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To: Gaming Business Planning & Strategy
Sent: 11/10/2020 5:09:35 PM
Subject: FW: Request for Strategy Approval: Sega
Attachments: Gaming CSA -- Strategic Framing Memo -- SEGA vF.docx



Game on

From: Phil Spencer <philsp@microsoft.com>
Sent: Tuesday, November 10, 2020 8:11 AM
To: Amy Hood <amyhood@microsoft.com>; Satya Nadella <satyan@microsoft.com>
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Subject: Request for Strategy Approval: Sega

I'm writing to request Strategy Approval to approach Sega Sammy regarding a potential acquisition of their Sega gaming studios. For context, Bill and I have reviewed the business case for acquiring Sega and are both supportive. We believe that Sega has built a well-balanced portfolio of games across segments with global geographic appeal, and will help us accelerate Xbox Game Pass both on and off-console. Please find the attached memo and bullets below for additional detail on our strategy to prioritize our next acquisition target, a brief overview of Sega's gaming portfolio, and the value drivers for the potential acquisition.

As the Sega gaming studios are owned by Sega Sammy, a publicly-traded Japanese company, we have called out a few deal complexities in the memo. Sega's gaming has represented roughly half of Sega Sammy's revenue and operating income, or ~\$900M of revenue and \$60-90M of operating income, in each of Sega Sammy's last three fiscal years. The team is coordinating closely with CELA on next steps, if we were to receive SA.

Please let us know if you have any questions or concerns, or would like us to schedule time to discuss live.

Thanks,
Phil

Prioritizing Acquisition Targets

To help inform our next strategic acquisition target, we have identified top priority segment and geographic combinations for Xbox, in order:

- PC in North America and Europe
- Mobile in North America and Europe
- Console and PC in APAC

Keeping in mind these leading priorities, we evaluated a set of targets, both individually and in combination of our own studios, to determine the best strategic fit. Sega is the most attractive next acquisition target due to its global PC catalog, presence on mobile in Asia, and global brand affinity on console through its classic IP.

Sega Overview

Based in Tokyo, Japan (2,100 FTEs), Sega is one of the largest and most recognizable publishers in the world. It is a division of Sega Sammy, a publicly-traded company (EV of ~\$2.3B) that operates in several other businesses including pachinko machines and resorts. Sega's Consumer gaming studios have a proven portfolio that includes:

- Global Console Depth & Back Catalog - Sega's console portfolio spans generations and contains some of the industry's most recognizable franchises, including *Sonic the Hedgehog*, *Megami Tensei*, and *Yakuza*.
- Global PC Catalog - Sega has, through its own studios and acquired ones, established expertise at developing and publishing high-quality, deeply engaging PC content that would greatly enhance a gaming subscription service, including pay-to-play titles such as *Football Manager* and *Total War*, as well as free-to-play titles like *Phantasy Star Online 2*.
- Mobile Presence in Asia - Sega has a notable mobile presence in Asia, particularly in Japan, via mobile-first games (~\$250M in 2019), often as extensions of their existing IP

Value Drivers:

We believe that an acquisition of Sega's Consumer division would drive strategy & economic value for Microsoft through:

- Xbox Game Pass - Subscription exclusivity of current and future releases will improve Xbox Game Pass' appeal and value to players. This will result in new subscribers across console, PC, and cloud. Further, the global appeal of Sega's beloved IP will help expand Xbox Game Pass's reach to new audiences around the world, most notably in Asia, where localized content is critical to success.
- Game Transactions - We will continue to sell acquired games and franchises across all game platforms. Previously unavailable titles on Xbox will be brought over to the platform for additional monetization opportunities, and future titles will no longer observe a delay of launching on Xbox.

Next Steps

If SA is received, the broader working team will investigate the following questions in parallel (and any additional concerns you might have):

- Detailed post-acquisition integration plan
- Financial modeling, including impacts to Xbox Game Pass and game transactions
- Discussion of a potential acquisition with Sega Sammy leadership

Once these investigations are complete, if warranted, we would request A2N from you, Satya, and the Board before extending an offer.

1. | STRATEGY OVERVIEW

A more detailed overview of the game industry, our strategic thesis, and how we are accelerating Xbox Game Pass growth can be found in the appendix of this paper. However, our perspective on growth remains unchanged and is grounded in the following:

- The game industry is large and growing; in 2019, the industry generated \$182 billion¹ in total revenue; —larger than the global home video, movie box office, and music industries combined — and continues to grow. Today, 1 in 3 people in the world plays games, 2.6 billion² in total. Microsoft, which accounts for 5% of global gaming revenue and players, has significant headroom for growth in this rapidly expanding market³.
- Our opportunity is to expand our presence through driving the industry paradigm shift from being device-centric to player-centric. To aid this transformation, we are making “needle moving” investments in Xbox Game Pass, supported by Xbox Series X / Series S, and xCloud.
- Differentiated content, the primary engine behind subscription growth, remains a key accelerant to helping us realize our ambition.
- Our content portfolio continues to reach more gamers across devices in North America and Europe. However, there is still opportunity to reach further than our primary addressable audiences.

2. | PRIORITIZING ACQUISITION TARGETS

Mapping Xbox’s projected areas of geographic presence onto the total market opportunity helps inform our view on how to sequence the priorities to be pursued. The distribution of our consumer spend and its estimated portion of differing segment and geo combinations within the overall gaming industry market help us identify top priority segment and geographic combinations for Xbox, in priority order:

- PC in North America and Europe
- Mobile in North America and Europe
- Console and PC in APAC

¹ Consensus analyst estimates, public filings, internal analysis (“CY2019 Game Industry Sizing”).

² Analyst estimates, internal analysis (“CY2019 Gamer Value”).

³ Public financial disclosure, equity research, internal analysis (“CY2019 Game Industry Profit Pools”).

Keeping in mind our leading priorities (bolstering our presence in PC for North America and Europe and definitively entering Western Mobile), we evaluated 46 companies and applied a set of filters (e.g., scale, regional strengths, corporate ownership, etc.) to identify the most attractive targets. The filtering process resulted in 12 leading targets that we believe are large-scale and most attractive to acquire (see Figure 6). To summarize the consideration set for our next large-scale acquisition:

Figure 2: Comparison of Sega and Alternative Acquisition Opportunities⁴

Company	Enterprise Value	Commentary
Sega Sammy	\$2 billion	Deep stable of owned franchises on console & PC with mobile presence
Bandai Namco	\$12 billion	Asia-focused publisher with owned franchises and strength in console & mobile
Capcom	\$5 billion	Asia-focused publisher with owned franchises and strength in console with mobile presence
Konami	\$5 billion	Asia-focused publisher with owned franchises and strength in console & mobile
Netmarble	\$13 billion	Mobile-centric content portfolio; mix of owned franchises & licensed intellectual property
Nexon	\$17 billion	Asia-focused publisher with strength in PC and presence in mobile
Playrix	\$7 billion	Mobile-only content portfolio with casual focus
Square Enix	\$6 billion	Asia-focused publisher with owned franchises and strength in console & mobile
Take-Two Interactive	\$15 billion	Deep stable of owned franchises on console & PC
Ubisoft	\$10 billion	Console-centric content portfolio; mix of owned franchises & licensed intellectual property
Valve	\$17 billion	Stale but relevant owned PC franchises; owns the world's largest 3rd party PC store (Steam)
Zynga	\$8 billion	Western-focused mobile-only player with deep portfolio of casual games

These leading targets were evaluated, both individually and in combination, to determine the best strategic fit based on the leading priorities identified above. Outside of pursuing a mobile-first strategy, we conclude that Sega is the most attractive next acquisition target due to its PC catalog,

⁴ Enterprise values as of September 10th, 2020.

presence on mobile, and global brand affinity. We will explore Sega in the context of future acquisitions, including evaluations of mobile first companies.

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3. | SEGA

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3.1. | Company Overview and Corporate Structure

Headquartered in Tokyo, Japan, Sega is one of the largest and most recognizable games publishers in the world. Sega's ten gaming studios have produced beloved franchises such as *Sonic the Hedgehog*, *Total War*, *Puyo Puyo*, and *Football Manager*, spanning platforms and geographies. Collectively, the studios have ~2,100 FTEs⁵ and in 2019, they generated ~\$1.0 billion of revenue. For FY17, FY18, and FY19 (ending 3/31), the gaming business generated ~\$900M of revenue and \$60-90M in operating income⁶.

Sega is part of a larger holding company, Sega Sammy, that owns and operates several business divisions, including Pachinko / Pachinslot, Entertainment Contents (which includes its gaming-focused Consumer segment), and Resorts⁷. Sega Sammy is publicly traded on the Tokyo Stock Exchange, with an enterprise value of \$2.3 billion⁸. Our focus is on the company's gaming studio operations, reflected in its 'Consumer' division.

3.2. | Key Asset Overview

Sega's key assets, all based on owned franchises, include:

- Global Console Depth & Back Catalog: Sega's console portfolio spans generations and contains some of the industry's most recognizable franchises. Its primary tentpole, *Sonic the Hedgehog*, has proven commercial success (250+ million console and PC units sold, 700+ million mobile downloads) and cultural relevancy that will drive the growth of Xbox Game

⁵ 2019 Sega Management Meeting presentation

⁶ Sega financial disclosures

⁷ Sega's Pachinko and Pachinslot businesses develop, manufacture, and sell playable machines; traditionally in recreational arcade and gambling halls. The company's Resorts business operates 2 casino-based resorts and 1 golf club, both based in Asia.















⁸ Enterprise Value as of November 9th, 2020.

Pass. Sega also publishes a broader portfolio of successful at-scale franchises such as *Megami Tensei*, *Persona*, and *Yakuza*, that have sold over 40 million copies collectively. These established franchises release on console (and PC) at a regular cadence and are well suited for global audiences within a subscription service.

- Global PC Catalog: Sega has, through its own studios and acquired ones, established expertise at developing and publishing high-quality, deeply engaging PC content that would greatly enhance a gaming subscription service. In addition to pay-to-play games such as *Football Manager* and *Total War*, that have collectively sold nearly 50 million copies, the company also has expertise on creating free-to-play PC titles (e.g. *Phantasy Star Online 2*).
- Mobile Presence in Asia: Finally, Sega has a notable presence in Asia, particularly in Japan, via mobile-native games (~\$250M in 2019⁹). Popular games like *PuyoPuyo!!Quest*, *Chain Chronicle*, and *Hortensia Saga*, etc. have generated 160+ million life-to-date downloads and \$1.3 billion in life-to-date revenue.

⁹ App Annie 2019 Sega gross mobile revenue estimates

Figure 4: Sega Development Studios¹⁰

Studio	Location	Est. FTEs	Franchises	Commentary
SEGA Japan Asia Studio 1	Tokyo, Japan	~1000		Action-adventure fighting games
				Platform party games
SEGA Japan Asia Studio 2	Tokyo, Japan			Tile-matching video games
				Cross-genre platform games
SEGA Japan Asia Studio 3	Tokyo, Japan			F2P online action role-playing game
Atlus	Tokyo, Japan	~150		Tactical and action role-playing games
Creative Assembly	Horsham, England	~480		PC Strategy games
				Survival horror video games
Relic	Vancouver, BC	~220		Military science-fiction real-time strategy games
				PC Real-time strategy video games
Sports Interactive	London, England	~125		Simulation sports games
Amplitude Studios	Paris, France	~80		PC Turn-based strategy games
Hardlight (mobile)	Leamington Spa, England	~50		Score attack racing video games
Two Point	Surrey, England	~20		Business simulation game

We believe Sega's portfolio of tentpole and complementary franchises would provide the content infusion necessary to accelerate Xbox Game Pass subscriber growth across console, PC, and cloud.

¹⁰ FTEs based on 2019 Sega Management Meeting presentation

4. | ACQUISITION ECONOMICS

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4.1. | Operating Plan

Subject to diligence and discussions with Sega's leadership team, we expect Sega to report to Matt Booty with the following operating principles:

- We will continue to develop and sell all acquired games and franchises on all relevant platforms (e.g., Android, iOS, PlayStation, Steam, Switch, Windows, Xbox, etc.).
- We will bring previously exclusive to PlayStation and Nintendo titles to Xbox and launch future titles on Xbox in addition to other relevant platforms as rights permit.
- We will launch all acquired games and franchises with subscription exclusivity into Xbox Game Pass on console, PC, and cloud; future releases will ship into Xbox Game Pass on a day-and-date basis.

4.2. | Value Drivers

The primary economic levers of the acquisition can be summarized in two broad buckets:

1. Xbox Game Pass Subscribers. Subscription exclusivity of current and future releases will improve Xbox Game Pass' appeal and value to players. This will result in new subscribers across console, PC, and cloud. Further, the global appeal of Sega's beloved IP will help expand Xbox Game Pass's reach to new audiences around the world, most notably in Asia, where localized content is critical to success. The incremental engagement driven by these franchises will reduce existing subscriber churn. Together, these dynamics will greatly increase total Xbox Game Pass subscribers, accelerating the virtuous cycle described in Section 2.1.
2. Game Transactions. We will continue to sell acquired games and franchises across all game platforms. Previously unavailable titles on Xbox (e.g. *Persona* franchise on PlayStation, *Shin Megami Tensei* franchise on Nintendo) will be brought over to the platform for additional monetization opportunities, and future titles will no longer observe a delay of launching on Xbox. Releasing new games in Xbox Game Pass day-and-date potentially shifts base game sales to the subscription service; however, we observe that games in Xbox Game Pass typically have a larger player base and see a lift in post-sale monetization.

5. | KEY RISKS

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While Sega represents a meaningful opportunity for Gaming, we are cognizant of the following strategic and operating risks:

- Deal execution: It is unclear whether Sega Sammy has appetite to divest their gaming studios, which have represented roughly half of their revenue and operating income. Deal execution would likely be particularly complex.
- Integration risk: Microsoft has limited experience with Japanese acquisitions. Our preliminary integration plan is intended to preserve a degree of cultural & operating autonomy for Sega by having its Consumer division leadership report to Matt Booty. However, there is a risk that this plan may not completely account for cultural and/or other integration challenges.

6. | CONCLUSION

The opportunity to accelerate our ambitions in gaming with Xbox Game Pass is now. As the industry undergoes meaningful transition, new economic value will be created, and existing economic value will be reorganized. Other key Microsoft competitors (e.g., Google, Tencent, Amazon, etc.) perceive this shift as well, and are also investing in content subscriptions and cloud services. Acquiring Sega would create sustained differentiation in this competitive environment.

APPENDIX

7. | SEGA SAMMY OVERVIEW

Company Overview



Summary	
Operates three business segments:	
<ul style="list-style-type: none"> Entertainment Contents: Develops and sells gaming content across various studios worldwide <ul style="list-style-type: none"> Consumer: includes digital games and packaged games subsegments <ul style="list-style-type: none"> Digital Games: online and mobile games that are primarily free to play Packaged Games: physical and downloaded packaged games Amusement and Other: Amusement machine sales and operations, animation, and toys Pachislot and Pachinko Machines: Manufactures and sells pachislot and pachinko machines Resort: Develops and operates large resorts in Japan and South Korea 	
<ul style="list-style-type: none"> Headquarters: Tokyo, Japan. Employees: 7,993 (67% Entertainment Contents, 20% Pachislot and Pachinko Machines, 8% Resort, 8% Corporate) Revenue (FY19A) by geography: Japan (84%), North America (10%), Europe (3%), Other (3%) Top ownership: CEO & Chairman Hajime Satomi (19%), FSC Co. Ltd – Japanese consumer cable supplier (8%), Nomura (3%), Vanguard (2%), Orbis (2%) Founded in 2004 via the merger of Sega and Sammy (founded in 1951 and 1975, respectively) Acquired 11 studios since 2005, including Creative Assembly and Relic 	
Sega Key Milestones	
Date	Milestone
1982	Launched its first console, the SG-1000
2001	Exited the console business and became a third-party developer and publisher
2004	Merged with Sammy in a deal valuing Sega at ~\$2B
2005-2006	Acquired 3 studios: Creative Assembly (PC strategy games; 2005), Sports Interactive (Simulation sport games; 2006), Secret Level (console; 2006 for \$15M)
2011-2019	Acquired 8 studios: Three Rings Design (console; 2011), Relic (console & PC; 2013), Index (mobile; 2013), Demiurge Studios (mobile; 2015), Ignited Artists (mobile; 2015), Amplitude (PC; 2016), Crytek Black Sea (console & PC; 2017), Two Point (PC; 2019)

Financial Summary							
(\$M)	FYE Mar 31						
	2017A	2018A	2019A	2020A	2021E	2022E	2023E
Digital Games	\$438	\$373	\$395	\$427	\$447	\$442	\$433
Packaged Games	456	552	529	757	528	668	623
Amusement and Other	1,077	1,089	1,202	1,184	760	949	956
Entertainment Contents	\$1,971	\$2,014	\$2,126	\$2,368	\$1,735	\$2,059	\$2,012
Pachislot and Pachinko Machines	1,433	1,023	962	1,049	801	1,133	1,019
Resort	125	96	102	101	67	66	30
Revenue	\$3,551	\$3,138	\$3,210	\$3,548	\$2,634	\$3,278	\$3,138
% Growth	5%	(22%)	2%	11%	(26%)	24%	(4%)
Operating Income⁽¹⁾	\$286	\$12	\$127	\$268	(\$34)	\$268	\$246
% Margin	8%	0%	4%	8%	(1%)	8%	8%
EBITDA	\$509	\$378	\$329	\$454	\$188	\$442	\$426
% Margin	14%	12%	10%	13%	7%	13%	14%
% Operating Margin							
Digital Games	10%	3%	(5%)	2%	2%	2%	2%
Packaged Games	6%	17%	12%	6%	3%	10%	14%
Amusement and Other	3%	4%	3%	0%	(14%)	(1%)	1%
Entertainment Contents	2%	0%	4%	6%	2%	8%	2%
Pachislot and Pachinko Machines	16%	11%	13%	23%	7%	20%	16%
Resort	(7%)	(25%)	(23%)	(35%)	(80%)	(35%)	(20%)
Consumer⁽²⁾							
Revenue	\$94	\$925	\$923	\$1,214	\$976	\$1,170	\$1,083
% Growth	7%	1%	(0%)	31%	(20%)	14%	(4%)
Operating Income	\$73	\$95	\$61	\$142	\$142	\$160	\$17.5
% Margin	8%	10%	7%	12%	14%	14%	16%
Non-Consumer							
Revenue	\$2,638	\$2,208	\$2,286	\$2,334	\$1,658	\$2,168	\$2,075
% Growth	5%	(16%)	4%	2%	(29%)	31%	(4%)
Operating Income	\$213	\$16	\$65	\$126	(\$176)	\$108	\$71
% Margin	8%	0%	3%	5%	(11%)	5%	3%

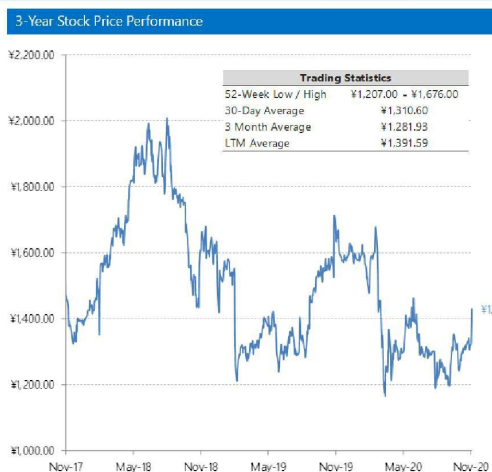
Notes: financial projections are JP Morgan research report estimates (6/10/20); Financials are in Japanese GAAP; JPY/USD exchange rate of 103.321x as of 11/6/20
 (1) Total Operating Income includes unallocated expenses (~2% of revenue per year)
 (2) The Digital Games and Packaged Games subsegments were consolidated into the Consumer subsegment in Q1 FY2021
 Source: Company filings, Company website, broker estimates, Capital IQ

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Market Overview



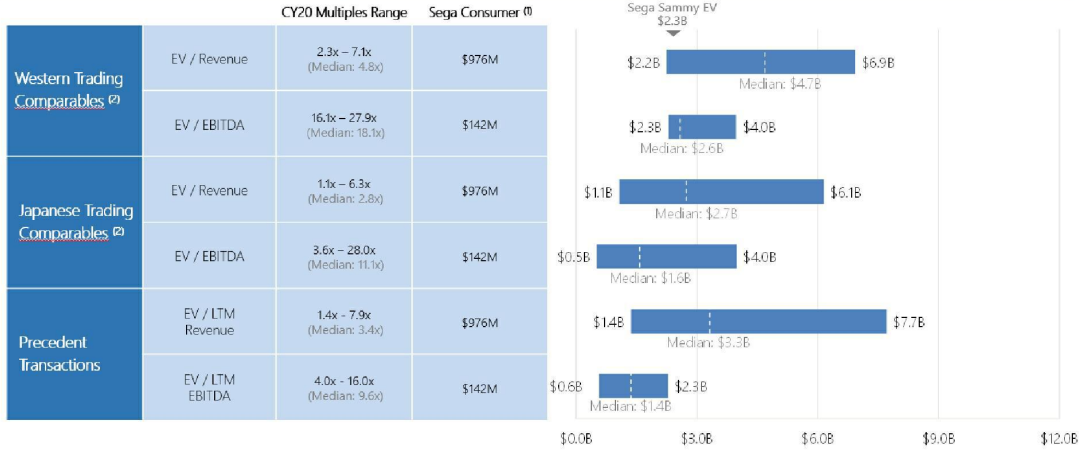
Public Market Overview		
Trading Value		
<i>(M, except per share value)</i>		
Stock Price (11/06/20)	¥1,430.00	\$13.84
52-Week High	¥1,676.00	\$16.22
Equity Value	¥336,240	\$3,254
Plus: Debt	95,328	923
Plus: Minority Interest	2,384	23
Less: Cash	200,595	1,941
Enterprise Value	¥233,357	\$2,259
Trading Multiples		
	CY2020E	CY2021E
EV/Revenue	0.9x	0.7x
EV/EBITDA	16.3x	5.1x
Operating Metrics		
	CY2020E	CY2021E
Revenue	\$2,634	\$3,278
% growth	(25%)	24%
EBITDA	\$138	\$442
% margin	5%	13%
Analyst Summary (based on 7 analysts)		
<ul style="list-style-type: none"> Mean / Median: ¥1,498.57 / ¥1,540.00 Range: ¥1,300.00 – ¥1,650.00 Recommendations: 43% Buy / 57% Hold / 0% Sell 		



Source: Company filings, Company website, Thomson, Capital IQ
 Note: Assumes SegaSammy's fiscal year end of March 31 equals December 31

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Market Value, Sega Sammy Consumer



Note: Market data as of 11/6/20
 (1) JPMorgan estimates for 12-months ending 3/31/21. Includes digital games and packaged games subsegments; excludes non-consumer segments (Amusement and other, Pachislot and Pachinko Machines, and Resort). Using EBIT estimates for EBITDA. Consumer D&A undisclosed.
 (2) Western comparable companies include Activision Blizzard, Electronic Arts, Take-Two and Ubisoft. Japanese comparable companies include Nintendo, Square Enix, Capcom.
 Sources: Company information and filings, Capital IQ, Thomson

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Trading Comparables

\$, millions ex. per share	Price 11/6/20	% 52-wk high	Equity Value	Enterprise Value	EV/Revenue		EV/EBITDA (Incl. SBC)		Revenue		Revenue Growth		EBITDA Margin (Incl. SBC)		
					CY 20E	CY 21E	CY 20E	CY 21E	CY 20E	CY 21E	CY 20E	CY 21E	CY 20E	CY 21E	
Western															
Activision Blizzard	\$78.81	90%	\$62,050	\$58,412	7.1x	6.9x	18.1x	17.9x	\$8,242	\$8,459	27%	3%	39%	38%	
Electronic Arts	\$119.19	81%	\$35,540	\$30,580	4.8x	4.6x	16.1x	15.3x	\$6,306	\$6,661	17%	6%	30%	30%	
Take-Two	\$175.19	97%	\$21,005	\$18,721	5.4x	5.6x	27.9x	NM	\$3,496	\$3,344	22%	(4%)	19%	13%	
Ubisoft	\$95.34	94%	\$11,884	\$12,301	4.7x	3.7x	NM	NM	\$2,630	\$3,340	34%	27%	7%	12%	
Zynga	\$8.73	82%	\$10,705	\$9,134	4.7x	3.5x	NM	13.9x	\$1,929	\$2,586	46%	34%	9%	25%	
Glu Mobile	\$8.79	81%	\$1,502	\$1,224	2.3x	2.1x	NM	NM	\$536	\$583	30%	9%	(6%)	2%	
					Mean	4.8x	4.4x	20.7x	15.7x	\$3,856	\$4,162	29%	12%	17%	20%
					Median	4.8x	4.1x	18.1x	15.3x	\$3,063	\$3,342	29%	7%	14%	19%
Asian															
Nintendo	\$559.52	94%	\$66,652	\$50,913	3.5x	3.7x	10.3x	10.7x	\$14,645	\$13,789	23%	(6%)	34%	34%	
Netmarble	\$112.83	62%	\$9,228	\$9,164	4.0x	3.5x	28.0x	22.3x	\$2,287	\$2,583	18%	13%	14%	16%	
Square Enix	\$62.62	87%	\$7,482	\$6,164	2.1x	1.9x	11.8x	10.2x	\$3,001	\$3,162	10%	5%	17%	19%	
Capcom	\$55.26	90%	\$5,900	\$5,285	6.3x	5.4x	19.5x	14.2x	\$841	\$972	(5%)	16%	32%	38%	
IGG	\$1.13	76%	\$1,394	\$1,064	1.6x	1.5x	3.6x	4.2x	\$681	\$701	2%	3%	44%	36%	
GungHo	\$24.80	95%	\$1,683	\$919	1.1x	1.2x	4.1x	4.5x	\$825	\$790	(16%)	(4%)	27%	26%	
					Mean	3.1x	2.9x	12.9x	11.0x	\$3,713	\$3,667	5%	4%	28%	28%
					Median	2.8x	2.7x	11.1x	10.5x	\$1,564	\$1,778	6%	4%	30%	30%

Sources: Company Filings, Capital IQ, Broker Estimates
 Note: Financials are GAAP and IFRS figures; EBITDA includes SBC and is adjusted for capitalized R&D for consistency with Microsoft accounting practices

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Precedent Transactions

Announced	Target	Acquirer	Enterprise Value (\$M)	EV/MTM Revenue	EV/MTM EBITDA	Target Main Titles
06/21/20	ZeniMax	Microsoft	\$7,500	8.3x	33.3x	The Elder Scrolls, Fallout, Starfield
06/01/20	Peak Games	Zynga	\$1,800	2.8x	15.0x	Toon Blast, Toy Blast
04/28/20	Jagex	Mancinor Fortune Holding	\$530	4.4x	NA	Runescape
02/19/20	Saber Interactive	Embracer Group	\$525	5.0x	8.5x	World War Z, Show Runner, The Witcher 3, NBA Playgrounds, Hale Online
08/26/19	Seriously	Playtika	\$375	5.0x	NA	Best Friends
08/19/19	Insomniac Games	Sony	\$329	NA	NA	Marvel's Spider-Man, Ratchet & Clank: The Unspoken, Song of the Deep
08/15/19	Carallio Curve Digital	Northedge Capital	\$311	NA	14.5x	Ember, Horizon Racing, A Knight's Quest, American Fugitive, Beholder
12/20/18	Small Giant Games	Zynga	\$360	NA	NA	Rope Rascals, Emores & Puzzles
09/13/18	Shengou Technology Holdings	Zhejiang Century Huatong Group	\$4,344	NA	NA	Ragnarok Online, Dungeons & Dragons, The World of Legend, MapleStory
09/06/18	CCP Games	Pearl Abyss	\$325	NA	NA	Ew, Dust 514, Gunjack
08/15/18	Bluehole Studio	Tencent	\$509	NA	NA	TERA, Devilian, PlayerUnknown's Battlegrounds, PUBG
06/10/18	Ninja Theory	Microsoft	\$317	6.0x	16.0x	Hellblade, Bleeding Edge, VR Prejects
05/30/18	Avalanche Studios	Nordisk Film	\$196	NA	NA	Just Cause, Mad Max
02/14/18	Koch Media	THQ Nordic	\$149	NA	NA	Saint's Row, Metro games (under Deep Silver)
11/29/17	Big Fish Games	Aristocrat Technologies	\$990	2.2x	11.8x	Drawn, Fairway Solitaire, Hidden Expedition
11/20/17	Relayzen Entertainment	Electronic Arts	\$315	NA	NA	Titanfall, Star Wars VR
02/01/17	Social Point	Take-Two Interactive Software	\$350	2.8x	12.6x	Dragon City, Monster Legends
07/04/16	Splash Damage	Layou Technologies	\$150	NA	NA	Blockbuster sequels: Wolfenstein, Enemy Territory, Gears of War
06/21/16	Supercell	Tencent Holdings	\$10,200	4.4x	11.0x	Clash of Clans, Hay Day and Battle Buddies
11/20/15	King Digital	Activision Blizzard	\$5,500	2.8x	8.2x	Candy Crush, Farm Heroes, Pet Rescue
06/09/15	China Mobile Games	Pegasus Investment	\$689	3.4x	NM	Castleman, Storm Battleship, SeaJed Dragon
04/26/15	Perfect World	Founder take private	\$840	1.4x	9.6x	Perfect World, Legend of Martial Arts, Perfect World II, Zhu Xian, Chi Bi
04/09/15	Shanda Games	Capitalhold Limited	\$1,800	3.2x	9.2x	AION, Maple story, The World of Legend, Ragnarok Online
11/22/14	Big Fish Games	Churchill Downs	\$485	1.5x	7.8x	Drawn, Fairway Solitaire, Hidden Expedition
10/14/14	Digital Extremes	Multi Dynamic Games/Perfect Online Holding	\$320	NA	NA	Warframe, The Darkness
09/15/14	Mojang AB	Microsoft Corporation	\$2,500	7.6x	9.6x	Minecraft franchise
03/17/14	Giant Interactive	Chairman & PE consortium take private	\$990	2.5x	4.0x	ZTOline
02/30/14	NaturalMotion	Zynga	\$487	7.9x	NM	BackBreaker, CSR Racing
10/15/13	Supercell	Softbank	\$3,000	3.4x	NA	Clash of Clans, Hay Day and Battle Buddies
07/25/13	Activision Blizzard	Management Buyout	\$5,830	1.4x	5.4x	World of Warcraft, Hearthstone
07/08/13	Backflip Studios	Hasbro	\$160	NA	NA	Paper Toss, Dragonvale
07/12/11	PopCap Games	Electronic Arts	\$750	7.4x	NA	Alchemy, Bejeweled, Feeding Frenzy
04/26/11	Bigpoint GmbH	Siemens Partners/TA	\$160	NA	NA	Battlestar Galactica, Farm Heroes, Drakensang, DarkOrbit, Scurfah
04/21/11	OpenFeint	GREE	\$104	NA	NA	Fruit Ninja, Galaxy on Fire, BirdStrike, 3D Rollercoaster Rush
02/04/11	Riot Games	Tencent	\$472	NA	NA	League of Legends
			Mean	4.2x	11.8x	
			Median	3.4x	9.6x	

Source: Company Filings, 451 Research

Note: EBITDA includes capitalized R&D and excludes amortized R&D for all transactions other than Big Fish Games, Peak Games, Saber Interactive, Social Point and Supercell, where targets' accounting for R&D is not available; Multiples above 35.0x are "NM"

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8. | DETAILED STRATEGY OVERVIEW

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8.1. | Market Opportunity

The game industry generated \$182 billion¹¹ in total revenue in 2019—larger than the global home video, movie box office, and music industries¹² combined—and continues to grow. Software & services revenue, the primary measure of industry health and >90% of total industry revenue, has seen steady growth, nearly 10% annually, from 2017-2022¹. Console remains a key driver of software & services revenue (\$38 billion) along with Mobile (\$87 billion) and PC Client (\$32 billion)¹. Today, 1 in 3 people in the world plays games, 2.6 billion¹³ in total. In the next decade, we estimate that the

¹¹ Consensus analyst estimates, public filings, internal analysis ("CY2019 Game Industry Sizing").

¹² PricewaterhouseCoopers ("Global Entertainment and Media Outlook, 2016-2020"). Home video includes DVDs, video-on-demand, streaming services (e.g. Netflix). Music includes CDs, digital purchases, subscription services, and ticket sales.

¹³ Analyst estimates, internal analysis ("CY2019 Gamer Value").

number of players worldwide will grow to exceed 4 billion. Microsoft, which accounts for 6% of global revenue and players, has significant headroom for growth in this rapidly expanding market¹⁴.

Gaming—which is computationally intensive, accounts for 72%¹⁵ of mobile store spend, and drives 20%¹⁶ of non-browser time across all consumer Windows 10 machines—also represents a high-value cloud workload and potential growth vector for Azure.

8.2. | Strategic Thesis

Microsoft's opportunity is to expand its share of an at-scale and growing industry. Our perspective on growth remains unchanged and is grounded in our worldview:

Today, the game industry is largely organized around devices. This structure runs counter to the desires and motivations of both players and publishers. We believe the industry will reorganize, moving from a device-centric paradigm to one that orients around the player. Our opportunity is to expand our presence in a large and growing industry by powering this transformation, including establishing relationships with more players on more endpoints in more geographies. Our underlying strategic thesis also remains constant—Xbox is the best place to play, empowering people to play the games they want, with the people they want, anywhere they want. As our ecosystem evolves, membership, in our services across devices, becomes our platform. This requires:

- **Content:** to attract and engage players across our platform and services
- **Community:** to create an ecosystem for discovery, purchase, and engagement
- **Cloud:** to provide ubiquitous content access and presence across endpoints

8.3. | Xbox Game Pass

We envision a world in which players are empowered to play their games anywhere and publishers can reach players everywhere. Xbox Game Pass, supported by Project xCloud and Xbox Series X, embodies our vision:

- **Xbox Game Pass.** Xbox Game Pass provides members access to 100s of games for a single monthly fee. More importantly, Xbox Game Pass both reduces barriers for players to discover games, riding the broader shift in entertainment toward subscriptions, and creates fertile ground for publishers to monetize their games. Xbox Game Pass will become our long-term consumer-facing platform. Scaling Xbox Game Pass is the primary strategic objective for the Gaming CSA.
- **Project xCloud.** Project xCloud migrates a game's computational workload from the device to the cloud, freeing high-fidelity games to play across a broader array of devices (e.g., console

¹⁴ Public financial disclosure, equity research, internal analysis ("CY2019 Game Industry Profit Pools").

¹⁵ AppAnnie "State of Mobile 2020". Includes iOS App Store and Android Google Play.

¹⁶ Windows 10 Telemetry.

games streaming to mobile phones). This technological shift is a key enabler of the player-centric paradigm described in Section 1.2 and will extend Xbox Game Pass across devices.

- Xbox Series X. The next generation Xbox console, Xbox Series X, will launch in 2020. Series X, the best instantiation of our services and experiences, will accelerate Xbox Game Pass by providing critical onramps for new content and new subscribers.

9. | ACCELERATING XBOX GAME PASS GROWTH

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9.1. | Key Lessons from Video

Similar to other entertainment markets, the transition to subscriptions in gaming offers a historic opportunity. We believe that an empirical review of the video industry yields three primary insights that are directly applicable to Xbox Game Pass:

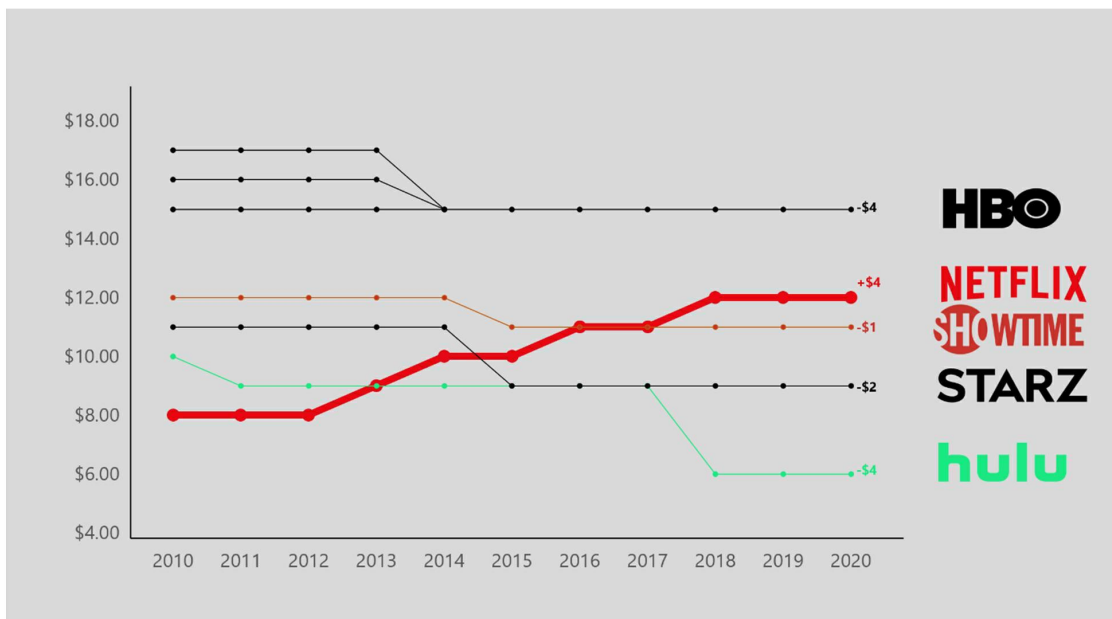
A: Subscriber scale is *the* imperative for a successful subscription service.

Beyond the financial health that typically extends from business growth, subscriber scale is *essential* in building a subscription service. The advantage that scale affords becomes self-reinforcing across multiple key vectors:

- Content Investment. There is a virtuous relationship between content and subscriber scale. Content investments are better amortized across a larger subscriber base, improving per user economics and positioning a service to further invest in content. To illustrate, a hypothetical \$100 million investment would cost Netflix \$0.60 per subscriber, but would cost Hulu \$3.33 per subscriber. Due to this dynamic, Netflix is able to invest in more and better content for the same cost per subscriber, which enhances the value of its service for subscribers, and has resulted in 4x the number of subscribers and 2x the monthly average revenue per user of Hulu¹⁷.
- Distribution. At scale services achieve “most favored nation” status with non-content ecosystem partners (e.g., device manufacturers), further reinforcing the leader’s position. For example, Spotify often enjoys distribution as the default music service for Android handset manufacturers because it is the largest, most prominent music service.
- Pricing. Premium pricing is a function of a service’s underlying subscriber value. The virtuous cycle described above enables at scale services to invest in content, improve service value, and positively affect average revenue per user. By contrast, lagging services compete on price out of necessity. Comparing Netflix’s (the leader) average revenue per user to those of lagging services between 2010 and 2020 illustrates that point:

¹⁷ Figures as of January 2019.

Figure 5: Effective Average Revenue Per User of Streaming Video Services¹⁸



B: Differentiated content is the primary driver of subscriber scale.

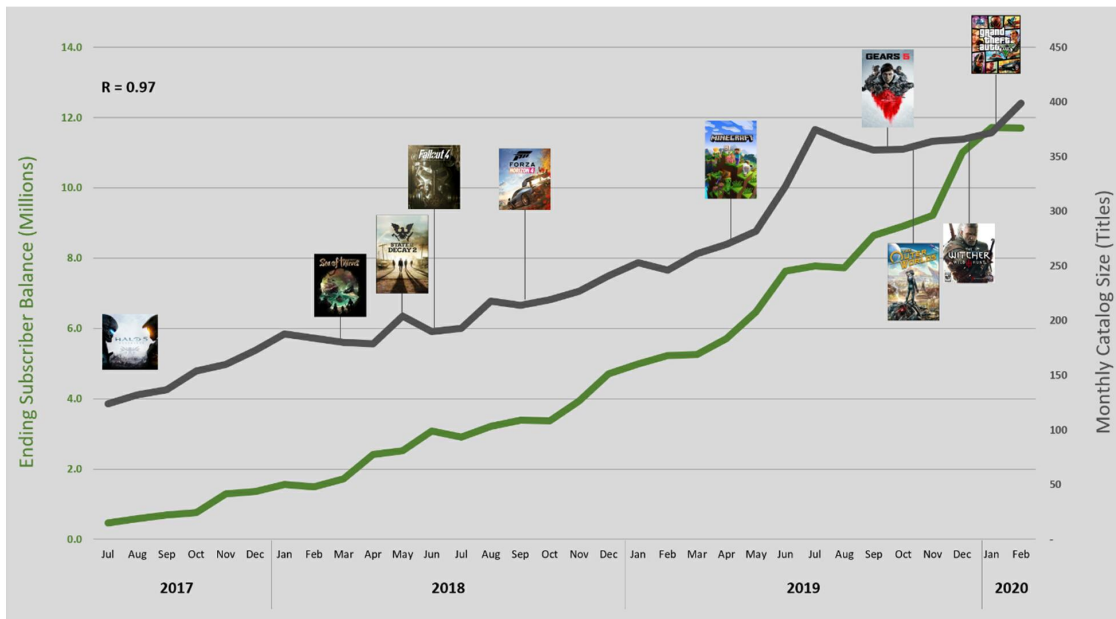
Content is the primary engine behind subscription growth. In digital video subscriptions, Netflix invested early and aggressively in its Originals program, content available exclusively on Netflix, creating a sustained advantage over competing services. To illustrate, when Netflix first released *Stranger Things* in 2016, quarterly subscriber growth accelerated 54%¹⁹, helping jumpstart the virtuous cycle described above. Conversely, those services which took a more measured approach to content investment, saw the opposite dynamic, with content costs increasing on a per user basis, hampering their ability to invest and compete effectively. The relationship between differentiated content and subscriber growth is further evidenced by the fact that virtually every major content platform, across entertainment categories and business models, invests in differentiated content to drive growth.

With Xbox Games Pass, we also see a strong relationship, which we believe is causal, between differentiated content and subscriber growth:

¹⁸ Matthew Ball, January 2020.

¹⁹ Netflix disclosure.

Figure 6: Xbox Game Pass Ending Subscriber Balance & Catalog Growth



Two dynamics underly this relationship. Improved catalog scale, quality, and diversity helps a service:

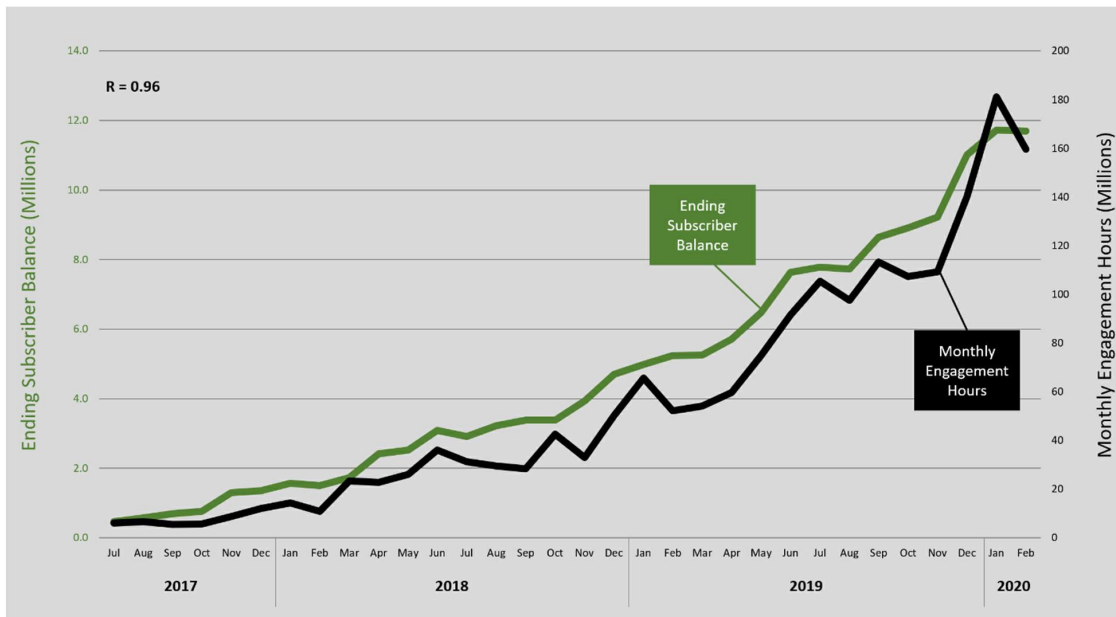
1. Cater to new demographics and grow subscribers by attracting new users
2. Improve engagement of existing subscribers, reducing churn and growing subscribers via retention

C: Content engagement is the best proxy for subscriber growth.

The long-term viability of a subscription service is based on the value it provides its subscribers. Content engagement, a proxy for service value, correlates closely with long-term subscriber growth. Netflix, whose service management is best-in-class, has operationalized the relationship between engagement and subscriber growth, informing content investments based on the predicted impact a title will have on service engagement and therefore subscribers.

Xbox Game Pass also sees a strong positive correlation between the increase in engagement and subscriber growth. Similar to Netflix, we inform our content investments by estimating the incremental engagement hours a game will drive, based on historical precedents, to forecast the impact it will have on Xbox Game Pass subscriber growth:

Figure 7: Growth of Xbox Game Pass Monthly Engagement Hours & Ending Subscriber Balance



9.2. | Xbox Game Pass State of the Union

Xbox Game Pass is a leading content subscription service in gaming with nearly 15 million subscribers. We believe there is a nearly 750 million subscriber opportunity globally, with more than 250 million potential subscribers in our primary geographies. Achieving our subscriber ambitions is predicated on our ability to create value for our members and partners, beginning with continued investment in content. To that end, Xbox Game Pass faces 3 primary content dynamics:

1. **Need for Differentiated Content.** For gaming, differentiated content means investing in content that is (i) exclusive to the service, to differentiate relative to other services, (ii) blockbuster in scale, to attract and engage users, and (iii) released on a “day-and-date” basis (i.e. releases in the service on the day it launches), to maximize the value of the content to subscribers.
2. **Expanding Beyond Console.** Console is a proven subscriber onramp for Xbox Game Pass, but the total opportunity is limited by the active installed base of Xbox consoles. PC and cloud dramatically expand our market opportunity; addressing that opportunity requires differentiated content that is attractive to players in those segments.
3. **Limited Content Supply.** Different than other entertainment markets, the supply of attractive games is structurally limited. Long development cycles, progressive industry consolidation, and high average engagement per title translate into a reduced content supply in gaming relative to music or video. This complicates our ability to rent differentiated content across console, PC, and cloud.

9.3. | Implications for Xbox Game Pass

Based on the parallels with the video industry highlighted in Section 2.1, Xbox Game Pass has a window of opportunity to make early and aggressive investments in content, accelerate subscriber scale, jumpstart the virtuous cycle realized by leading services, and create lasting value for our subscribers and partners. Given the dynamics illustrated in Section 2.2, we believe an acquisition of an at-scale content owner is our optimal path to realize this opportunity.