We hope it provides a good summary of the global impact and spread thus far.