

Video Games Market Update



SPRING 2024

Executive Summary

- » The video game industry stabilized and returned to growth in 2023.
 - The industry returned to growth in 2023, driven by better console supply, a stronger new release lineup, growth in the subscription model, and live game services.
 - 2023 saw many video game companies look inward, rationalize operations, reduce costs, and position themselves for profitable growth in 2024 onward.
 - Industry valuations have moderated versus the frothy levels seen in 2021, creating an opportunity for investors and buyers to enter the market. -
- We are bullish as the video game industry is resilient and will continue to evolve and reinvent itself, and gamers are still gaming (at record levels!).
 - Total video game players are on track to hit nearly four billion by 2026, as video games continue to show strength as the No. 1 form of entertainment for younger generations.
 - A powerful shift in media consumption to video games across all age groups is expected to drive long-term sustainable growth globally.
 - New innovative revenue models are expected to drive user engagement and revenue over the coming years (i.e., free-to-play (F2P), in-game advertising, and transmedia).
- » We have seen a noticeable pick-up in M&A activity in recent months, following a slowdown in 2023.
 - Notable M&A includes Activision Blizzard (acquired by Microsoft after clearing lengthy regulatory proceedings), Rovio (acquired by Sega Sammy), Scopely (acquired by Savvy Games), Jagex (acquired by CVC and Haveli), and Saber Interactive (acquired by private investor group).
 - While certain strategic buyers pulled back from M&A in 2023, there have been several notable new market entrants, such as Savvy Games, Netflix, and Disney.
 - In 2024, we expect to see a growing number of financial sponsors investing in the video game space as well, as they take notice of compelling (private and public) market opportunities.
 - We believe there is a significant investment opportunity in the Indie game market, a market that is highly fragmented and ripe for growth and consolidation. -
- » We are optimistic about the long-term outlook for the video game industry.
 - While the industry is facing some near-term challenges, we expect it will overcome these challenges by super-servicing gamers around the world with exceptional and highly engaging content across multiple platforms via innovative business models.
 - We believe that strong pent-up demand on both the sellside and buyside will provide a catalyst for greater investment and M&A activity in 2024. -

Houlihan Lokey's Video Games Coverage Team



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Houlihan Lokey Is the No. 1 M&A Advisor

LEADING M&A ADVISOR, DRIVEN BY INDUSTRY EXPERTISE

No. 1

No. 1

M&A Advisor for All Global Transactions M&A Advisor to Privately Held Mid-Cap Companies

2023 M&A Advisory Rankings—All **Global Transactions**

	Advisor	Deals
1	Houlihan Lokey	352
2	Rothschild & Co	349
3	Goldman Sachs & Co	300
4	JP Morgan	300
5	Morgan Stanley	253

Source: Refinitiv. Excludes accounting firms and brokers.

1,000+

M&A Transactions Under \$1 Billion in the Past Five Years

2023 M&A Advisory Rankings-All **Global Technology Transactions**

	Advisor	Deals
1	Houlihan Lokey	89
2	Rothschild & Co	76
3	JP Morgan	68
4	Goldman Sachs & Co	63
5	Morgan Stanley	59

Source: Refinitiv. Excludes accounting firms and

brokers

FULLY INTEGRATED FINANCIAL SPONSOR COVERAGE 730+

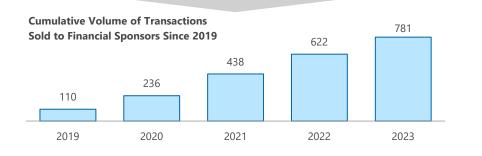
Senior officers dedicated to the sponsor community in North America and Europe.

29

Sponsors covered, providing proprietary data and knowledge of buyer behavior.

1,000+

Companies sold to Financial Sponsors over the past five years.



GLOBAL M&A CAPABILITIES BOLSTERED BY LOCAL PRESENCE

180 +36 89 Offices in the Americas, Europe, Technology Deals in CY 2023 Technology Bankers and Asia

FULLY INTEGRATED CAPITAL MARKETS COVERAGE

Past Two Years

90+

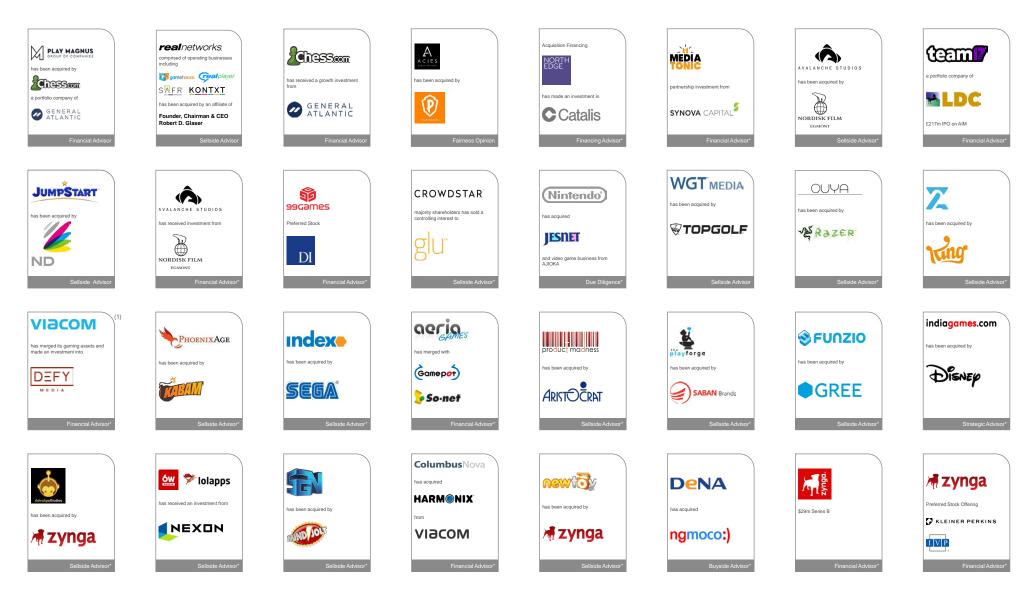
\$25B+ Capital Raised in the Professionals

Senior-Level

Contact With All Major Credit Investors

Largest dedicated alternative investor coverage team in the industry, with real-time insights to market-clearing terms and investor appetite.

Extensive History Advising Video Game Companies



Tombstones included herein represent transactions closed from 2008 forward.

*Selected transactions were executed by Houlihan Lokey professionals while at other firms acquired by Houlihan Lokey or by professionals from a Houlihan Lokey joint venture company. (1) Viacom's digital gaming assets included Addicting Games, GameTrailers, and Shockwave.

Highlights From Our 2023 Global Tech Conference in New York City

Sharing valuable and unique perspectives on navigating market conditions globally and positioning our clients for continued success.



2024 London Global Tech Conference

Mark Your Calendar for Our 2024 Global Tech Conference in London!

Our next Global Tech Conference will be held on March 14, 2024, at the London Hilton on Park Lane. Please save this date in your calendar. We hope to see you there!



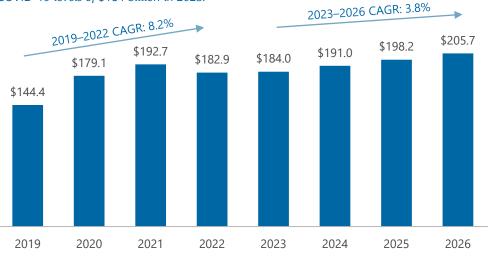
The Video Game Industry Stabilized and Returned to Growth in 2023

Commentary

- The industry stabilized as it returned to modest growth in 2023; video game revenues are on track to surpass \$200 billion by 2026.
- Growth in 2023 was driven by better console supply, a stronger new release lineup, growth in the subscription model, and live game services.
- The mobile market, the biggest segment by device, is facing headwinds due to the elimination of IDFA and a squeeze on disposable incomes, declining by 2.0% in 2023 from the prior year.
- 2023 saw many video game companies look inward, rationalize operations, reduce costs (80+ gaming companies announced layoffs in 2023), and position themselves for profitable growth in 2024 onward.
- The long-term outlook for the market remains strong, supported by continued growth in the number of gamers, a trend propelled by increasing penetration across multiple generations.

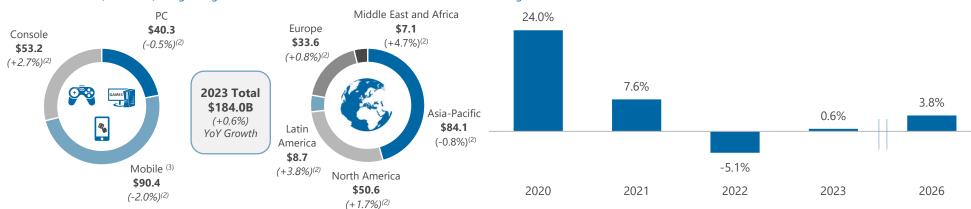
Video Game Market to Exceed \$200 Billion in 2026⁽¹⁾ (\$B)

The video game market has grown from pre-COVID-19 levels of \$144 billion in 2019 to post-COVID-19 levels of \$184 billion in 2023.



Video Game Market Returned to Growth in 2023⁽¹⁾

The video game market has returned to growth in 2023 and is forecasting stronger growth



Revenues by Segment⁽¹⁾ (\$B)

Mobile accounts for ~50% of total gaming revenues. Asia-Pacific and North America combine to account for 73% of the gaming market.

(1) Newzoo, 'Global Games Market Report (October 2023).' (2) Percentages are 2022A/2023E YoY growth.

(3) Includes mobile and tablet revenue.

through 2026.

While the Industry Has Faced a Number of Headwinds Over the Past Two Years, Recent Market Performance Signals Market Stabilization

Relative Stock Performance



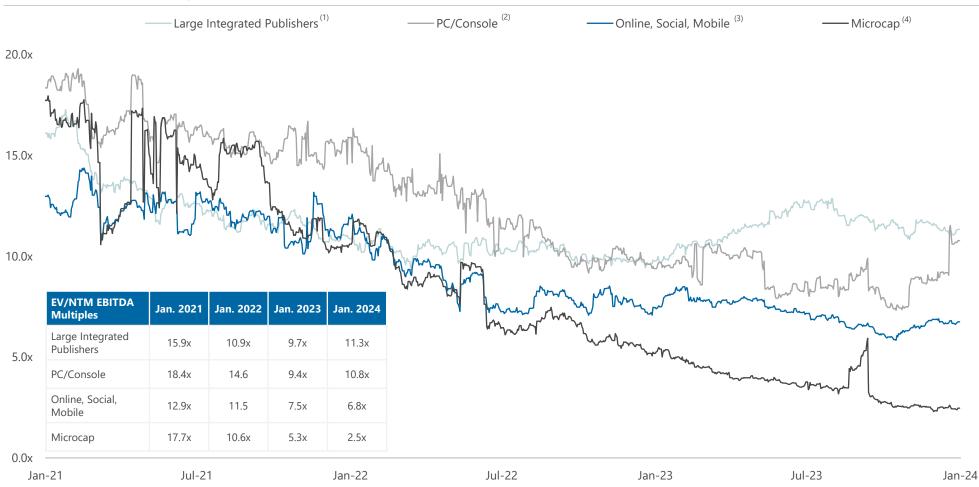
- **Post-Pandemic Normalization:** Slower growth, as the industry has not been able to sustain pandemic-driven growth seen during 2020 and 2021.
- 2 Privacy: Privacy changes like IDFA's removal have made user acquisition more challenging for mobile games across the board, and in response, mobile developers have been acquiring advertising technology platforms.
- 3 China: Challenging regulatory environment, as video game companies need regulatory approval to monetize new games. However, the Chinese gaming regulator recently softened its rhetoric and approved the release of a batch of games; investors rallied behind this signal in 2024, leading to Chinese gaming stocks regaining some ground.
- 4 Inflation: Inflation has weighed on consumers and ultimately impacted discretionary spending, driving a reduction in gaming sales.
- 5 Supply Chain Disruption: Supply constraints of new-generation consoles have led large gaming publishers to delay the releases of major titles, creating a drag on 2022 revenues; 2023 saw a large slate of high-profile game releases, and 2024 is showing similar signs of improvement.
- 6 Ukraine and Labor Shortages: The war in Ukraine has been challenging to many video game companies with talent in the region; this is exacerbating what is already a very tight market for video game developer talent, alongside wider public markets and the tech sell-off in particular.
- 7 Recessionary Fears: While recessionary fears have subsided in the U.S., China, the largest market for video games, could be facing an economic decline stemming from recent fears surrounding its debt crisis.



Moderate Valuations Should Provide Catalyst for Greater M&A/Take-Privates

We see a unique opportunity with microcaps, which many believe have been oversold.

EV/NTM EBITDA Multiples



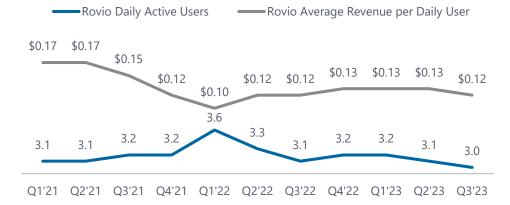
(3) Online, Social, Mobile Index found on page 30.(4) Microcap Index found on page 30.

Mobile: Following a Prolonged Period of Extraordinary Growth, the Industry Saw its Second Consecutive Decline. Is the Worst Behind Us?

Commentary

- In 2023, mobile gaming revenue saw its second consecutive annual decline, largely driven by a pullback in consumer spending (due to inflationary pressures), as well as a reduction in the active player base. The shift away from pandemic restrictions provided players with more entertainment options, leading to decreased game-playing time.
- Popular mobile game companies are struggling with monetizing users as well as expanding their engaged user base. Rovio Entertainment has seen average revenue per user drop from \$0.17 to \$0.12 from Q1 '21 to Q3 '23. Over that same period, the user base has remained flat, going from 3.1 million to 3.0 million daily active users, respectively.
- A combination of reduced revenue per DAU (less engaged player base) and a more inefficient marketing model post-IDFA led to a lower number of installs, causing a significant rise in CPIs across both IOS and Android since 2018.

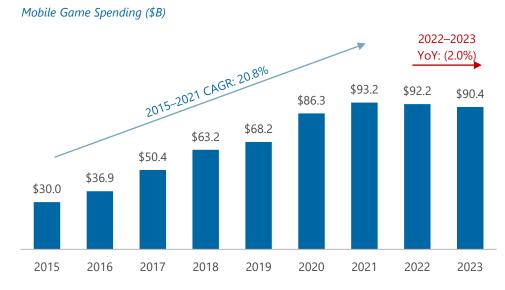
Declining Revenue per DAU⁽²⁾



Notes: DAU: daily active user, IDFA: identifier for advertisers, and CPI: cost per install. (1) Newzoo, 'Global Games Market Report (October 2023).' (2) HSBC Video Games Report.

Average Daily Active Users (M); Average Revenue per Daily User

Mobile Game Revenue Pulls Back Year Over Year⁽¹⁾



IDFA Changes Leads to Higher CPIs⁽²⁾



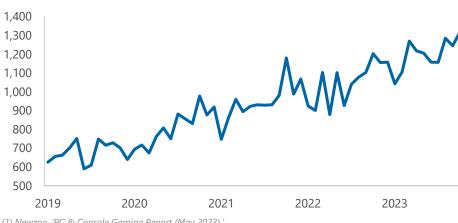
PC/Console: Returned to Growth 2023; the Outlook Is Positive

Commentary

- The video game industry saw heightened levels of growth during the pandemic; however, recently, the growth in the PC and console markets slowed, mostly attributed to the lack of hardware supply, decreased playtime, and delay to popular game releases.
- Despite the PC and console market having modest growth in 2023, equating to \$93.5 billion in global revenues, the outlook remains positive in 2024 and beyond due to a strong lineup of new releases and increasing ways to monetize users with paid downloadable content (DLC) and microtransactions.
- Game releases have been impressive in 2023, with an average of ~1200 games being released per month on Steam, which represents a 15% increase over 2022 figures.
- Console sales have remained strong due to the strength of current generation consoles (Xbox Series X, PS5); the forecasted period is returning to growth supported by the next generation of consoles (Nintendo Switch 2).

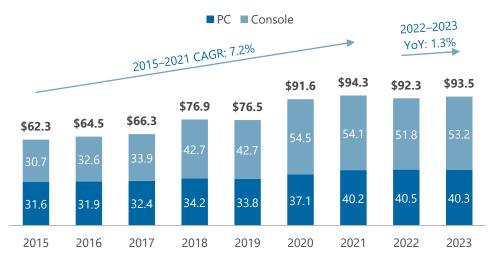
Game Releases Have Skyrocketed⁽²⁾

Number of Monthly Game Releases on Steam



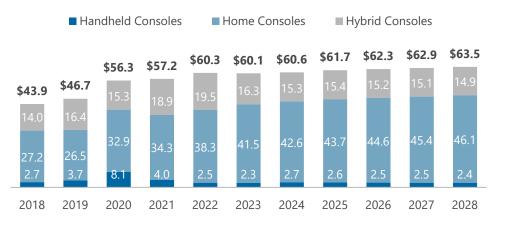
PC/Console Gaming Revenue Still Growing in 2023⁽¹⁾

PC/Console Spending (\$B)



Console Sales Have Proven Resilient⁽³⁾

Global Console Sales (\$B)



(1) Newzoo, 'PC & Console Gaming Report (May 2023).

(2) SteamDB. (3) Statista.

Delayed Franchise Releases in 2022 Contributed to the Success for 2023

Tears of the Kingdom, Hogwarts Legacy, and Starfield were among the delayed high-profile games that had successful releases in 2023.

2023 Had Highly Successful Video Game Releases⁽¹⁾

	Awareness	Purchase Intent	Highlights		Awareness	Purchase Intent	Highlights
PESIDENT I VIL 4 Resident Evil 4 (Capcom)	50%	20%	3 Million Units Sold in Its First Two Days	Hogwarts Legacy (Avalanche Software)	40%	15%	12 Million Copies Sold in Its First Two Weeks
SPIDER MAN 2 Sony's Spider-Man 2 (Insomniac Games)	47%	17%	5 Million Copies Sold in Its First 11 Days	Star Wars Jedi: Survivor (Respawn Entertainment)	39%	14%	800,000 Units Sold in Its First Month
Legend of Zelda (Nintendo)	43%	17%	10 Million Copies Sold in Its First Three Days	Diablo IV (Blizzard Entertainment)	37%	13%	\$670 Million of Sales in Its First Five Days
Street Fighter 6 (Capcom)	42%	15%	2 Million Units Sold in Its First Month	Dead Island 2 (Dambuster Studios)	33%	12%	2 Million Copies Sold in Its First Month
Final Fantasy XVI (Square Enix)	41%	14%	3 Million Copies Sold in a Week as a PS5 Exclusive Game	Starfield (Bethesda Game Studios)	26%	9%	10 Million Players Across All Platforms as of September 20

Sources: Press releases; Newzoo, 'PC & Console Gaming Report (May 2023).'

(1) Awareness and purchase intent percentages based on a survey of PC and/or console gamers ages 10–50 in the U.S.

The Outlook for the H1 2024 Pipeline Is Equally Encouraging

With 2023 game releases performing well, the first half of 2024 is poised to be strong, leveraging remakes of classic games.

High Profile 2024 Game Releases



Prince of Persia: The Lost Crown (Ubisoft) Ubisoft released the first

major installment of the Prince of Persia franchise in more than 10 years on January 18.



Suicide Squad: Kill the Justice League (Rocksteady Studio)

Released on **February 2**, Warner Bros has created a genre-bending actionadventure shooter game.



Mario vs. Donkey Kong (Nintendo) The Nintendo Switch

remake of the 2004 Gameboy title released on February 16.



Princess Peach: Showtime (Nintendo)

Releasing on **March 22**, Showtime represents the first time Princess Peach is featured as the main protagonist since Super Princess Peach.







Tekken 8 (Bandai Namco and Arika)

Co-developed by Bandai Namco and Arika, the 10th installment in the franchise was released on January 26.



Persona 3 Reload (P-Studio)

Released on **February 2**, Persona 3 Reload is a remake of the 2006 Persona 3 game.



Mar-24

Final Fantasy VII Rebirth (Square Enix)

Released on **February 29**, Rebirth represents the second installment in the planned trilogy of the remake of the 1997 PlayStation game.



Apr-24

Destiny 2: The Final Shape (Bungie)

Following delays, the game is now set to release on **June 4** and represents the conclusion of Destiny's primary storyline.

We Are Bullish as the Video Game Industry Is Resilient, and Gamers Are Still Gaming (at Record Numbers!)

A powerful shift in media consumption to video gaming (across all generations) is expected to drive long-term sustainable growth globally.

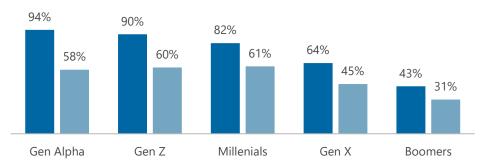
Commentary

- Total video game players are on track to hit nearly four billion by 2026.
- Although Gen Alpha and Gen Z are more engaged than older generations, video games hold a universal appeal across generations; their participation and engagement with gaming have increased: approximately 22% of Gen Alpha, 19% of Gen Z, and 18% of Millennials' favorite form of entertainment is video games.
- Younger generations are also more willing to spend money on video games; approximately 60% of Gen Alpha, Gen Z, and Millennials have all spent money on video games in the past six months; as Gen Alpha grows and gains access to their own sources of disposable income, we expect this percentage to increase.
- The video game market is approaching the size of the PayTV market and is significantly larger than video streaming, movie box office, and music streaming.

■ % of Each Generation That Are Video Gaming Enthusiasts

■ % of Players Who Spent Money on Video Games in Past Six Months

Cross Generational Appeal of Video Games⁽²⁾

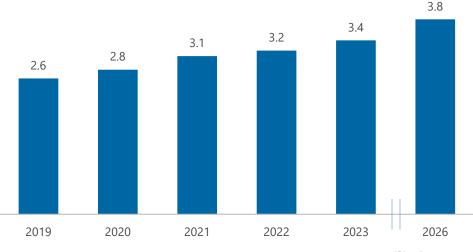


Note: Game enthusiasts are consumers who engage with gaming through playing, viewing, owning, and/or social behavior. (1) Newzoo, 'Global Games Market Report (October 2023).'

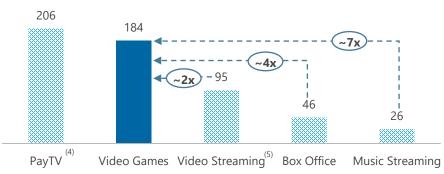
(2) Newzoo, 'How different generations engage with video games today.'

Total Players Forecast to Reach ~4 Billion by 2026⁽¹⁾





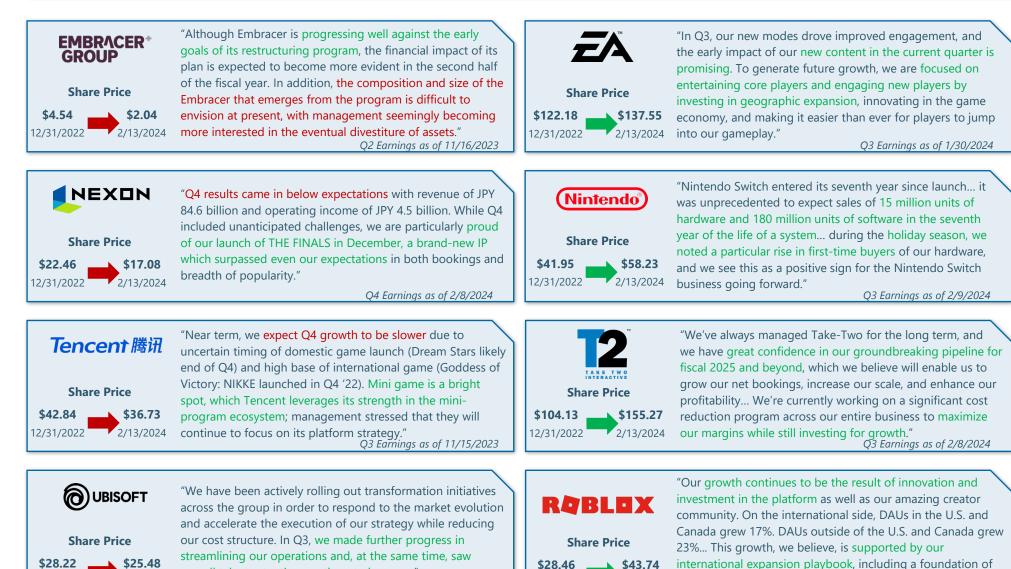
The Video Game Market TAM in 2023 in Context⁽³⁾ (\$B)



The video game industry is 2x the size of the video streaming industry and 4x the size of the movie box office market in 2023.

(3) Precedence Research, Grand View Research, Steamcharts, Statista.
(4) PayTV consists of cable, satellite, and IPTV.
(5) Video streaming consists of SVoD.

Recent Earnings Announcements Reflect Long-Term Optimism



12/31/2022

2/13/2024

overall talent retention continue to improve."

Q3 Earnings as of 2/8/2024

2/13/2024

12/31/2022

Houlihan Lokey | 14

O4 Earninas as of 2/7/2024

safety and stability, automatic Al-powered translation."

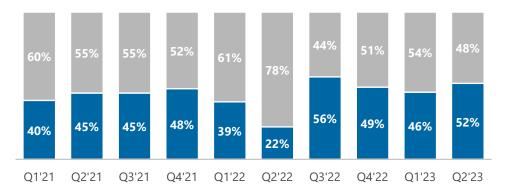
F2P and DLC Continue to Drive Growth Across Titles

Commentary

- The F2P model, in combination with "live services," in which a constant stream of new levels keeps audiences engaged, has emerged over the past decade as a powerful, more accessible model, utilizing in-game purchases and advertising to monetize audiences across a significantly larger base of gamers.
- In-game spend is transforming game economics, now representing 58.5% of game revenues for Sony in 2022, with popular games now having a much longer monetizable tail through in-game purchases. The "pay to win" model, as well as ingame customization, has the potential to create a more profitable game compared to the existing premium games model.
- The driver of live services game revenues is time spent on the platform; game companies do not just compete with each other for this time but rather compete with all entertainment platforms. For live service games to be successful, video games must dethrone users' engagement from another media form.
- Large gaming companies are set to pivot their leading AAA and AA franchises into more of a live service model. This will take place in existing games such as Grand Theft Auto and Call of Duty, as well as new initiatives such as Sony's plan to launch 10 live service games by 2026.

Significant Percentage of Revenues Are Derived From Paid DLC⁽²⁾

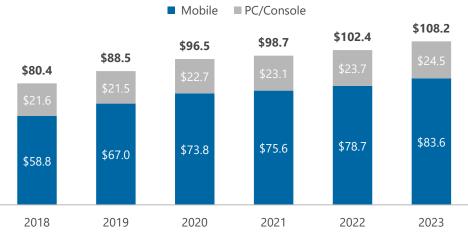
Sony Gaming Software Revenues Breakdown



Full Game Sales Add-On Content

F2P Global Video Game Revenue⁽¹⁾ (\$B)

New, more accessible business models, such as F2P, have reduced barriers to entry and driven user engagement and growth.



Growth of Micro Pay Transactions in AAA Games⁽²⁾

EA Sports FC (Formerly EA FIFA) Franchise Revenues (\$M)





Consumer Brands Are Looking to Leverage Video Games and the Communities to Reach Their Target Audiences

Commentary

- Brands are viewing video games as an avenue in which they can reach a significant number of viewers. The in-game advertising market in the U.S. is more than \$36 billion and is growing at an 18.7% CAGR from 2017 to 2027.
- Battle Royale is the genre that has been most benefited by collaborations.
 With Fortnite leading the way, Battle Royale games have amassed more than 130 brand collaborations from 2021 through the first half of 2023.
- Brand collaborations are also taking shape in less traditional manners, as video game companies are partnering with non-gaming brands inside and outside the game. For example, Nintendo partnered with Oreos to create Pokémon-themed Oreos ahead of new game releases, Barbie partnered with Microsoft to release a Barbie-themed Xbox, and League of Legends partnered with Louis Vuitton to integrate unique skins into the game.

Fortnite Has Successfully Collaborated With Major IPs⁽²⁾

Fortnite has consistently introduced brand partnerships as premium add-ons and skins, helping provide further monetization.



In-Game Advertising Represents a Huge Market⁽¹⁾ (\$B)





Collaborations Expanding Into New Categories⁽²⁾

Video game companies have been introducing non-traditional partnerships that are woven into game play.



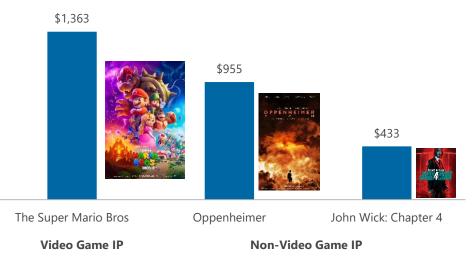
Video Game IP in Transmedia Is Succeeding on All Fronts

Commentary

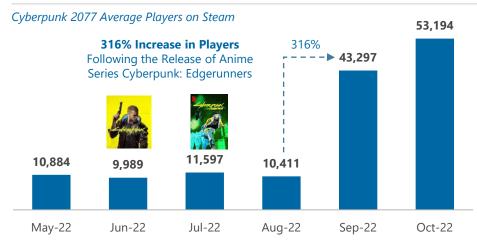
- Popularity of video game IP in movies is succeeding regular box office hits, with The Super Mario Bros. Movie outperforming Oppenheimer and John Wick: Chapter 4.
 - These adaptions leverage familiar video game IP while also taking advantage of the benefits inherent to the box office medium, including lengthy dialogue and action sequences.
- This, in turn, drives game and console sales in a feedback loop, where the movies create demand for the games and their platforms, which creates more demand for cinematic adaptions.
- Growth in transmedia is expected to continue given Disney's recent \$1.5 billion investment into Epic Games—the collaboration will bring together Disney's brands and franchises with the hugely popular Fortnite in a transformational new games and entertainment universe.

Popularity of Video Game IP⁽¹⁾ (\$M)

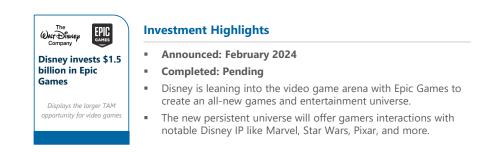
Box Office Takings From Blockbuster Movie Releases



Driving Video Game/Console Sales⁽²⁾

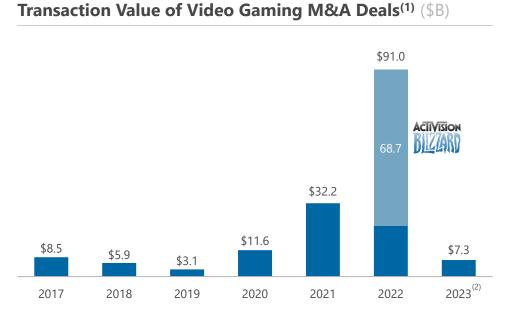


The Mouse Is Leaning Into Games!

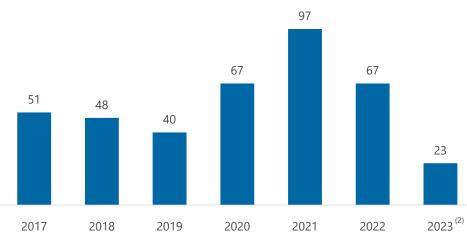


"When I saw Gen Z and Gen Alpha and even millennials, and I saw the amount of time they were spending in terms of their total media screen time on video games, it was stunning to me, equal to what they spend on TV and movies. And the conclusion I reached was, we have to be there, and we have to be there as soon as we possibly can, in a very compelling way." —Bob Iger, CEO of Disney

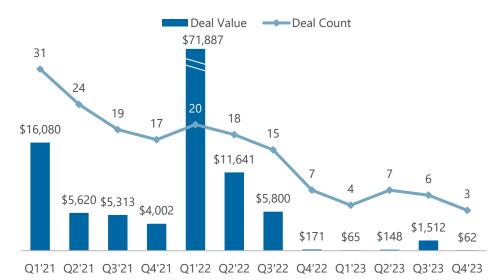
M&A Slowed in 2023 Due to a Variety of Factors, Including Lower Public Market Valuations, Tighter Credit Markets, and Fewer Active Strategics...



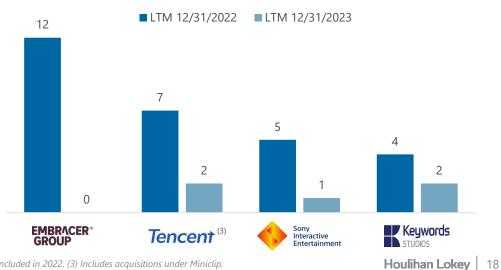
Number of Video Gaming M&A Deals Announced⁽¹⁾







Number of Video Game Transactions by Buyer



Sources: PitchBook, S&P Capital IQ as of 12/31/2023.

(1) Allocation of transaction values and deal counts based on completion date of the acquisition. (2) Activision Blizzard deal is included in 2022. (3) Includes acquisitions under Miniclip.

Summary of Blockbuster Transactions

CVC HAVELI KAVELI CVC and Haveli acquire Jagex Portrays the increasing interest of financial sponsors in the video games market.	 Transaction Highlights Announced: February 2024 Completed: Pending Enterprise Value: \$1.1 Billion CVC Capital Partners and Haveli Investment Management collaborate on acquiring Jagex, developer of the classic game RuneScape from Carlyle. Other Jagex IP includes Old School RuneScape, Scum, Melvor Idle, and This Means Warp. 	Sega Sammy acquires Rovio Demonstrates the importance of increasing exposure to the mobile segment.	 Transaction Highlights Announced: April 2023 Completed: August 2023 Enterprise Value: \$603 Million Sega Sammy, best known for its Sonic the Hedgehog franchise expands its mobile game offering with the acquisition of, Angry Birds developer, Rovio. Other Rovio properties include games such as Moomin Puzzle & Design and Small Town Murders.
5 5		it has been Sega's long-term	global gaming market, the mobile gaming market has especially high potential, and goal to accelerate its expansion in this field." t and CEO of Sega Sammy Holdings
SAVVY Sames acquires Scopely	Transaction Highlights Announced: April 2023 Completed: July 2023 Enterprise Value: \$4.9 Billion	Microsoft acquires Activision Blizzard	Transaction Highlights Announced: January 2022 Completed: October 2023 Enterprise Value: \$68.7 Billion

Exemplifies how content and IP

are key to building critical

mass in the video game

industry.

- The Saudi Public Investment Fund through Savvy Games Group continues to build out its video game presence with the acquisition of a leading mobile game developer, Scopely.
 - Key Scopely IP includes The Walking Dead Road to Survival, Marvel Strike Force, Star Trek Fleet Command, YAHTZEE With Buddies, and Monopoly Go.

"Scopely is one of the fastest-growing games companies today, and we have long admired [its] ability to build loyal, engaged player communities."

-Brian Ward, Chief Executive Officer of Savvy Games Group

- For Microsoft, gaming is a relatively small part of the business (9% of total revenue), but as Microsoft says, gaming is the fastest-growing sector in entertainment, and Activision brings PC, mobile, and console games, covering all bases.
- Notable IP in Activision's portfolio includes Call of Duty, World of Warcraft, Diablo, Hearthstone, Overwatch, and Candy Crush Saga.

"Gaming is the most dynamic and exciting category in entertainment across all platforms today and will play a key role in the development of metaverse platforms." —Satya Nadella, Chairman and CEO of Microsoft

Illustrates Saudi's commitment

to expand into the video game

market.

And There Are Signs That the Pace of M&A Is Starting to Pick Up (cont.)

Date	Target	Acquirer	Deal Size (\$M)	LTM Revenue Multiple	LTM EBITDA Multiple
Feb-24	SABER.	Private Investor Group	\$500	-	-
Feb-24	У ја се х	CVC 🖩 HAVELI	\$1,148	-	-
Dec-23		Keywords studios	\$96	-	-
Nov-23	SYSTEM ERA	DEVOLVER	\$40	5.7x	10.5x
Sep-23	UNTIMALE	SUP ERC ELL	-	-	-
Sep-23		💫 Playtika.	\$300	-	-
Sep-23	Midaki		-	-	-
Aug-23	youdu GAMES	💫 Playtika.	\$89	-	-
Jul-23	SUORDCANES studio	CAPCOM®	-	-	-
Jul-23	S TECHLAND	Tencent 腾讯	\$1,590	-	-
Jul-23	Kahoot!	GENERAL Generation Asset Management	\$1,644	10.8x	NM
Jun-23	taggames		-	-	-
May-23	Sci <mark>Play</mark>	LIGHT &	\$422	3.5x	13.2x
Apr-23		team	-	-	-
Apr-23	dovetail	FOCUS ENTERTAINMENT	-	-	-
Apr-23	FIREWALK 🕉	SONY	-	-	-
Apr-23	≷ ROVIO	SEGA	\$636	2.6x	19.4x
Apr-23			\$4,900	2.8x	20.0x
Feb-23	VINDEX	ESL FACEIT GROUP	-	-	-
Jan-23	Skybox	網多 NETEASE	-	-	-
			Top Quartile Mean	5.7x 5.1x	19.6x 15.8x
			Median Bottom Quartile	3.5x 2.8x	16.3x 12.5x

Several Notable New Market Entrants Leaning Into Video Games

Spotlight on New Entrants



Notable Investments

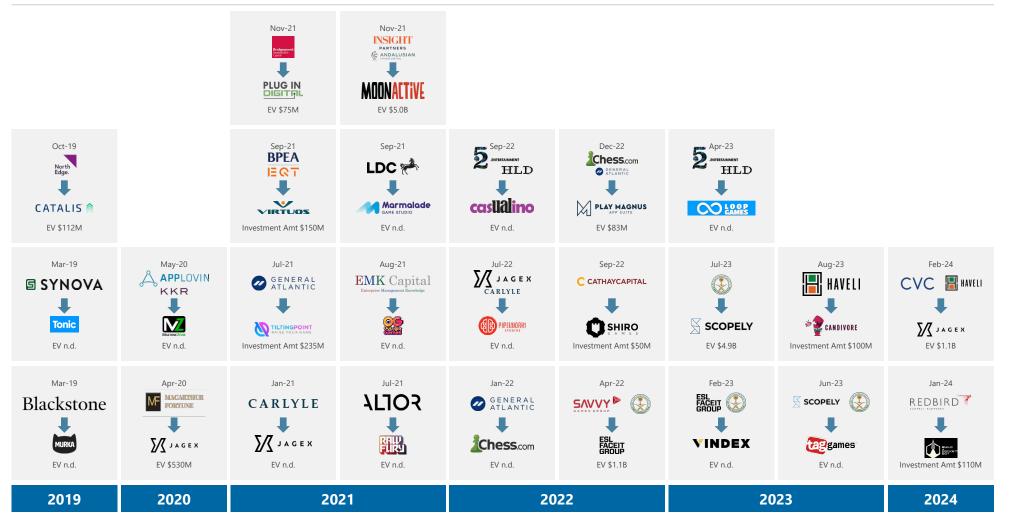
Target	Category	Details					
taggames	Mobile	Mobile game development studio, acquired by Scopely in June 2023.					
	Mobile	Leading mobile game provider, acquired by Savvy Games for \$4.9 billion in April 2023.					
EMBRACER* GROUP	PC/Mobile	Video game developer, receives \$1 billion investment from Savvy Games in July 2022.					
ESL FACEIT GROUP	eSports	Acquired by Savvy Games for a combined value of \$1.5 billion in January 2022.					
(Nintendo)	PC/Console	PIF increased its stake in gaming conglomerate Nintendo to 8.3% .					
ĒÀ	PC/Console	PIF increased its stake in gaming conglomerate EA to ~9% .					

NETEI	Yea Yea	ar Founded: 1997
NETFL	He	adquarters: California, U.S.
	We	ebsite: www.netflix.com
	Ма	rket Cap: \$207.5 Billion ⁽¹⁾
Description:		del focused solely on streaming services, a push into the video game industry in
Notable Acqu	isitions	
Target	Category	Details
SPRYFOX	Mobile	Mobile game studio acquired by Netflix in November 2022.
BOSSFIGHT	PC/Mobile	Video game developer acquired by Netflix in March 2022.
NEXT GAMES	Mobile	Mobile game studio acquired by Netflix in March 2022 for \$69.4 million .
night school	PC/Console	Video game developer acquired by Netflix in September 2021.

Growing Number of Financial Sponsors Are Investing in Video Games

We expect to see a growing number of financial sponsors investing in the video games space as private equity firms lean into compelling market opportunities and rational valuations.

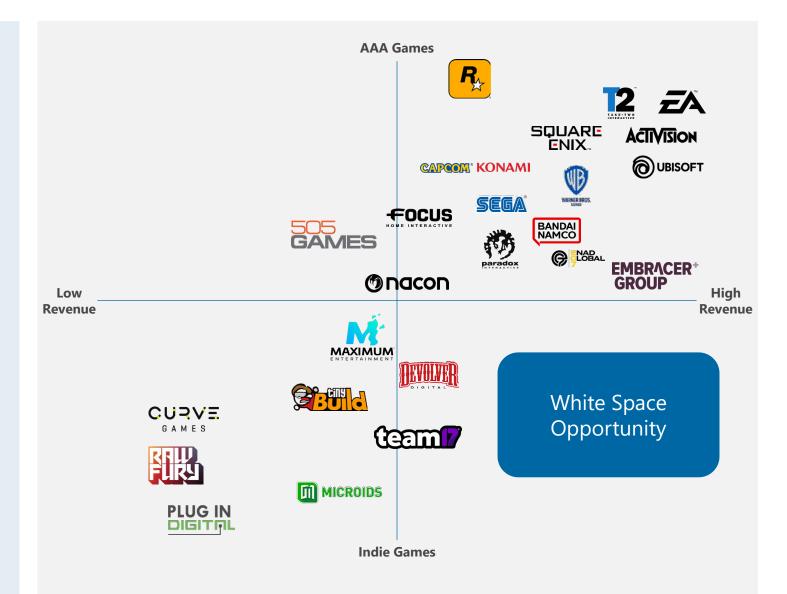
Sponsor/Sponsor-Backed Video Game Transactions



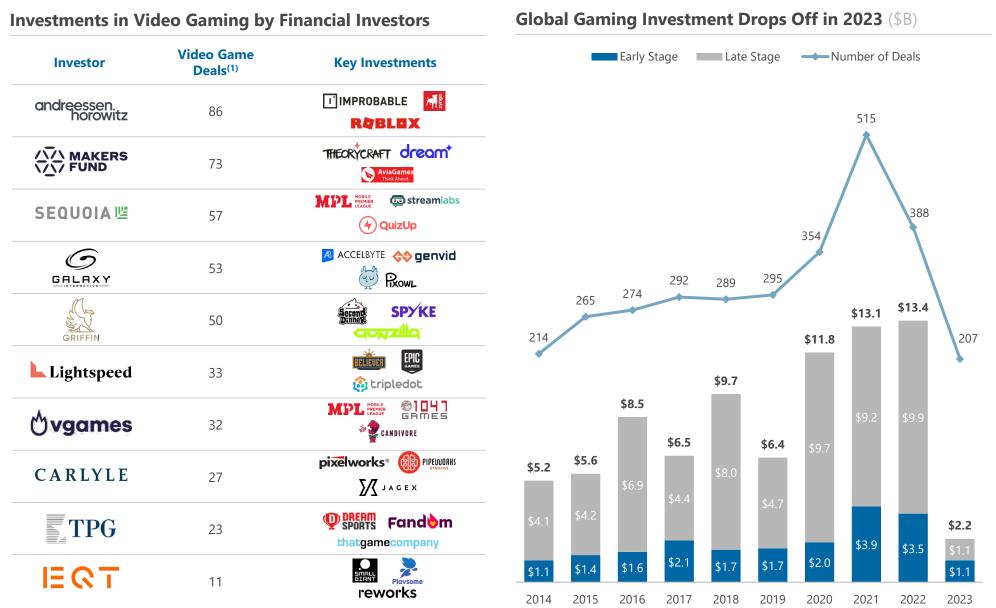
Sources: PitchBook, S&P Capital IQ as of 2/9/2024.

Spotlight Market Opportunity: The Indie Games Market

- The indie market is uniquely profitable, and yet few large-scale publishers are focused on the category, creating a significant white space opportunity.
- Medium-sized budgets (\$0.5-\$5 million) have the potential for outweighed success as lower budget zeitgeists consistently outperform mega-budget AA/AAA (i.e., budget is not correlated to commercial success).
- Only a handful of publishers today have the resources or capabilities, with a number of publishers leaving (Foundry by Frontier and Secret Mode by Sumo Digital) the market.
- We believe there is a significant opportunity to consolidate what is now a highly fragmented indie market.



After Historical Investment Levels in 2021 And 2022, Video Game Investments in 2023 Slowed Significantly



Sources: PitchBook, S&P Capital IQ as of 2/15/2024. (1) Represents transactions since inception.

We Are Seeing a Step-Up in the Pace of Video Games Investments, With Several Notable Financings Having Been Announced in Q1

Date	Target	Investor	Segment	Deal Size (\$M)	Raised to Date	Pre-Money Valuation
Feb-24	EPIC	The Water Disnep Company	PC/Console	\$1,500	\$7,580	-
Jan-24	BUILD & BOY	CAPITAL PARTNERS	PC/Console	\$110	\$300	-
Jan-24	Second	GRIFFIN	Mobile	\$100	\$130	\$390
Nov-23	BLANK.		PC/Console	\$17	\$17	\$63
Oct-23	UPLAND	animoca BRANDS	Web3 Gaming	\$25	\$29	\$275
Sep-23	FU22Y Boto	KRAFTON	PC/Console	\$13	\$16	\$30
Sep-23	Proofo/Play		Web3 Gaming	\$33	\$133	\$100
Sep-23	STORY PROTOCOL	andreessen. horowitz	Web3 Gaming	\$54	\$84	-
Sep-23	Second	GRIFFIN	Mobile	\$90	\$120	\$400
Aug-23	* CANDIVORE	HAVELI	Mobile	\$100	\$123	-
Aug-23	inworld	Lightspeed	VR/AR	\$50	\$120	\$460
Jul-23	ЯГ	10T	Web3 Gaming	\$54	\$54	-
Jul-23	G A R D E N S	Lightspeed KRAFTON	PC/Console	\$31	\$36	-
Jul-23		gem digital	eSports	\$50	-	-
Jul-23		Tencent 腾讯	PC/Console	-	-	-
Apr-23	كاجراع	Seven Seven Six	eSports	\$20	\$39	-
Mar-23	Voodoo	LOWERCARBON. CAPITAL	Mobile	\$31	-	-
Mar-23	CCP	andreessen. horowitz	PC/Console	\$40	-	-
Mar-23	BELIEVER	Lightspeed	PC/Console	\$55	\$55	-
Feb-23	V.S.P.D		eSports	\$265	-	-

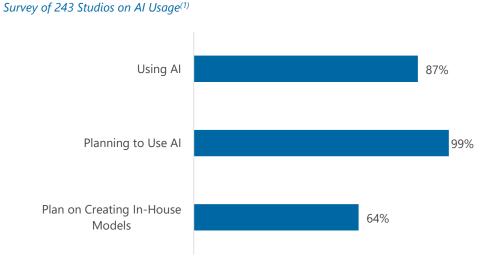
Other Notable Trends in the Video Game Sector

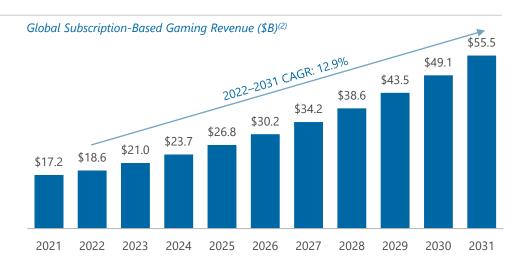
Generative AI Is Met With Controversy, Yet Has the Potential to Change Video Game Creation

- Generative AI today can be used to help video game developers with writing code, art designers and creative directors with formulating in-game designs and even creative ideas, and it can help with language translation within the game subtitles as well as voice dubbing.
- Al can be used to create intelligent and realistic behaviors for non-playable characters (NPCs) so that they can exhibit more complex decision-making, "develop a personality," adapt to player actions, and provide a more immersive gaming experience.
- Machine-learning techniques can analyze gameplay data to identify bugs, balance issues, and improve game mechanics. Al-driven testing can help speed up the development cycle and ensure a more polished final product.
- AI has the potential to revolutionize video game development by enabling more immersive worlds, intelligent NPCs, personalized experiences, and streamlined development processes.

Subscription Models Are Expected to Gain Momentum

- Global subscription-based gaming revenue is projected to reach more than \$55 billion by 2031 and grow at a CAGR of 12.9% between 2022 and 2031.
- Video game companies are attempting to increase the predictability of revenues by introducing subscription models, leading to acquisitions in an attempt to expand IP, which they can put on their subscription services, i.e., Microsoft acquiring Activision Blizzard.
- Subscription-based models have seen a steady uptick, where in 2022, PlayStation Plus had 47 million users, Nintendo Switch Online had 36 million users, Xbox Game Pass had 29 million users, and Nvidia Geoforce had 25 million users.





(1) A16Z.(2) Allied Market Research.

Conclusion

The video game industry stabilized and returned to growth in 2023.

- The industry returned to growth in 2023, driven by better console supply, a stronger new release lineup, growth in the subscription model, and live game services.
- Industry valuations have moderated versus frothy levels seen in 2021, creating compelling opportunities for investors and buyers to enter the market.

We are bullish as the video game industry is resilient and will continue to evolve and reinvent itself, and gamers are still gaming (at record levels!).

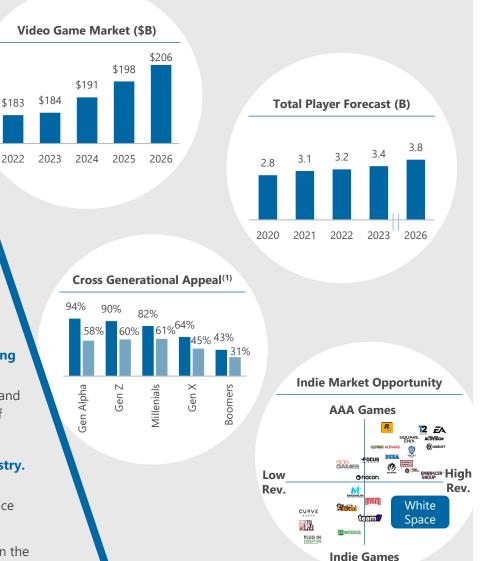
- Total video game players are on track to hit nearly four billion by 2026, as video games remain the No. 1 form of entertainment for younger generations.
- New innovative content and revenue models are expected to drive user engagement and revenue over the coming years (F2P, DLC, Transmedia).

We have seen a noticeable pick-up in M&A activity in recent months following a slowdown in 2023.

 We are seeing a new wave of strategic (i.e., Savvy Games, Netflix, and Disney) and financial investors leaning into the video games space as parties take notice of compelling market opportunities and rational valuations.

We remain optimistic about the long-term outlook for the video game industry.

- We believe that strong pent-up demand on both the sellside and buyside will provide a catalyst for greater investment and M&A across the video game space in 2024.
- We would welcome the opportunity to share our thoughts and perspectives on the video games industry with you.



Appendix

Large Integrated Publishers

(\$ in millions, except stock price)								EV / Revenue			EV / EBITDA	
Company	Exchange	Stock Price	<u>% of 52-wk High</u>	Cash & ST Inv	Equity Value	Enterprise Value	<u>CY 2022A</u>	<u>CY 2023E</u>	<u>CY 2024E</u>	<u>CY 2022A</u>	CY 2023E	<u>CY 2024E</u>
Tencent	SEHK	\$36.73	72%	\$49,680	\$362,517	\$351,531	4.6x	4.1x	3.7x	14.8x	11.0x	9.7x
Nintendo Co.	TSE	58.23	100%	14,261	67,808	54,351	4.3x	4.6x	5.5x	13.2x	14.2x	16.9x
Electronic Arts	NasdaqGS	137.55	96%	3,104	37,517	35,887	4.9x	4.6x	4.6x	13.5x	12.9x	13.0x
Take-Two	NasdaqGS	155.27	90%	922	26,307	29,091	6.0x	5.4x	5.0x	32.9x	35.5x	29.7x
Konami Holdings	TSE	61.96	98%	1,690	8,402	7,343	3.1x	3.1x	3.0x	12.8x	12.1x	10.6x
Capcom Co.	TSE	37.77	86%	766	7,899	7,226	9.4x	6.7x	6.6x	18.2x	16.7x	14.8x
Ubisoft Entertainment	ENXTPA	25.48	75%	1,381	3,126	4,525	2.2x	2.3x	1.8x	9.9x	4.4x	3.9x
Square Enix	TSE	43.25	85%	1,403	5,189	3,865	1.5x	1.6x	1.6x	9.2x	10.3x	9.2x
Sega Sammy	TSE	12.88	60%	1,374	2,860	2,512	0.9x	0.8x	0.7x	6.1x	6.7x	5.6x
	_			<u> </u>								
		op Quartile	96%	\$3,104	\$37,517	\$35,887	4.9x	4.6x	5.0x	14.8x	14.2x	14.8x
		ean	85%	8,287	57,958	55,148	4.1x	3.7x	3.6x	14.5x	13.7x	12.6x
	м	edian	86%	1,403	8,402	7,343	4.3x	4.1x	3.7x	13.2x	12.1x	10.6x
	Fi	rst Quartile	75%	1,374	5,189	4,525	2.2x	2.3x	1.8x	9.9x	10.3x	9.2x

PC/Console

(\$ in millions, except stock price)								EV / Revenue			EV / EBITDA	
Company	Exchange	Stock Price	<u>% of 52-wk High</u>	Cash & ST Inv	Equity Value	Enterprise Value	<u>CY 2022A</u>	<u>CY 2023E</u>	<u>CY 2024E</u>	<u>CY 2022A</u>	<u>CY 2023E</u>	<u>CY 2024E</u>
NetEase	NasdaqGS	\$108.05	91%	\$17,871	\$70,812	\$54,528	3.9x	3.7x	3.4x	16.7x	12.4x	11.1
Roblox	NYSE	43.74	92%	2,193	26,956	27,060	12.2x	7.9x	6.4x	NM	NM	48.2
NEXON Co.	TSE	17.08	78%	4,528	14,723	10,445	3.9x	3.4x	3.4x	12.5x	9.7x	12.2
Krafton	KOSE	161.12	93%	2,504	7,560	4,918	3.3x	3.5x	3.0x	7.2x	7.9x	7.4
Embracer Group	OM	2.04	36%	366	2,561	4,440	1.4x	1.1x	1.0x	4.9x	4.1x	3.8
CD Projekt	WSE	28.29	64%	176	2,850	2,643	12.2x	8.9x	13.5x	23.4x	15.1x	26.7
Ncsoft Corp.	KOSE	153.97	44%	1,633	3,129	2,018	1.0x	1.5x	1.5x	3.8x	10.1x	10.3
Paradox Interactive	OM	19.49	65%	129	2,069	1,944	10.3x	7.8x	7.2x	14.9x	12.2x	10.5
Wemade Co.	KOSDAQ	36.40	62%	142	1,218	1,176	3.2x	2.5x	1.6x	NM	NM	14.9
PlayWay	WSE	80.87	68%	50	551	500	7.8x	6.7x	5.9x	12.6x	9.7x	9.5
Team17 Group	AIM	3.03	50%	57	442	385	2.3x	2.1x	2.0x	6.6x	10.5x	7.2
Remedy Entertainment	HLSE	18.98	57%	32	255	230	4.9x	6.5x	3.3x	NM	NM	14.2
Focus Home Interactive	ENXTPA	14.84	26%	11	99	223	1.5x	1.0x	0.9x	3.7x	3.6x	2.6
Digital Bros	BIT	10.71	43%	5	157	209	1.4x	1.5x	1.4x	4.0x	4.3x	3.8
GungHo Online	TSE	16.29	81%	993	1,138	196	0.2x	0.2x	0.2x	0.9x	0.9x	1.1
Frontier Developments	AIM	1.84	22%	22	72	74	0.5x	0.6x	0.7x	1.7x	2.4x	2.5
Maximum Entertainment	OM	0.48	31%	7	23	60	0.5x	0.5x	0.5x	6.5x	3.6x	3.7
Devolver Digital	AIM	0.23	51%	65	104	39	0.3x	0.4x	0.4x	1.7x	NM	4.9
tinyBuild	AIM	0.08	10%	14	16	17	NM	NM	NM	NM	NM	NN
	Τ	op Quartile	73%	\$1,313	\$2,990	\$3,542	4.7x	5.8x	3.4x	12.5x	10.4x	11.9
		ean	56%	1,621	7,091		3.9x	3.3x	3.1x	8.1x	7.6x	10.8
	м	edian	57%	129	1,138	500	2.8x	2.3x	1.8x	6.5x	8.8x	8.4
	Fi	irst Quartile	40%	27	130	202	1.1x	1.0x	1.0x	3.8x	3.7x	3.8

Public Company—Trading Multiples

Online, Social, Mobile

(\$ in millions, except stock price)								EV / Revenue			EV / EBITDA	
Company	Exchange	Stock Price	% of 52-wk High	Cash & ST Inv	Equity Value	Enterprise Value	<u>CY 2022A</u>	<u>CY 2023E</u>	<u>CY 2024E</u>	CY 2022A	CY 2023E	<u>CY 2024E</u>
AppLovin	NasdaqGS	\$47.06	96%	\$502	\$17,063	\$18,657	6.6x	5.7x	4.9x	17.5x	12.7x	10.3x
Aristocrat	ASX	28.70	98%	2,056	18,851	17,978	4.6x	4.1x	4.0x	15.3x	12.5x	12.0x
Netmarble Corp.	KOSE	47.36	86%	445	3,972	5,291	2.5x	2.7x	2.5x	NM	NM	24.8x
Playtika	NasdaqGS	7.55	59%	1,055	2,769	4,390	1.7x	1.7x	1.7x	4.8x	5.3x	5.1x
Stillfront Group	OM	1.08	47%	80	553	950	1.3x	1.4x	1.4x	3.8x	3.7x	3.8x
DeNA Co.	TSE	9.26	67%	544	1,112	890	0.9x	0.9x	0.9x	10.2x	41.9x	13.9x
Modern Times Group	OM	7.41	83%	294	917	686	1.3x	1.2x	1.1x	5.2x	4.7x	4.5x
Com2uS	KOSDAQ	35.76	60%	308	565	545	1.0x	0.9x	0.8x	40.4x	NM	15.0x
NHN Corp.	KOSE	19.12	85%	681	917	483	0.3x	0.3x	0.3x	5.1x	3.8x	3.4x
GREE, Inc.	TSE	3.61	71%	349	626	401	0.7x	0.8x	0.9x	4.2x	5.9x	10.3x
HUUUGE	WSE	6.84	92%	128	518	303	1.0x	1.1x	1.1x	6.1x	3.0x	3.5x
DoubleDown Interactive	NasdaqGS	10.64	93%	275	527	295	0.9x	1.0x	0.9x	2.9x	2.6x	2.6x
Neowiz Games	KOSDAQ	19.39	49%	156	429	270	1.2x	0.9x	0.9x	8.8x	5.3x	5.7x
JOYCITY Corp.	KOSDAQ	2.24	60%	21	158	215	1.6x	2.0x	1.7x	26.5x	14.3x	11.3x
PLAYSTUDIOS	NasdaqGM	2.32	46%	130	307	192	0.7x	0.6x	0.6x	5.0x	3.2x	3.0x
Qingci Games	SEHK	0.56	49%	219	383	169	1.9x	0.6x	0.5x	12.9x	2.9x	1.8x
Ten Square Games	WSE	26.53	79%	31	193	161	1.3x	1.5x	1.5x	5.0x	6.5x	5.6x
EG7	OM	1.48	43%	48	131	91	0.5x	0.4x	0.5x	2.0x	1.4x	2.0x
G5 Entertainment	OM	12.82	58%	18	103	86	0.6x	0.6x	0.7x	3.9x	2.8x	3.2x
East Side Games	TSX	0.41	61%	3	34	31	0.4x	0.5x	0.4x	9.5x	3.4x	2.0x
Starbreeze	OM	0.04	16%	35	41	26	2.1x	0.4x	1.3x	4.1x	0.6x	3.1x
Skillz	NYSE	7.41	43%	335	156	(41)	NM	NM	NM	NM	NM	NM
	То	op Quartile	85%	\$421	\$917	\$839	1.7x	1.5x	1.5x	10.9x	6.2x	10.3x
		ean	65%	350	2,288	2,367	1.6x	1.4x	1.4x	9.7x	7.2x	7.0x
		edian	60%	247	522	299	1.2x	0.9x	0.9x	5.1x	3.8x	4.5x
	Fi	rst Quartile	49%	56	166	163	0.7x	0.6x	0.7x	4.2x	3.0x	3.1x

Microcap

(\$ in millions, except stock price)								EV / Revenue		EV / EBITDA			
Company	Exchange	Stock Price	% of 52-wk High	Cash & ST Inv	Equity Value	Enterprise Value	<u>CY 2022A</u>	<u>CY 2023E</u>	<u>CY 2024E</u>	<u>CY 2022A</u>	<u>CY 2023E</u>	<u>CY 2024E</u>	
DoubleDown Interactive	NasdaqGS	\$10.64	93%	\$275	\$527	\$295	0.9x	1.0x	0.9x	2.9x	2.6x	2.6x	
GungHo Online	TSE	16.29	81%	993	1,138	196	0.2x	0.2x	0.2x	0.9x	0.9x	1.1x	
Ten Square Games	WSE	26.53	79%	31	193	161	1.3x	1.5x	1.5x	5.0x	6.5x	5.6x	
EG7	OM	1.48	43%	48	131	91	0.5x	0.4x	0.5x	2.0x	1.4x	2.0x	
G5 Entertainment	OM	12.82	58%	18	103	86	0.6x	0.6x	0.7x	3.9x	2.8x	3.2x	
Frontier Developments	AIM	1.84	22%	22	72	74	0.5x	0.6x	0.7x	1.7x	2.4x	2.5x	
Maximum Entertainment	OM	0.48	31%	7	23	60	0.5x	0.5x	0.5x	6.5x	3.6x	3.7x	
Devolver Digital	AIM	0.23	51%	65	104	39	0.3x	0.4x	0.4x	1.7x	NM	4.9x	
East Side Games	TSX	0.41	61%	3	34	31	0.4x	0.5x	0.4x	9.5x	3.4x	2.0x	
Starbreeze	OM	0.04	16%	35	41	26	2.1x	0.4x	1.3x	4.1x	0.6x	3.1x	
tinyBuild	AIM	0.08	10%	14	16	17	0.3x	0.4x	0.3x	0.7x	3.4x	2.9x	
Skillz	NYSE	7.41	43%	335	156	(41)	NM	NM	NM	NM	NM	NM	
	F		000/	¢447	¢405	¢100	0.0	0.0	0.0	1.0	0.4.	0.5	
		op Quartile	66%	\$117	\$165	\$108	0.8x	0.6x	0.8x	4.6x	3.4x	3.5x	
		ean	49%	154	211	86	0.7x	0.6x	0.7x	3.5x	2.8x	3.1x	
		edian	47%	33	103	67	0.5x	0.5x	0.5x	2.9x	2.7x	2.9x 2.3x	
		rst Quartile	29%	17	39	30	0.3x	0.4x	0.4x	1.7x	1.6x		

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