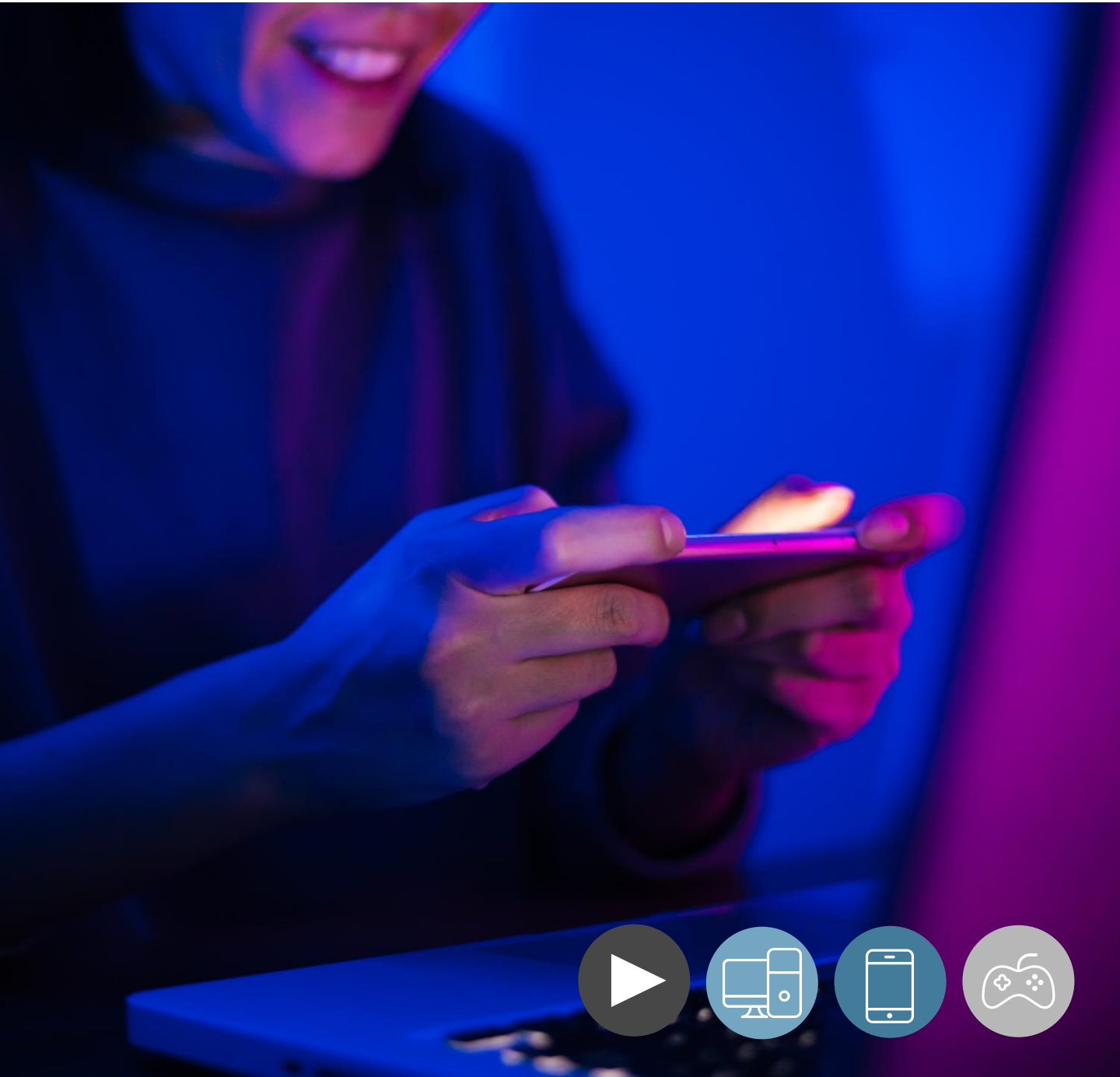




HOULIHAN LOKEY

# VIDEO AND MOBILE GAMING

QUARTERLY UPDATE | SPRING 2021



# Houlihan Lokey Video and Mobile Gaming Quarterly Update

Dear Clients and Friends,

Houlihan Lokey is pleased to present its Video and Mobile Gaming Quarterly Update for spring 2021.

We have included industry insights and select transaction announcements to help you stay ahead in the rapidly evolving video games sector. Drivers of the sector appear to change year by year with current industry forces, including the rapid growth of mobile gaming and specifically free-to-play gaming, the launch of the next generation of consoles, augmented reality (AR) and virtual reality (VR), the rise of professional gaming, and many others. We expect M&A activity and sector evolution to be fast-paced and relentless for the foreseeable future, as the largest video game companies in the world currently have significant cash reserves and/or highly valued public currencies and are looking for additional scale, IP, studios, and capabilities.

Over the past year, COVID-19 sent shock waves through markets globally, and the pandemic continues to drag on but real hope has been instilled by way of rapidly accelerating vaccination rates. Despite its many negative effects, the pandemic has significantly benefitted the video game industry; people of all ages around the world have been forced to find ways to entertain themselves at home for months on end, and video games have been one of their top choices. Supporting this notion, global gaming revenues jumped by nearly 20% in the prior year and the prevailing trends appear enduring. COVID-19 has likely provided a long-term structural tailwind permanently growing the pie and attracting capital to the industry.

We hope you find this update informative and that it serves as a valuable resource to you in staying abreast of the market. If there is additional content you would find useful for future updates, please don't hesitate to call or email us with your suggestions. We look forward to staying in touch with you.

Regards,



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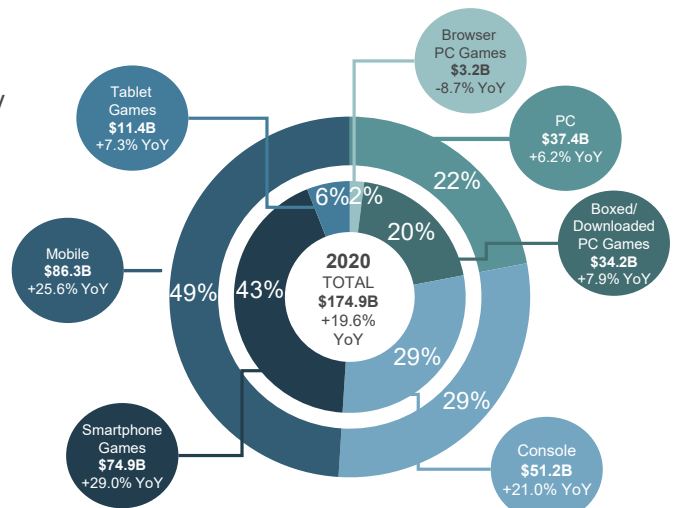
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# Current Market Outlook

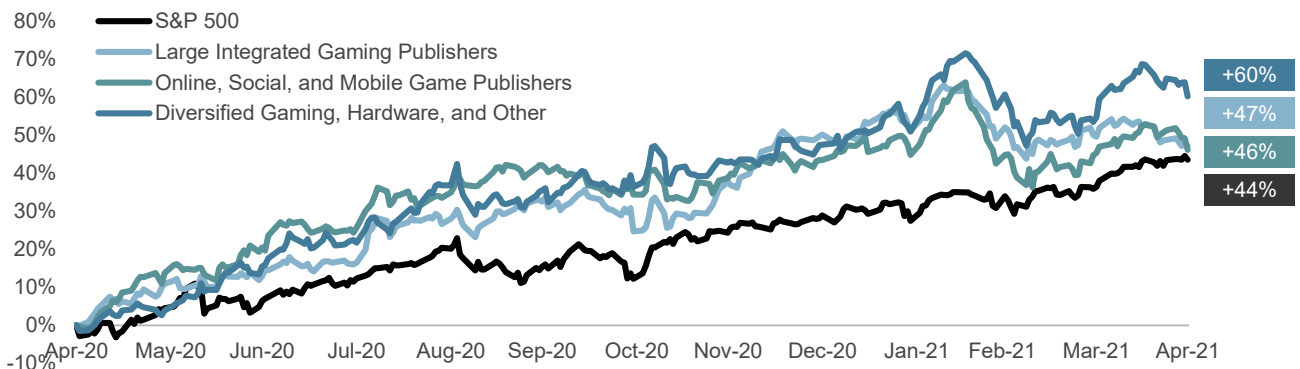
## 2020 Gaming Overview<sup>(1)</sup>

In 2020, the global video games market achieved record revenues of \$175 billion in 2020, representing a robust 19.6% increase over last year. Approximately 50% of revenues across all three categories (mobile, PC, console) come from the U.S. and China; significant revenue growth is expected in emerging markets over the next several years, as gaming companies are increasingly investing in those markets.

Mobile gaming has seen the biggest increase of the three main segments. This is mainly due to low barriers to entry, closure of PC cafes due to COVID-19, and the relative simplicity of developing mobile games as opposed to PC and console games.



## Industry Trading History (Trailing Year)



## Industry Multiples (TEV/LTM EBITDA, Revenue)<sup>(1)</sup>

	February High (2/19/2020)	March Low (3/23/2020)	4/30/2021	Change Since March 2020 Low	
<b>Large Integrated Gaming Publishers</b>					
TEV/EBITDA	11.7x	9.9x	21.1x	113%	▲
TEV/Revenue	3.5x	3.1x	5.0x	62%	▲
<b>Online, Social, Mobile Game Publishers</b>					
TEV/EBITDA	14.1x	11.1x	17.3x	55%	▲
TEV/Revenue	3.8x	2.6x	5.6x	116%	▲
<b>Diversified Gaming, Hardware, and Other</b>					
TEV/EBITDA	16.9x	13.3x	17.0x	28%	▲
TEV/Revenue	10.1x	7.4x	10.6x	43%	▲

Notes: Companies were grouped based on a variety of factors, including size, target market, and brand recognition. The specific companies in each group are listed in the trading data section.

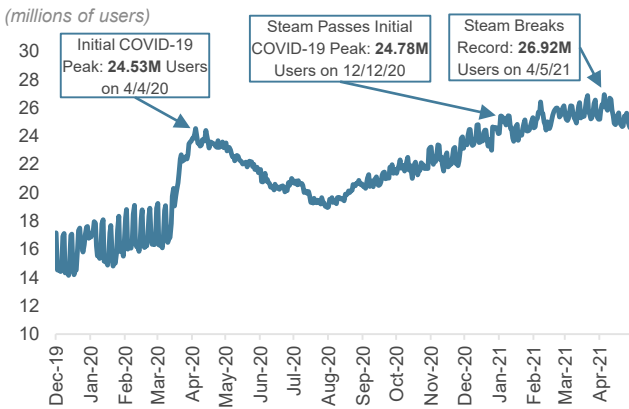
(1) Newzoo.

(2) Selected metrics are per those reported on S&P Capital IQ. They represent the median multiple of the selected companies discussed in the trading data section. Companies may be excluded due to extraordinary data (>15x EV/LTM revenue, >50x EV/LTM EBITDA).

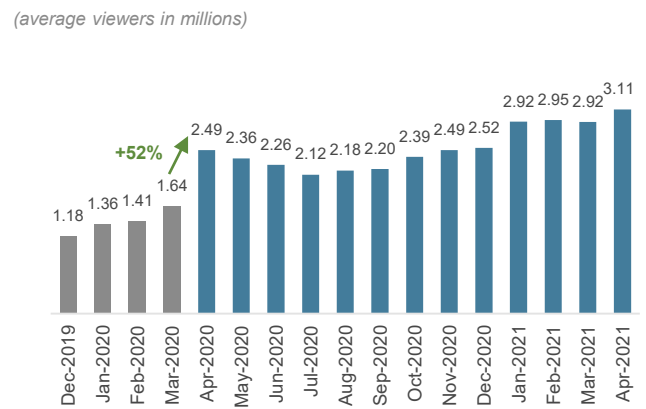
# COVID-19 Has Boosted the Gaming Industry

Despite the troubles it has created in the wider economy, COVID-19 has been a major positive for the gaming industry. According to a survey conducted by Jefferies, 54% of respondents indicated that they had been playing more games during COVID-19 than the prior year, and 67% of respondents claimed that they would spend more or a similar amount of time gaming after the COVID-19 crisis ends. In support of this view, Twitch has seen a massive jump in average viewers, increasing from approximately 1.5 million per month during early 2020 to more than 2.1 million per month; the gaming platform Steam has also seen a jump in its daily concurrent users from approximately 15 million to more than 20 million. All signs point to an enduring increase in gaming even after the impacts of the restrictions wane.

## Steam Sees Hike in Daily Concurrent Users

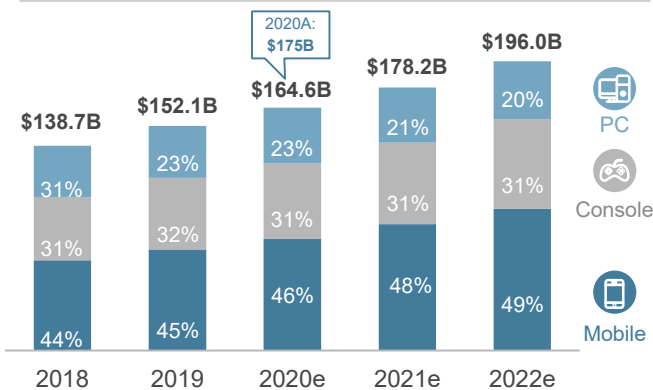


## Twitch Sees Jump in Average Viewers

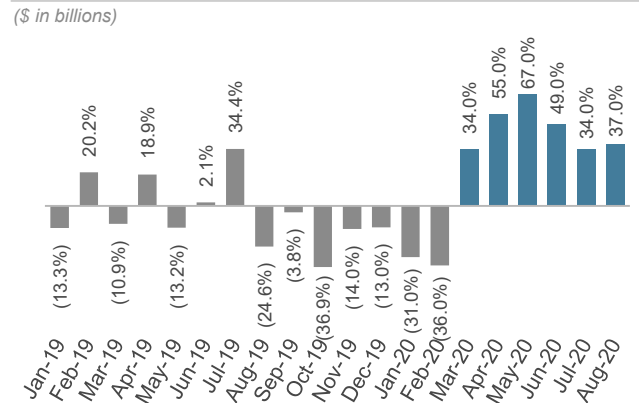


Mobile gaming was a significant beneficiary from the pandemic. During Q2 2020, games on the iOS App Store saw a YoY increase in revenues of 25%, revenues of games on the Google Play store increased 24%, and other mobile games saw a 31% increase in revenues. Simply put, COVID-19 has been a bonanza for mobile game developers as they attempt to reach more than 2 billion smartphone owners. For the most part, these efforts have paid off; the pandemic has accelerated the shift to mobile gaming, with player spending rising faster in Q2 2020 than in recent periods and mobile gaming expected to reach nearly 50% of game revenues by 2022. Q2 revenues were up 10.7% QoQ and 28% YoY to \$19.4 billion. As with the broader gaming industry, mobile gaming tailwinds are expected to remain positive in 2021 and beyond.

## Global Game Revenues



## U.S. Video Game Software Sales Change YoY<sup>(1)</sup>



Sources: BNP Paribas report dated 10/5/2020, S&P Market Intelligence August 2020, Jefferies report dated 10/26/20, Twitch Tracker as of 3/31/2021, SteamDB as of 3/31/21, Newzoo, AppAnnie.

(1) NPD tracks physical sales at retailers, but it also gets digital data directly from publishers (except Nintendo, BattleNet). This chart does not include micro transactions, subscriptions, or anything beyond full-game sales. Since June 2020, NPD has shared a new metric called "Video Game Content," which includes full-game software sales, spending on micro transactions, downloadable content, subscriptions, and more.

# Gamer Demographics Continue to Evolve

The COVID-19 pandemic and ensuing lockdowns greatly increased the presence of the “casual gamer,” defined as a person who doesn’t consider gaming to be one of their main hobbies. For the past year, individuals across the world have been forced to find ways to spend countless hours at home, and video games have proven to be a highly appealing option for consumers. According to research by AppAnnie, casual gaming grew by 45% in 1H 2020. This was first observed with the release and instant viral success of Nintendo’s *Animal Crossing: New Horizons*, which sold 26 million copies since its release in March. This places it among the top 30 selling games of all time on any system.

Other “casual” games that have exploded in popularity during the year include Innersloth’s *Among Us*, Mediatonic’s *Fall Guys: Ultimate Knockout*, and Roblox’s eponymous platform. In a recent interview, the former COO of King, Stephane Kurgan, said that sheer scale gives mobile game companies greater upside from the pandemic than console publishers, outside of the very biggest hits. “A large majority of PC and console titles haven’t really benefited,” Mr. Kurgan mentioned. “It’s more the mobile free-to-play industry, which has seen very material revenue spikes.”

On top of this, advertisers are seeing mobile games as a potentially viable alternative to reaching consumers. According to Julie Shumaker, Vice President of Monetization at the AR/VR gaming engine Unity, “Even a continued downturn in the economy is going to only increase revenues. [Brands] are spending \$40, \$80 CPMs to have a 30-second TV spot that costs \$10 million to produce...We are such an interesting space for efficiency of their dollar.”

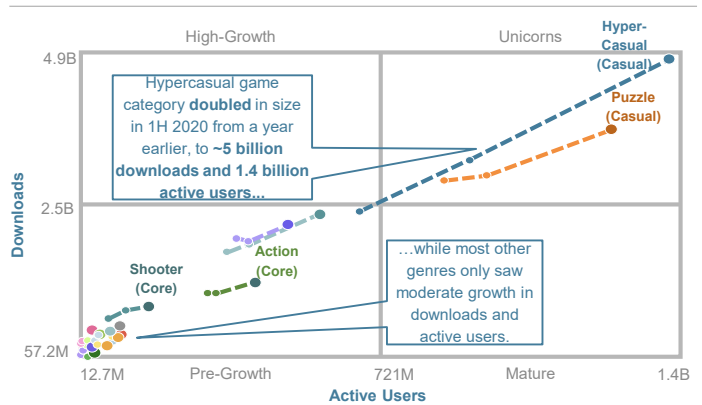
In addition, female gamers have become a larger part of the market in recent years. Accordingly, developers and gamers are devising solutions to create a more gender-inclusive environment in the gaming space. For a key example of this point, developers should turn to Asia, which accounts for 48% of the world’s total gaming revenue—with female gamers being significant contributors. For 2019, the number of female gamers grew to 38% of the 1.33 billion Asian gaming population, according to Google and market researcher Niko Partners. In China, they now account for 45%, while in South Korea, Japan, and Southeast Asia, the figure is 40%.

According to a Google Play paper, 65% of women aged 10–65 are gamers, and they also play mobile games at a higher rate than men. Of those 65% who are gamers, 79% of those females are more likely to make in-app purchases. In addition, more than two-thirds (71%) of women aged 25–54 years old who have at least one child at home under the age of 18 play video games.

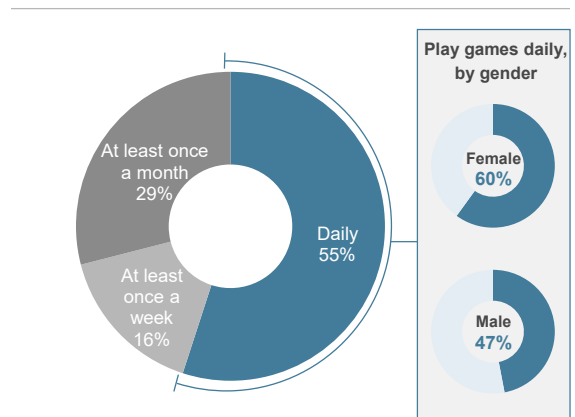
The chart to the right depicts a 2017 survey on consumers’ frequency of playing mobile games. As mobile games continue their ascent in popularity, it will be particularly important for developers to create inclusive products that appeal to female gamers.

## Growth Stage by Game Genre

Growth in Downloads and Active Users



## Daily Gamers by Gender



# Next-Generation Console Launches

The latest consoles from Microsoft and Sony launched in November 2020, in advance of the holiday season.

The next-generation Xbox and PlayStation systems launched on November 10 and 12, 2020, respectively, to generally positive reviews and limited supply due to the COVID-19 pandemic. The new consoles showcase a number of comparable improvements over their forerunners, including ray tracing technology for the more impressive graphics and solid-state storage drives to shorter load times.

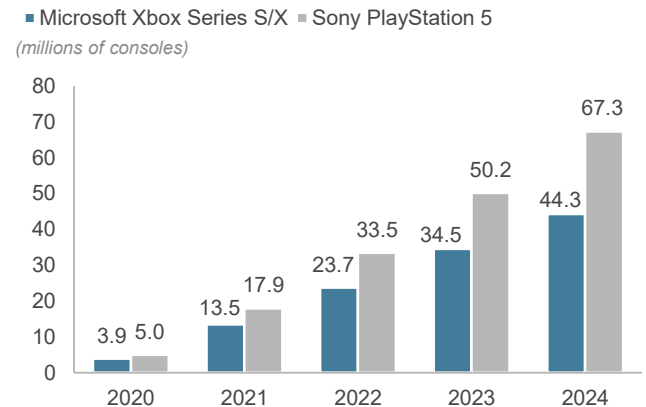
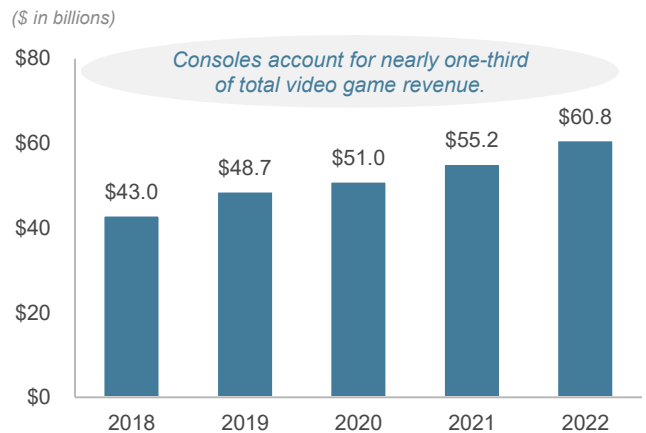
According to Newzoo, Microsoft's strategy leans more on its ecosystem, strong Game Pass content offering, and a play-anywhere philosophy (e.g., cloud gaming). Meanwhile, Sony's PS5 approach remains much like the PS4's: a strong emphasis on narrative-driven AAA exclusives. Microsoft has taken a page out of Sony's book by acquiring several studios, including its recent acquisition of Bethesda for \$7.5 billion. The acquisition of Bethesda and its library of titles should help drive users to Microsoft's cloud initiative via Xbox Game Pass.

On the other hand, Sony celebrated its "biggest console launch ever," selling a record 3.4 million consoles in its first four weeks of sales outpacing the Xbox Series X/S, in which early estimates suggest selling 1.8 million units. In its latest earnings report in February 2021, Sony boasted sales of 4.5 million PS5 units worldwide in 2020.

Despite the excitement around these next-generation consoles, certain industry dynamics have begun to shift focus in the industry away from console gaming. Namely, the most popular multiplayer games such as *Fortnite* and *Call of Duty: Warzone* are focused on creating a "device-agnostic" approach, which allows cross-platform multiplayer gaming. This reduces the incentive for gamers to purchase any particular console, as they can play popular games with their friends regardless of their individual console or PC.

Looking forward, VR and AR platforms are increasingly seen as a threat to console platforms and have the potential to be the "future of gaming." Major tech companies such as Apple, Google, and Facebook are pouring billions into VR and AR technology. Facebook has been especially aggressive in this arena; in a recent interview with *The Information*, CEO Mark Zuckerberg subtly resisted the idea of partnerships with Apple and Microsoft: "We would like to make sure we can design the next system so it can actually create the social experiences that we would like there to be." In addition, Mr. Zuckerberg intends to price Facebook's VR/AR technology at levels that would prove difficult for console makers to overcome. He stated that Facebook's "inclination is probably going to be to try to offer these products at as low of a cost as possible in order to be able to get them out to everyone" and used \$300 as a benchmark.

## Console Revenue and Sales Forecasts



# Looking Forward: Entering the Metaverse

In recent years, and especially in 2021, many have heard the term “metaverse” used for the first time. As defined in the Roblox S-1, the metaverse is a term “used to describe the concept of persistent, shared, 3D virtual spaces in a virtual universe.” With faster, more powerful computers and rapid advances in connectivity around the corner with 5G, this concept of a metaverse is coming quickly. For instance, Roblox is not simply a game; it is a *world* in which players can enjoy many separate games. Within this world, users create a unique virtual identity, spend time with virtual friends, and spend virtual money. Most importantly, this world is constant across any device: PC, console, or smartphone. The Chief Business Officer of Roblox, Craig Donato, touched on this concept in a June 2020 interview:



**Craig Donato**  
Chief Business Officer  
Roblox

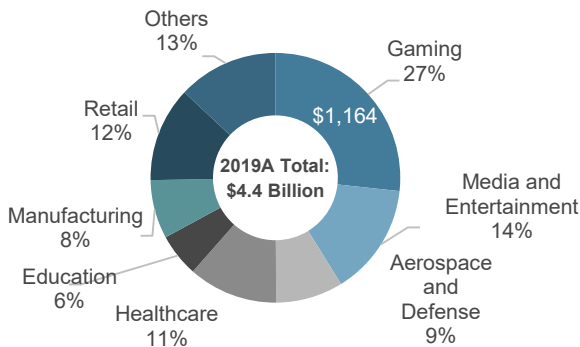
*“...The metaverse is inherently a social place. It’s this shared experience...This ability to be able to have social interactions and maintain and actually make friendships becomes super important. What the internet is for information, the metaverse is going to do for social connections. I’m no longer bound by physical distance or all these constraints in terms of who I interact with or how I represent who I am. All these things are suddenly unleashed...If you have a metaverse, it has to start to evolve the constructs of a society. We need to think about rules of order. What’s allowed, what’s not allowed? How are those rules enforced, and are they aligned with real-world laws? What happens in different countries? You also need to have an integrated economy. You need to make sure that people can make a living. We have our own currency, Robux, and we have our own economy. We do think about rules of order and enforcing them.”*

While this is certainly exciting for Roblox, the platform itself does not capture the full nature of a true metaverse, as the concept’s traditional definition is of a virtual world that integrates with the real world that surrounds us all. This naturally leads us to one of the most anticipated evolutions of gaming: VR and AR. Currently, the gaming industry is poised to take advantage of the massive forecasted growth in the VR and AR (collectively known as “XR”) markets.

VR and AR continue to grow rapidly and are forecasted to be worth more than \$70 billion in the U.S. within the next decade. Most VR and AR technologies are currently used for gaming and are still relatively new; as the technology becomes increasingly advanced and the industry moves further into the public eye, the possibility of a paradigm shift within the gaming industry is becoming more probable. Current VR gaming products are developed by Oculus (Facebook), Sony, and HTC, among others, all of which are seeking a market share in the coming metaverse.

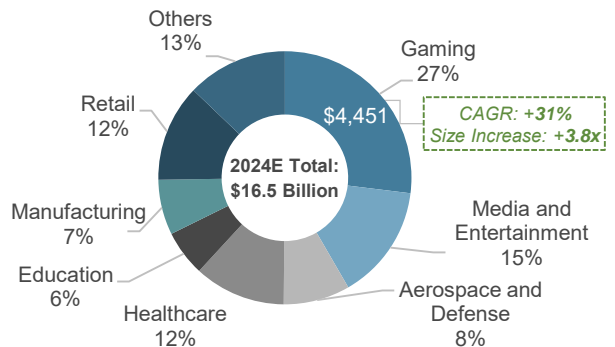
## Alongside Overall VR and AR Industry Growth...

United States



## ...Gaming Will Remain the Largest Segment





United States






# Gaming M&A and Capital Markets Highlights

M&A activity in the video games space is white-hot. Aggressive consolidation is underway, powered by the sector's underlying health and growth as well as investors' enthusiasm regarding the future. Frothy public markets and healthy balance sheets are creating catalysts for consolidation.

## Selected M&A Transactions

February 2021	December 2020	May 2020
 <span>Acquired</span> 	 <span>Acquired</span> 	 <span>Acquired</span> 
<ul style="list-style-type: none"> <li>On February 8, 2021, EA agreed to acquire Glu Mobile in a deal worth approximately <b>\$2.3 billion</b> in cash; the deal closed on April 29, 2021.</li> <li>Glu Mobile has developed multiple hit mobile games such as <i>Design Home</i>, <i>Covet Fashion</i>, and <i>MLB Tap Sports Baseball</i>.</li> <li>Per EA's CEO Andrew Wilson, this acquisition will double the size of EA's mobile games business; this is no doubt in response to the recent white-hot growth of mobile gaming.</li> <li>In addition, <i>MLB Tap Sports Baseball</i> will allow EA to complete its suite of mobile games sponsored by professional sports leagues.</li> </ul>	<ul style="list-style-type: none"> <li>In mid-December 2020, EA agreed to acquire Codemasters in a deal worth approximately <b>\$1.2 billion</b>; the deal closed on February 18, 2021.</li> <li>Codemasters is primarily known for its sports-focused approach, specifically its racing games (<i>Dirt</i>, <i>F1</i>, and <i>Micro Machines</i> franchises).</li> <li>EA intends for these sports-related titles to complement their existing titles held by its studio EA Sports, such as <i>Madden NFL</i> and <i>FIFA</i>.</li> </ul>	<ul style="list-style-type: none"> <li>On May 14, 2020, AppLovin acquired MachineZone for undisclosed terms.</li> <li>Machine Zone is a mobile games company that pioneered free-to-play mobile gaming and created the first massive multiplayer online game on iOS.</li> <li>This was primarily done in an effort to bolster AppLovin's mobile games portfolio, as MachineZone's <i>Game of War: Fire Age</i> and <i>Mobile Strike</i> are among the best known mobile game titles to date.</li> </ul>

## Selected IPOs

<div style="display: flex; align-items: center;"> <div style="background-color: #008080; color: white; padding: 2px 5px; margin-right: 10px;">3/10/2021</div>  </div> <ul style="list-style-type: none"> <li>Roblox is a multiplayer online game platform and "game creation system" released in 2006 that allows users to program games and play games created by other users.</li> <li>Roblox initially filed for an IPO on November 19, 2020. However, on January 6, 2021, the company announced that it would pivot from a traditional IPO to a direct listing following the closure of a \$520 million Series H private placement that valued Roblox at nearly \$30 billion.</li> <li>The company began trading on the NYSE as "RBLX" on March 10, 2021, at a price of \$69.50; as of April 30, 2021 it was priced at \$64.83 <b>(+7.3%)</b>.</li> </ul>	<div style="display: flex; align-items: center;"> <div style="background-color: #008080; color: white; padding: 2px 5px; margin-right: 10px;">12/17/2020</div>  </div> <ul style="list-style-type: none"> <li>Skillz is an online mobile multiplayer platform launched in 2012 that allows developers to turn their mobile game into its own "esport" by enabling gamers to wager small amounts of cash on the outcome of head-to-head games.</li> <li>Skillz followed the hottest IPO trend of 2020 by merging with the SPAC Flying Eagle Acquisition Corp.</li> <li>The transaction included approximately \$850 million in funding from investors, including Fidelity, Wellington Management, and Franklin Templeton.</li> <li>The company began trading on the NYSE as "SKLZ" on December 17, 2020, at a price of \$17.89; as of April 30, 2021, it was priced at \$17.52 <b>(-2.1%)</b>.</li> </ul>	<div style="display: flex; align-items: center;"> <div style="background-color: #008080; color: white; padding: 2px 5px; margin-right: 10px;">9/18/2020</div>  </div> <ul style="list-style-type: none"> <li>Unity is a video game software company founded in 2004 known for its eponymous game engine, used to create hit games like <i>Pokémon Go</i> and <i>Call of Duty: Mobile</i>.</li> <li>Investors found Unity's IPO to be particularly exciting because of the company's success in the VR and AR realms; with VR and AR gaming poised to explode in the near future, Unity's game engine has maintained a dominant hold on games produced for the Microsoft HoloLens and Samsung's Gear VR.</li> <li>The company began trading on the NYSE as "U" on September 18, 2020, at a price of \$68.35; as of March 31, 2021, it was priced at \$101.58 <b>(+48.6%)</b>.</li> </ul>
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# Selected Gaming M&A Transactions

Announced	Target	Acquirer	Transaction Value (USD M)	Transaction Value/LTM Revenue	LTM EBITDA	
Apr-2021	Climax Studios Ltd.	Keywords Studios plc	\$59.5	NA	10.0x	
Mar-2021	Ninja Kiwi Ltd.	MTG Gaming AB	\$198.7	4.9x	9.8x	
Mar-2021	Tantalus Media	Keywords Studios plc	\$52.2	NA	8.7x	
Mar-2021	704 Games Co.	Motorsport Games Inc.	\$122.7	NA	NA	
Mar-2021	Truly Social Games Vancouver Inc.	Leaf Mobile Inc.	\$33.4	NA	NA	
Mar-2021	IGNIS Ltd.	Bain Capital Private Equity, LP	\$431.4	8.3x	NM	
Mar-2021	Studio397 BV	Motorsport Games Inc.	\$16.0	NA	NA	
Mar-2021	Junglee Games, Inc.	Flutter Entertainment plc	\$132.1	NA	NA	
Mar-2021	Raketspel Interaktiva Produktioner AB	Safe Lane Gaming AB (publ)	\$26.8	NA	NA	
Feb-2021	Innova Intellectual Properties Sà r.l.	Enad Global 7 AB (publ)	\$111.5	2.9x	7.0x	
Feb-2021	Royalcrow Co., Ltd.	Aceville Pte. Ltd.	\$36.3	NA	NA	
Feb-2021	Headup GmbH	Thunderful Group AB	\$13.1	2.6x	NA	
Feb-2021	Sarl Justforgames	Zordix AB (publ)	\$19.8	0.5x	4.2x	
Feb-2021	Glu Mobile Inc.	Electronic Arts Inc.	\$1,983.0	3.7x	57.0x*	
Feb-2021	The Gearbox Entertainment Company, LLC	Embracer Group AB (publ)	\$1,488.9	NA	NA	
Feb-2021	Easybrain Ltd.	Embracer Group Lager 5 AB	\$896.5	NA	NA	
Feb-2021	Aspyr Media, Inc.	Saber Interactive, Inc.	\$461.4	11.4x	NA	
Jan-2021	Jagex Ltd.	The Carlyle Group Inc.	>\$644.4	>4.3x	NA	
Jan-2021	Assets of Golf With Your Friends	Team17 Group plc	\$16.5	NA	NA	
Jan-2021	Kahoot! AS (nka Kahoot! ASA)	Glitrafjord AS; SB Management Ltd.	\$5,488.2	177.8x*	NM	
Jan-2021	YoYo Games Ltd.	Opera Ltd.	\$10.0	NA	NA	
Dec-2020	Sandbox Interactive GmbH	Stillfront Group AB (publ)	\$160.0	NA	NA	
Dec-2020	High Voltage Software, Inc.	Keywords Studios plc	\$50.0	NA	NA	
Dec-2020	Hutch Games Ltd.	Modern Times Group Mtg AB	\$375.0	NA	NA	
Dec-2020	InnoGames GmbH	Modern Times Group Mtg AB	\$762.7	NA	NA	
Dec-2020	Daybreak Game Company LLC	Enad Global 7 AB (publ)	\$339.8	4.4x	11.7x	
Nov-2020	Flying Wild Hog Sp. z o.o.	Koch Media GmbH	\$137.2	NA	NA	
Nov-2020	A Thinking Ape, Inc.	Embracer Group Lager 1 AB	\$111.3	NA	NA	
Nov-2020	Codemasters Group Holdings plc	Take-Two Interactive Software, Inc.	NA	NA	NA	
Oct-2020	Everguild Ltd.	Stillfront Group AB (publ)	\$7.0	4.5x	NA	
Oct-2020	Deuscraftdev LLC	MY.GAMES	\$62.6	NA	NA	
Oct-2020	Coatsink Software Ltd.	Thunderful Group AB	\$85.0	NA	NA	
Sep-2020	Pipeworks Inc.	Sumo Group plc	\$100.1	5.2x	23.8x	
Sep-2020	ZeniMax Media Inc.	Microsoft Corp.	\$7,332.0	NA	NA	
Sep-2020	Nanobit d.o.o.	Stillfront Group AB (publ)	\$139.7	NA	NA	
Sep-2020	Heavy Iron Studios, Inc.	Keywords Studios plc	\$13.3	2.5x	13.3x	
Sep-2020	Vertigo Games Holding BV	Koch Media GmbH	\$129.5	NA	NA	
Sep-2020	Flying Eagle Acquisition Corp.	Skillz Inc.	\$3,500.0	15.5x	NA	
Aug-2020	Playdots, Inc.	Take-Two Interactive Software, Inc.	\$198.4	NA	NA	
Aug-2020	DouYu International Holdings Ltd.	HUYA Inc.	\$780.7	NM	NM	
Aug-2020	Rollic Games	Zynga Inc.	\$254.5	NA	NA	
Jul-2020	Belong Gaming Arenas	Vindex LLC	\$50.0	NA	NA	
Jul-2020	Focus Home Interactive S.A.	Fhcp	\$233.4	1.3x	6.2x	
Jun-2020	Come2Play Ltd.	SciPlay Corp.	\$17.8	NA	NA	
Jun-2020	Peak Oyun Yazilim ve Pazarlama AS	Zynga Inc.	\$1,978.0	NA	NA	
May-2020	Machine Zone, Inc.	AppLovin Corp.	NA	NA	NA	
				<b>Median</b>	<b>4.3x</b>	<b>9.8x</b>
				<b>Mean</b>	<b>5.1x</b>	<b>10.5x</b>

Sources: S&P Capital IQ, Bloomberg, and publicly available articles.  
\*Excluded from summary calculations.

# Public Market Valuations—Trading Metrics

(\$ in millions, except per share figures and trading metrics)

Company	Stock Price	52-Week High	% of 52-Week High	Equity Mkt Cap	Enterprise Value	EV/Revenue			EV/EBITDA			
						CY 2019	CY 2020	CY 2021E	CY 2019	CY 2020	CY 2021E	
CD Projekt S.A.	\$45.94	\$122.48	37.5%	\$4,628	\$4,413	36.0	6.8x	10.4x	NM	9.8x	15.1x	
Com2uS Corp.	132.13	161.78	81.7%	1,589	1,020	2.5	2.2	1.7	8.9	8.5	6.5	
DeNA Co., Ltd.	20.43	21.08	96.9%	2,493	1,923	1.7	1.5	1.5	NM	13.1	7.7	
Frontier Developments plc	44.55	47.93	92.9%	1,732	1,715	16.0	15.2	10.3	45.2	36.3	25.9	
GAMEVIL Inc.	37.98	51.69	73.5%	244	336	3.1	2.5	2.3	NM	9.8	7.4	
GungHo Online Entertainment, Inc.	19.07	25.92	73.6%	1,294	426	0.4	0.5	0.5	1.4	1.5	1.5	
Modern Times Group Mtg AB	15.37	18.90	81.4%	1,629	1,609	3.5	3.0	2.6	NM	29.2	17.0	
Ncsoft Corp.	743.52	938.81	79.2%	15,322	13,729	9.3	6.2	5.0	28.2	16.6	12.9	
NetEase, Inc.	112.06	134.33	83.4%	72,892	63,463	7.4	5.7	4.6	24.8	23.8	20.8	
Netmarble Corp.	116.01	183.19	63.3%	9,505	9,415	4.9	4.0	3.8	34.4	27.1	22.6	
NEXON Co., Ltd.	33.16	34.22	96.9%	29,468	24,657	10.9	8.7	7.9	26.1	20.8	17.2	
Playtika Holding Corp.	27.78	36.06	77.0%	11,379	13,257	NA	5.6	5.4	NA	14.4	14.4	
Remedy Entertainment Oyj.	54.61	60.03	91.0%	714	690	16.5	13.8	12.5	NM	42.1	34.3	
Roblox Corp.	74.55	83.41	89.4%	41,043	40,514	NA	23.0	19.1	NA	NM	NM	
Rovio Entertainment Oyj.	7.96	9.53	83.5%	586	426	1.3	1.3	1.3	10.4	5.8	8.1	
SciPlay Corp.	17.65	21.74	81.2%	430	526	1.1	0.9	0.9	4.0	2.8	2.9	
Skillz Inc.	17.52	46.30	37.8%	6,936	6,673	NA	29.7	18.0	NA	NM	NM	
Stillfront Group AB (publ)	10.23	14.86	68.9%	3,547	4,022	18.9	8.1	5.4	48.7	20.4	14.8	
Team17 Group plc	10.71	12.43	86.1%	1,386	1,303	16.5	11.7	10.6	45.5	31.5	28.5	
Wemade Co., Ltd.	46.67	58.50	79.8%	766	715	6.7	6.5	3.0	NM	NM	11.0	
Zynga Inc.	10.82	12.32	87.8%	11,740	11,597	9.0	6.0	4.3	37.9	21.9	17.3	
				<b>Mean</b>	\$10,444	\$9,639	9.2x	7.8x	6.3x	26.3x	18.6x	15.0x
				<b>Median</b>	2,493	1,923	7.1	6.0	4.6	27.1	18.5	14.8
Activision Blizzard, Inc.	\$91.19	\$104.53	87.2%	\$70,856	\$65,940	10.4x	8.1x	7.7x	30.0x	18.8x	17.4x	
Capcom Co., Ltd.	32.48	34.76	93.4%	6,934	6,403	7.3	7.2	6.0	27.7	20.0	16.0	
Electronic Arts Inc.	142.08	150.30	94.5%	40,866	35,448	6.6	6.0	5.5	18.7	16.8	16.0	
Konami Holdings Corp.	59.65	69.16	86.2%	7,946	6,914	2.8	2.8	2.7	14.0	11.4	9.6	
Sega Sammy Holdings Inc.	14.35	17.47	82.1%	3,374	2,727	0.8	1.0	0.9	6.5	8.9	6.5	
Square Enix Holdings Co., Ltd.	55.62	68.25	81.5%	6,640	5,325	2.0	1.7	1.8	16.3	11.0	10.0	
Take-Two Interactive Software, Inc.	175.38	214.91	81.6%	19,225	16,990	6.1	4.9	5.0	25.1	17.5	20.4	
Ubisoft Entertainment S.A.	75.14	106.05	70.8%	9,213	9,745	5.4	3.7	3.4	12.3	8.0	7.7	
				<b>Mean</b>	\$20,632	\$18,686	5.2x	4.4x	4.1x	18.8x	14.1x	13.0x
				<b>Median</b>	8,579	8,329	5.8	4.3	4.2	17.5	14.1	13.0
Microsoft Corp.	\$252.18	\$263.19	95.8%	\$1,899,312	\$1,855,559	13.9x	12.3x	10.6x	31.2x	26.8x	21.8x	
Nintendo Co., Ltd.	573.52	638.84	89.8%	68,320	54,333	4.8	3.4	3.6	19.2	10.2	10.1	
NVIDIA Corp.	600.38	648.57	92.6%	373,667	369,824	34.3	22.5	16.5	NM	NM	NM	
Sony Group Corp.	99.72	114.77	86.9%	123,575	134,741	1.7	1.7	1.6	11.7	11.7	10.8	
Tencent Holdings Ltd.	80.21	99.85	80.3%	763,110	779,846	14.4	10.6	8.5	38.6	28.2	22.9	
				<b>Mean</b>	\$645,597	\$638,860	13.8x	10.1x	8.2x	25.2x	19.2x	16.4x
				<b>Median</b>	373,667	369,824	13.9	10.6	8.5	25.2	19.3	16.3

Source: S&P Capital IQ as of April 30, 2021.

Notes: USD in millions, except per share amounts and multiples. Multiples less than 0.0x and greater than 50.0x denoted as "NM."

# Public Market Valuations—Operating Metrics

(\$ in millions, except per share figures)

Company	Stock Price	Equity Mkt Cap	Enterprise Value	Revenue			EBITDA			Revenue Growth			EBITDA Margin		
				CY 2019	CY 2020	CY 2021E	CY 2019	CY 2020	CY 2021E	2018–2019	2019–2020	2020–2021E	CY 2019	CY 2020	CY 2021E
CD Projekt S.A.	\$45.94	\$4,628	\$4,413	\$122	\$651	\$423	\$39	\$451	\$292	27.6%	431.6%	NM	32.1%	69.3%	69.0%
Com2uS Corp.	132.13	1,589	1,020	410	469	587	114	120	156	NM	14.5%	25.2%	27.8%	25.6%	26.6%
DeNA Co., Ltd.	20.43	2,493	1,923	1,137	1,257	1,271	NA	147	251	NM	10.5%	1.1%	NM	11.7%	19.7%
Frontier Developments plc	44.55	1,732	1,715	107	113	167	38	47	66	36.1%	5.6%	47.8%	35.5%	41.8%	39.6%
GAMEVIL Inc.	37.98	244	336	108	134	148	NA	34	45	10.0%	24.2%	10.8%	NM	25.6%	30.5%
GungHo Online Entertainment	19.07	1,294	426	980	902	866	299	279	277	35.3%	NM	NM	30.5%	30.9%	32.0%
Modern Times Group Mtg AB	15.37	1,629	1,609	465	528	608	19	55	95	NM	13.5%	15.1%	4.1%	10.4%	15.6%
Ncsoft Corp.	743.52	15,322	13,729	1,472	2,205	2,725	487	828	1,065	NM	49.8%	23.6%	33.1%	37.6%	39.1%
NetEase, Inc.	112.06	72,892	63,463	8,589	11,229	13,751	2,559	2,665	3,052	NM	30.7%	22.5%	29.8%	23.7%	22.2%
Netmarble Corp.	116.01	9,505	9,415	1,921	2,345	2,491	273	348	417	3.2%	22.0%	6.3%	14.2%	14.8%	16.7%
NEXON Co., Ltd.	33.16	29,468	24,657	2,266	2,832	3,102	944	1,183	1,433	NM	25.0%	9.5%	41.7%	41.8%	46.2%
Playtika Holding Corp.	27.78	11,379	13,257	NA	2,350	2,465	NA	922	920	NA	NA	4.9%	NA	39.2%	37.3%
Remedy Entertainment Oyj.	54.61	714	690	42	50	55	13	16	20	78.5%	19.4%	10.6%	31.8%	32.8%	36.4%
Roblox Corp.	74.55	41,043	40,514	NA	1,759	2,117	NA	541	491	NA	NA	20.3%	NA	30.8%	23.2%
Rovio Entertainment Oyj.	7.96	586	426	333	333	334	41	73	53	1.4%	NM	0.4%	12.4%	21.9%	15.7%
SciPlay Corp.	17.65	430	526	474	581	604	131	188	184	NA	22.6%	3.9%	27.6%	32.4%	30.5%
Skillz Inc.	17.52	6,936	6,673	NA	225	370	NA	(68)	(125)	NA	NA	64.4%	NA	NM	NM
Stillfront Group AB (publ)	10.23	3,547	4,022	212	498	741	83	197	272	44.0%	134.6%	48.8%	38.9%	39.5%	36.8%
Team17 Group plc	10.71	1,386	1,303	79	111	123	29	41	46	54.5%	41.4%	10.7%	36.3%	37.1%	37.0%
Wemede Co., Ltd.	46.67	766	715	106	110	235	NA	3	65	NM	3.9%	113.6%	0.4%	3.0%	27.7%
Zynga Inc.	10.82	11,740	11,597	1,287	1,931	2,683	306	530	670	41.7%	50.0%	38.9%	23.8%	27.4%	25.0%
<b>Mean</b>	\$10,444	\$9,639	\$11,117	\$1,458	\$1,708	\$358	\$410	\$464	33.2%	56.2%	25.2%	26.3%	29.9%	31.3%	
<b>Median</b>	2,493	1,923	437.3	581.4	607.9	114.0	188.4	250.8	35.7%	23.4%	15.1%	30.1%	30.8%	30.5%	
Activision Blizzard, Inc.	\$91.19	\$70,856	\$65,940	\$6,363	\$8,164	\$8,551	\$2,198	\$3,505	\$3,788	NM	28.3%	4.7%	34.5%	42.9%	44.3%
Capcom Co., Ltd.	32.48	6,934	6,403	876	891	1,072	231	320	400	NM	1.7%	20.4%	26.4%	35.9%	37.3%
Electronic Arts Inc.	142.08	40,866	35,448	5,352	5,899	6,501	1,893	2,113	2,217	7.5%	10.2%	10.2%	35.4%	35.8%	34.1%
Konami Holdings Corp.	59.65	7,946	6,914	2,449	2,481	2,589	494	607	718	6.2%	1.3%	4.4%	20.2%	24.5%	27.7%
Sega Sammy Holdings Inc.	14.35	3,374	2,727	3,334	2,809	2,948	419	306	421	13.5%	NM	5.0%	12.6%	10.9%	14.3%
Square Enix Holdings Co., Ltd.	55.62	6,640	5,325	2,667	3,089	2,966	326	485	533	23.8%	15.8%	NM	12.2%	15.7%	18.0%
Take-Two Interactive Software	175.38	19,225	16,990	2,782	3,436	3,397	676	970	831	0.0%	23.5%	NM	24.3%	28.2%	24.5%
Ubisoft Entertainment S.A.	75.14	9,213	9,745	1,792	2,633	2,862	794	1,211	1,266	NM	47.0%	8.7%	44.3%	46.0%	44.2%
<b>Mean</b>	\$20,632	\$18,686	\$3,202	\$3,675	\$3,861	\$879	\$1,190	\$1,272	10.2%	18.3%	8.9%	26.2%	30.0%	30.5%	
<b>Median</b>	8,579	8,329	2,724.7	2,949.1	2,957.2	585.0	788.7	774.8	7.5%	15.8%	6.8%	25.3%	32.0%	30.9%	
Microsoft Corp.	\$252.18	\$1,899,312	\$1,855,559	\$133,041	\$150,442	\$175,775	\$59,445	\$69,251	\$84,941	12.3%	13.1%	16.8%	44.7%	46.0%	48.3%
Nintendo Co., Ltd.	573.52	68,320	54,333	11,352	15,872	14,997	2,830	5,319	5,399	7.4%	39.8%	NM	24.9%	33.5%	36.0%
NVIDIA Corp.	600.38	373,667	369,824	10,784	16,470	22,416	3,107	5,078	7,065	NM	52.7%	36.1%	28.8%	30.8%	31.5%
Sony Group Corp.	99.72	123,575	134,741	78,593	80,822	85,878	11,484	11,486	12,497	NM	2.8%	6.3%	14.6%	14.2%	14.6%
Tencent Holdings Ltd.	80.21	763,110	779,846	53,976	73,630	91,370	20,220	27,632	34,072	19.1%	36.4%	24.1%	37.5%	37.5%	37.3%
<b>Mean</b>	\$645,597	\$638,860	\$57,549	\$67,447	\$78,087	\$19,417	\$23,753	\$28,795	12.9%	29.0%	20.8%	30.1%	32.4%	33.5%	
<b>Median</b>	373,667	369,824	53,975.6	73,629.7	85,877.8	11,484.2	11,486.3	12,496.8	12.3%	36.4%	20.5%	28.8%	33.5%	36.0%	

Source: S&P Capital IQ as of April 30, 2021.

Notes: USD in millions, except per share amounts and multiples. Multiples less than 0.0x and greater than 50.0x denoted as "NM."

# How Houlihan Lokey Can Help

Our firm is extremely well equipped to help our clients navigate uncertain times. We respond quickly to challenging situations and are constantly helping clients to analyze, structure, negotiate, and execute the best possible solutions from both strategic and financial perspectives.

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- 1 Corporate Finance**
  - Mergers and Acquisitions
  - Capital Markets
  - Private Funds Advisory
  - Board Advisory Services
- 2 Financial Restructuring**
  - Company Advisory
  - Financial Restructuring
  - Distressed M&A
  - Liability Management
  - Creditor Advisory
- 3 Financial and Valuation Advisory**
  - Portfolio Valuation and Fund Advisory
  - Transaction Opinions
  - Corporate Valuation Advisory Services
  - Transaction Advisory Services
  - Real Estate Valuation and Advisory
  - Dispute Resolution Consulting

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 We are widely recognized as a leading M&A advisor to the middle market and have long-standing relationships with capital providers, including commercial banks and other senior credit providers, insurance funds, asset managers, and mezzanine fund investors. Few other investment banks maintain the breadth of relationships and capital markets intelligence that we do.

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- ~\$1+ Billion of Revenue
- 23 Locations Globally
- ~\$5 Billion Market Cap

## Corporate Finance

### 2020 M&A Advisory Rankings All U.S. Transactions

	Advisor	Deals
1	<b>Houlihan Lokey</b>	<b>210</b>
2	Goldman Sachs & Co	172
3	JP Morgan	132
4	Evercore Partners	126
5	Morgan Stanley	123

*Source: Refinitiv (formerly known as Thomson Reuters)*

No. 1 U.S. M&A Advisor

Top 5 Global M&A Advisor

Leading Capital Markets Advisor

## Technology, Media, and Telecom

### 2018 to 2020 M&A Advisory Rankings U.S. Technology, Media, Entertainment & Telecom Transactions Under \$1 Billion

	Advisor	Deals
1	<b>Houlihan Lokey</b>	<b>131</b>
2	Raymond James Financial Inc	107
3	William Blair & Co	93
3	Canaccord Genuity Grp Inc	93
5	Goldman Sachs & Co	88

*Source: Refinitiv (formerly known as Thomson Reuters)*

## Financial Restructuring

### 2020 Global Distressed Debt & Bankruptcy Restructuring Rankings

	Advisor	Deals
1	<b>Houlihan Lokey</b>	<b>106</b>
2	PJT Partners Inc	63
3	Lazard	50
4	Rothschild & Co	46
5	Moelis & Co	39

*Source: Refinitiv (formerly known as Thomson Reuters)*

No. 1 Global Restructuring Advisor

1,400+ Transactions Completed Valued at More Than \$3.0 Trillion Collectively

## Financial and Valuation Advisory

### 2001 to 2020 Global M&A Fairness Advisory Rankings

	Advisor	Deals
1	<b>Houlihan Lokey</b>	<b>956</b>
2	JP Morgan	876
3	Duff & Phelps	802
4	Morgan Stanley	599
5	BofA Securities Inc	542

*Refinitiv (formerly known as Thomson Reuters). Announced or completed transactions.*

No. 1 Global M&A Fairness Opinion Advisor Over the Past 20 Years

1,000+ Annual Valuation Engagements

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