
From: Phil Spencer </O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=MICROSOFT.ONMICROSOFT.COM-55760-PHIL SPENCER>
To: Sarah Bond; Tim Stuart
CC: Haiyan Zhang
Sent: 7/29/2020 4:11:56 PM
Subject: FW: Project Atom (ZeniMax)
Attachments: Gaming CSA -- Strategic Framing Memo -- ZeniMax v12.docx; Project Atom Financial Materials.pptx

Just what was sent for this mornings call.



From: Amy Hood <amyhood@microsoft.com>
Sent: Wednesday, July 29, 2020 6:53 AM
To: Satya Nadella <satyan@microsoft.com>
Cc: Phil Spencer <philsp@microsoft.com>; Marc Brown (CORPDEV) <marcb@microsoft.com>; Keith Dolliver (CELA) <keithd@microsoft.com>
Subject: Fwd: Project Atom (ZeniMax)

For 8am. This is material team went thru with me yesterday.

Amy

From: Tim Stuart <timstu@microsoft.com>
Sent: Monday, July 27, 2020 6:06:10 PM
To: Amy Hood <amyhood@microsoft.com>
Cc: Phil Spencer <philsp@microsoft.com>; Sarah Bond <Sarah.Bond@microsoft.com>; Bill Duff <billduff@microsoft.com>; Marc Brown (CORPDEV) <marcb@microsoft.com>; Ryan Cooper (CORPDEV) <Cooper.Ryan@microsoft.com>
Subject: Project Atom (ZeniMax)

Amy – Tomorrow we have time with you to discuss the Project Atom (ZeniMax) acquisition. We will spend our time in the Atom Financial Materials deck, but I have also attached our draft board materials for reference as well.

For our acquisition thesis, we will land the following financial and strategic elements:

- Content catalog growth drives net new hours within Game Pass customer engagement
- Hours and subscribers are highly correlated and therefore growth in hours = growth in paying subscribers
- ZeniMax is critical to growing a strong overall catalog à driving more hours à converting into paid subscriber growth

Current valuation model is at \$10.5B, \$4.3B from operating cash flow + synergies and \$6.2B from terminal value. We will walk you through the key drivers, valuation scenarios, and financial outlook.

Thanks

File Provided Natively

Project Atom Financial Materials.pptx

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Sarah.Bond@microsoft.com (Primary)\Top of Information Store\Archive\4. Deals\C. M&A\FW: Project Atom (ZeniMax)

ZeniMax Media

July 2020



Acquisition Strategic Rationale

Our Strategy

- Gaming presents a sizable market opportunity for Microsoft, nearly \$200 billion annually
- Our strategy, to extend our ecosystem across devices centered on the player, creates sustainable differentiation
- Xbox Game Pass, with nearly 15 million subscribers today, underpins this vision and positions Microsoft to pursue the potentially 250 million gaming subscribers in Xbox markets

Current Situation

- In subscriptions, scale is self-reinforcing; jumpstarting the virtuous cycle between content and subscribers is our imperative
- Xbox Game Pass faces increasing competition; our window to scale subscribers & accelerate this virtuous cycle is narrowing
- Differentiated content—across console, PC, and cloud—is the primary lever to rapidly scale Xbox Game Pass; given the limited supply of games to “rent”, ownership is our optimal strategy

Our Proposal

- ZeniMax is a proven game developer & publisher with owned franchises and strong performance on console and PC
- Acquiring ZeniMax would unlock nonlinear growth for Xbox Game Pass, establishing a long-term economic beachhead
- With Xbox Game Pass, Microsoft is best positioned to grow and realize financial return from ZeniMax’s assets

ZeniMax Media Overview

Company Overview

- Major developer of AAA cross-platform, action, and fantasy RPG titles such as Fallout, The Elder Scrolls, DOOM, and Wolfenstein
- Headquarters:** Rockville, MD; studio offices in Sweden, France, Japan, Canada, and throughout the United States
- Founded:** 1986 (current ZeniMax structure formed in May 1999)
- Key People:** Robert Altman (Founder, Chairman and CEO), Todd Howard (Bethesda Executive Producer), Todd Vaughn (SVP Product Development), James Leder (President and COO)
- Employees:** 2,379 (75% R&D, 15% G&A, 10% S&M)
- Ownership:** Providence Equity Partners (34%), employees (24%), Robert Altman (17%), Series A and B investors (11%), founders (7%), board (4%) and all others (3%)
- Funding:** ~\$460M in total, most recently \$450M from Providence Equity Partners (\$150M in Sep 2010 and \$300M in Oct 2007). Previously raised ~\$10M in 1999, 2000 and 2001.
- Xbox Live Engagement:** ~4M unique users played an average of ~12 hours / month in CY19
- Game Catalog** generates over \$135M of annual revenue; includes The Elder Scrolls: Skyrim and Fallout 4

Key Developments

- Recent Major Title Releases:** Fallout 76 (2018; underperformed), The Elder Scrolls: Blades (2019), Rage 2 (2019), Wolfenstein: Youngblood (2019), Wolfenstein: Cyberpilot (2019), and DOOM Eternal (2020)
- Planned Major Title Releases:** Starfield (2021), Fallout 3 Remaster (2024) and The Elder Scrolls VI (2024)
- Acquisitions:** Alpha Dog Games (mobile developer; closed 2019), Roundhouse Studios (developer; 2019), Escalation Studios (developer; 2017), Machinegames (developer; 2010), Arkane Studios (developer; 2010), id Software (Quake developer; 2009). Acquisition prices all undisclosed.

Source: Company Presentation, Pitchbook, Company website, 451 Group












(1) GAAP financials, including SBC and adjusted for capitalized R&D for consistency with Microsoft accounting practices.

Financial Overview

Analysis/Detail (\$ Millions)	2019			Management Forecast				
	2019	2020	2021	2022	2023	2024	2025	2026
Revenue	\$1,001	\$1,022	\$1,036	\$1,050	\$1,067	\$1,080	\$1,090	\$1,097
% Growth		(23%)	5%	62%	79%	(11%)	12%	66%
Cost of Sales	\$236	\$250	\$255	\$255	\$255	\$254	\$250	\$250
% Margin	82%	76%	73%	83%	85%	84%	82%	85%
Amortization Expense	\$10	\$10	\$10	\$10	\$10	\$10	\$10	\$10
% Margin	9%	(15%)	(11%)	15%	39%	31%	31%	50%
SG&A Expense	\$15	\$10	\$10	\$12	\$10	\$10	\$10	\$10
% Margin	11%	(13%)	(7%)	17%	41%	34%	33%	51%
Stock-Based Compensation	\$5	\$2	\$2	\$5	\$4	\$3	\$1	\$1
EBDA (incl. SBC)	\$100	\$100	\$100	\$100	\$104	\$101	\$100	\$100
% Margin	12%	(13%)	(7%)	18%	41%	34%	33%	51%

\$724M of cash and no debt as of 5/31/20

ZeniMax Media Portfolio Overview

Studio	Location	Full-Time Employees	Franchise / IP	LTD Units	Commentary
Bethesda Game Studios	Rockville, MD Austin, TX Dallas, TX	431		55M	Dystopian future role-playing game
				54M	Fantasy role-playing game
				N/A	New space-based role-playing game
				N/A	New franchise based on Indiana Jones character
ZeniMax Online	Hunt Valley, MD	381		15M	Online multiplayer role-playing game
Machine Games	Uppsala, Sweden	130		9M	Reboot of 1990's classic shooter
id Software	Richardson, TX	230		10M	Reboot of 1990's classic shooter
				<5M	Acquired in 2009
Tango Gameworks	Tokyo, Japan	89		<5M	Japanese survival horror games
Arkane Studios	Austin, TX / Lyon, France	241		Not yet released	New "immersive simulation"
Roundhouse Studios	Madison, WI	41		<5M	Acquired in November 2019
Alpha Dog Games	Halifax, NS	15		N/A	Acquired in October 2019
Bethesda Softworks	Rockville, MD Montreal, QC	505	Corporate / Publishing	N/A	Leadership, Marketing, PR, Sales, Bethesda.net, IT, Operations, Finance, Legal

Unit sales estimated from ZeniMax corporate press releases / interviews, financial disclosures, Superdata, NPD, GSD, GfK

Slide 4 Notes

Integration Principles

Organization, Culture and Leadership

- We plan to leave the company intact; ZeniMax's leadership will report to Phil Spencer, EVP of Gaming
- Retain all of ZeniMax's offices and development teams in existing locations
- Rationalize relevant SG&A and integrate key compliance functions into Microsoft (Treasury, Audit, Tax, Legal, Corporate Affairs, etc.)

Portfolio and Go-to-Market

- Continue developing all acquired games and franchises, and continue selling on all relevant platforms (e.g., Android, iOS, PlayStation, Steam, Switch, Windows, Xbox, etc.)
- Launch all acquired games and franchises (rights permitting) with subscription exclusivity into Xbox Game Pass on console, PC, and cloud; future releases would ship into the service on a "day-and-date" basis.

Buy Case Key Assumptions (1 of 2)

Category	Variable	Assumption	Commentary / Benchmark	
Existing Business	Tentpole Franchises	The Elder Scrolls VI performance	40M units @ \$60 Releases in FY24 and FY29	<ul style="list-style-type: none"> Units: Latest release (2011) shipped >40M LTD Price: Based on Xbox console historical performance (\$55 base game, \$5/unit of post-sale monetization)
		Fallout 5 performance	25M units @ \$71 Releases in FY21, FY22, FY24 and FY28	<ul style="list-style-type: none"> Units: Latest release (2015) shipped ~25M LTD Price: Based on Xbox console historical performance (including \$55 base game, \$16/unit of post-sale monetization)
		Starfield performance	25M units @ \$60 Releases in FY21, FY25, and FY29	<ul style="list-style-type: none"> Units: Based on recent title performance from Fallout and The Elder Scrolls franchises Price: In line with Fallout and The Elder Scrolls historical performance (including \$55 base game, \$5/unit of post-sale monetization)
	Complementary Franchises	Percent of Tentpole Revenue	24%	<ul style="list-style-type: none"> Based on Xbox console historical performance Franchises include: DOOM, Ghostwire, Deathloop, Indiana Jones, and several new IP projects
	Other Revenue	Free-to-Play	Management Forecast through FY24; 8% Growth FY25-FY30	<ul style="list-style-type: none"> Assumed 8% growth rate consistent with projected industry growth¹
		Back Catalog	Management Forecast through FY24; (15%) Growth FY25-FY30	<ul style="list-style-type: none"> Growth consistent with management forecast and trend that back catalog revenue will steadily decline YoY
	Expenses	COGS	16% of revenue	<ul style="list-style-type: none"> Tentpole and complementary COGS at management forecasted % of revenue through FY24; held at the average % of revenue FY25-FY30.
		ZeniMax headcount	2,379 FTEs +3% R&D / year CPH of ~\$180K in FY21, +3% / year	<ul style="list-style-type: none"> ZeniMax currently has 2,379 FTEs, with 1,789 in R&D CPH based on recently acquired LI studios
		Non-People S&M Expense Growth (CAGR)	8%	<ul style="list-style-type: none"> Management forecast assumes 13% CAGR; our reduced expense growth reflects efficiencies from combined operations

[1] Source: GBP&S CY2019 Game Industry Sizing.

Buy Case Key Assumptions (2 of 2)

Category	Variable	Assumption	Commentary / Benchmark
Net Synergies	Xbox Game Pass ZeniMax Titles Released Per Year into Xbox Game Pass	3.6 titles / year average	<ul style="list-style-type: none"> Assumes day and date releases of all tentpole titles (as described in "Existing Business" as well as ~3 annual complementary releases (consistent with historical release cadence)
	Total Hours for New ZeniMax Titles	Elder Scrolls: 184 million hours in Y1 Fallout & Starfield: 66 million hours in Y1 Each Complementary Title: 13 million hours in Y1	<p>Engagement hours in year 1 based on Xbox Game Pass engagement for similar titles, then decay in waterfall fashion:</p> <ul style="list-style-type: none"> Elder Scrolls: 132 million hours in Y2, 124 million hours in Y3 and held constant until next title launch (shallowest decay curve) Fallout & Starfield: 31 million hours in Y2, 23 million hours in Y3 Complementary Titles: 6 million hours in Y2
	Hours per ZeniMax Title	Average of ~5 hours / title / subscriber	<ul style="list-style-type: none"> 3-6 hours per subscriber depending on quality of title launched into the service in a particular year
	Average Xbox Game Pass Annual Hours Played	14 to 25 hours / year / subscriber	<p>Based on FY20 Xbox Game Pass annual engagement trends¹:</p> <ul style="list-style-type: none"> Drives engagement based on annual hours played
	Xbox Game Pass Subscriber Monetization	ARPU scaling to \$10.50 Post-sale monetization \$0.15 / hour flat	<ul style="list-style-type: none"> ARPU scaling as from \$6 (rev. attributed to Xbox Live Gold conversions to XGP) to \$10.50 as net new subscribers are brought into the service. \$0.15 / hour flat is based on historical post sales monetization rate
	Gross margins	85% for Console-first subscriptions 50% for xCloud-first subscriptions 85% for post-sale monetization	<ul style="list-style-type: none"> Console first-subscribers are subscribers who come into XGP on console as compared to xCloud-first who are subscribers brought to the platform primarily by xCloud streaming
	Xbox Game Pass Mix Shift (Cannibalization)	50% of Xbox direct purchase	<ul style="list-style-type: none"> Assumes mix shift from Xbox direct purchase to subscription

[1] Source: Xbox Gamer Analytics Platform and Xbox Game Pass Business Planning. See slide 24 for additional detail on average engagement per subscriber for current Xbox Game Pass library

Existing Business Summary

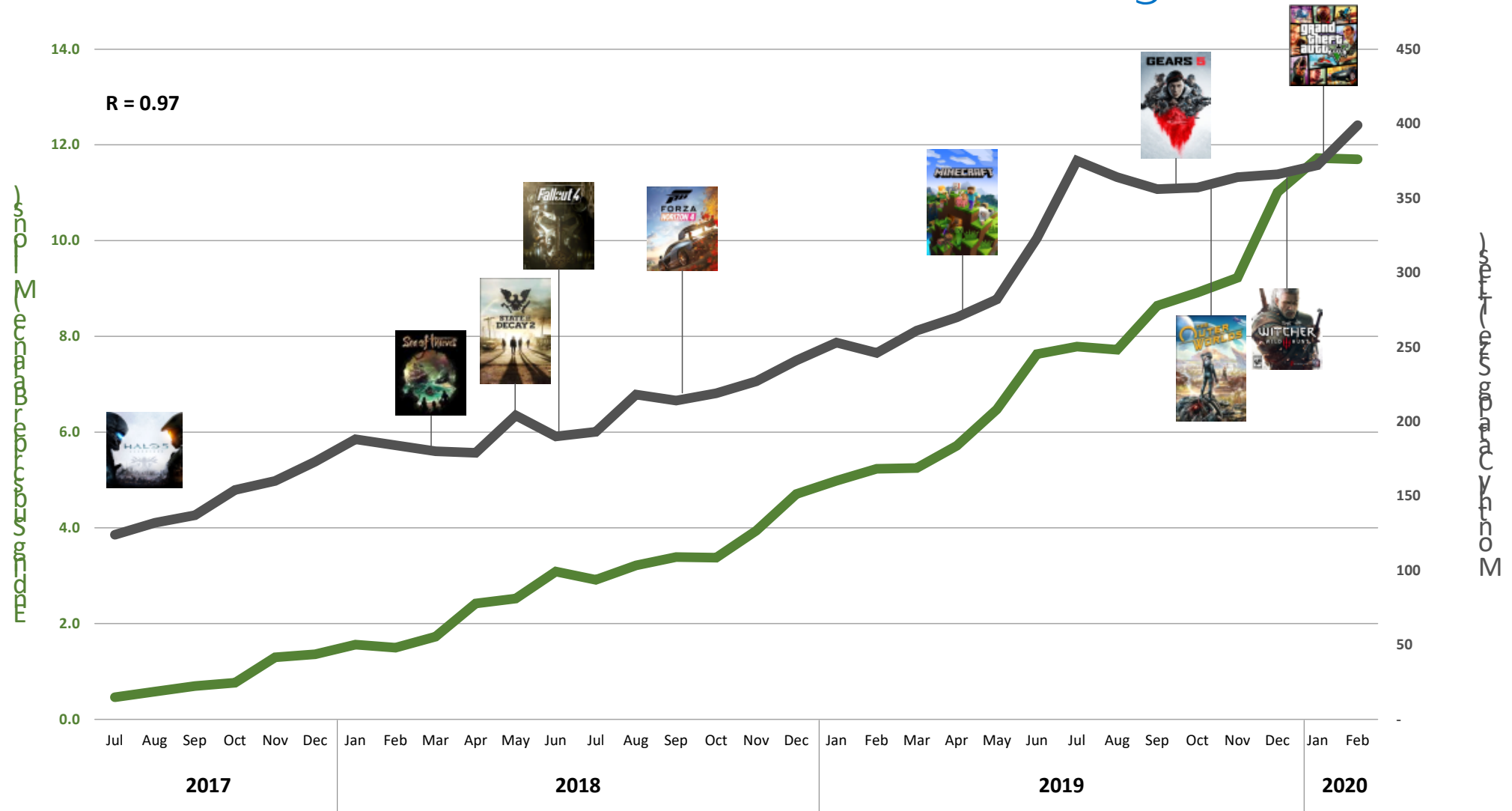
\$ Millions	Fiscal Year Ending June 30	H2 FY21	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY22-FY30 CAGR
		1	2		3	4			5	6		
Tentpole		\$364	\$765	\$390	\$876	\$1,395	\$981	\$493	\$642	\$1,414	\$1,434	8%
Complementary		\$87	\$184	\$94	\$210	\$335	\$236	\$118	\$154	\$339	\$344	8%
Free-to-Play & Back Catalog		\$110	\$283	\$333	\$323	\$288	\$297	\$308	\$322	\$339	\$359	3%
Total Revenue		\$561	\$1,232	\$717	\$1,410	\$2,018	\$1,515	\$819	\$1,318	\$2,092	\$2,137	7%
% Growth		0%	10%	(34%)	73%	43%	(25%)	(39%)	22%	87%	2%	
COGS		(\$87)	(\$190)	(\$140)	(\$219)	(\$311)	(\$245)	(\$149)	(\$181)	(\$339)	(\$346)	
Total Gross Margin		\$474	\$1,042	\$577	\$1,190	\$1,707	\$1,270	\$670	\$1,137	\$1,753	\$1,791	
% Margin		84%	85%	83%	84%	85%	84%	84%	84%	84%	84%	
Operating Expenses		(\$302)	(\$633)	(\$674)	(\$719)	(\$768)	(\$819)	(\$875)	(\$936)	(\$1,000)	(\$1,070)	
Annual FTE		2,433	2,488	2,545	2,603	2,663	2,726	2,790	2,855	2,923	2,993	
% Margin		(54%)	(51%)	(83%)	(51%)	(38%)	(54%)	(95%)	(84%)	(48%)	(50%)	
Total Accountability Margin		\$172	\$410	\$2	\$471	\$936	\$451	(\$159)	\$2	\$714	\$715	
% Margin		31%	33%	0%	33%	47%	30%	(11%)	0%	36%	34%	

Tentpole releases

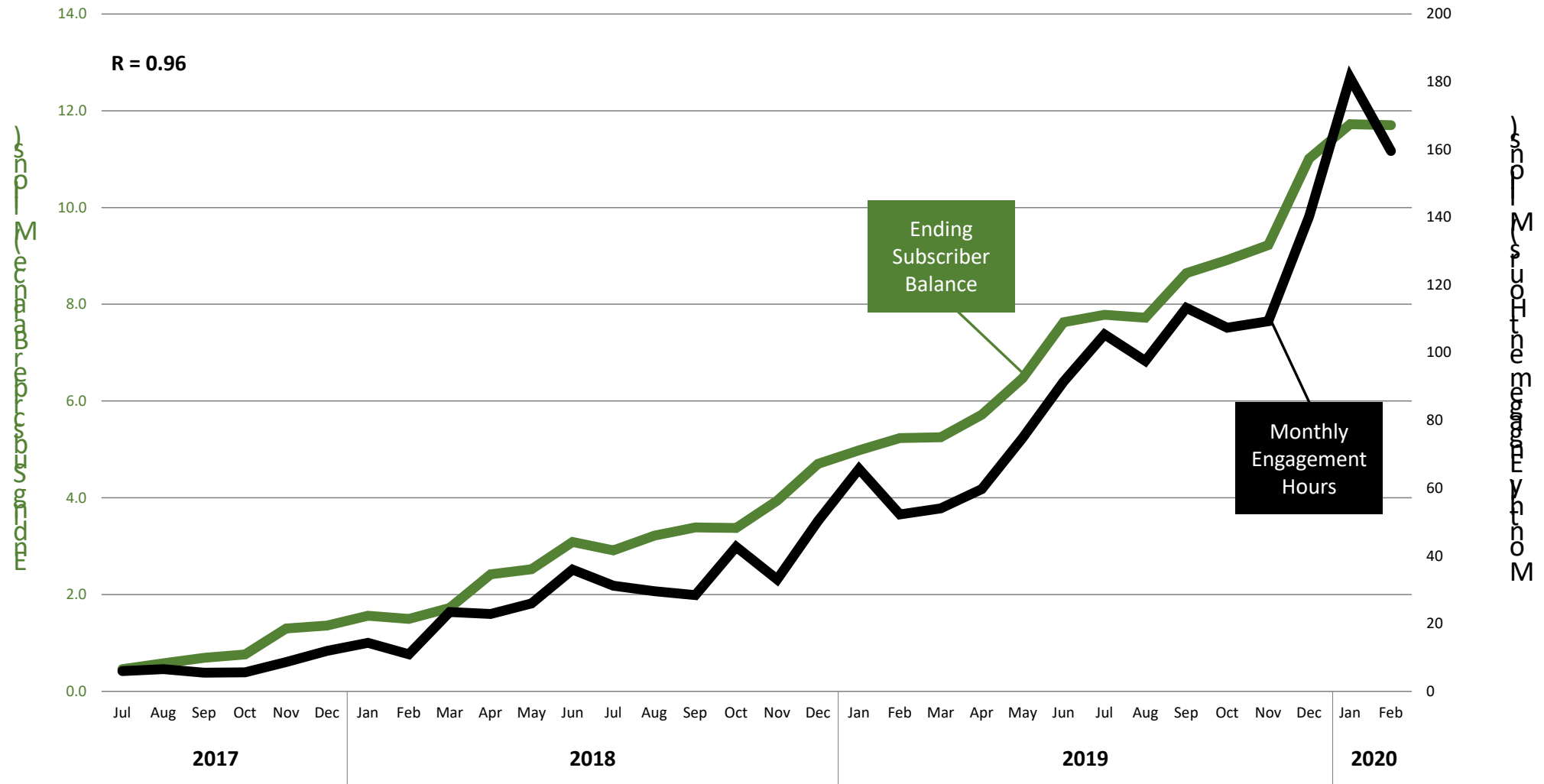
- 1 FY21: Starfield and Fallout
- 2 FY22: Fallout
- 3 FY24: The Elder Scrolls and Fallout
- 4 FY25: Starfield
- 5 FY28: Fallout
- 6 FY29: The Elder Scrolls and Starfield

[1] Source: GBP&S CY2019 Game Industry Sizing.

Xbox Game Pass: Historical Subscribers & Catalog Growth



Xbox Game Pass: Historical Engagement Hours & Subscribers



Net Synergies: Xbox Game Pass Acceleration

- 1 **Incremental Xbox Game Pass Subscribers:** The inclusion of tentpole and complementary games day-and-date into Xbox Game Pass will drive subscriber growth
 - Magnitude of subscriber growth projected based on estimated engagement hours, informed by historical performance of comparable games adjusted for service scale
 - Slides 19-20 in the appendix provide a more detailed overview of key modeling mechanics and assumptions
- 2 **Incremental Xbox Game Pass Revenue:** Subscription sales and post sales monetization drive incremental revenue, based on:
 - Console-first revenue¹ (90% of subscribers) starts at \$5/month in FY21, growing to \$10/month in FY26, flat thereafter / Cloud-first revenue² (10% of subscribers) at a flat \$12/month from FY21-30
 - Post-sale monetization revenue (\$0.15 per hour) for both subscriber categories
- 3 **Incremental Xbox Game Pass Gross Margin:**
 - 75% effective subscription gross margin, based on 85% console-first subscription gross margin and 50% cloud-first subscription gross margin
 - Post-sale monetization gross margin of 85% for both subscriber categories

	H2'FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30
ZeniMax Tentpole Title Releases	1	1	-	2	1	-	-	1	2	-
ZeniMax Complementary Title Releases	2	3	3	3	3	3	3	3	3	3
Average Xbox Game Pass Hours Played / New ZeniMax Title	3	4	4	6	6	7	6	5	6	7
Incremental ZeniMax Xbox Game Pass Hours Played (M)	139	402	389	1,121	1,126	1,081	1,050	1,403	2,030	1,571
Average Xbox Game Pass Hours Played / Subscriber	14	15	16	17	18	19	20	21	22	25
1 Incremental Xbox Game Pass Subscribers (M)	1.7	2.0	1.8	4.9	4.7	4.3	4.0	5.1	7.0	5.2
Subscription Revenue (\$M)	56.5	156.2	163.1	524.0	554.2	540.3	501.1	640.5	888.1	659.8
<i>Subscription Average Revenue / User / Month</i>	<i>\$ 5.70</i>	<i>\$ 6.60</i>	<i>\$ 7.55</i>	<i>\$ 8.89</i>	<i>\$ 9.84</i>	<i>\$ 10.50</i>	<i>\$ 10.50</i>	<i>\$ 10.50</i>	<i>\$ 10.50</i>	<i>\$ 10.50</i>
Post-Sale Monetization Revenue (\$M)	20.8	60.4	58.4	168.1	169.0	162.1	157.5	210.5	304.5	235.6
2 Incremental Xbox Game Pass Revenue (\$M)	\$77	\$217	\$221	\$692	\$723	\$702	\$659	\$851	\$1,193	\$895
Subscription Margin (75%) (\$M)	43.9	122.9	129.5	395.9	412.0	405.2	375.9	480.4	666.0	494.9
Post Sale Monetization Margin (85%) (\$M)	17.7	51.3	49.6	142.9	143.6	137.8	133.9	178.9	258.8	200.3
3 Incremental Xbox Game Pass Gross Margin (\$M)	\$62	\$174	\$179	\$539	\$556	\$543	\$510	\$659	\$925	\$695

[1] Refers to Xbox Game Pass subscribers that primarily engage with content via local compute (e.g., console, gaming PC).

[2] Refers to Xbox Game Pass subscribers that primarily engage with content via cloud streaming (e.g., mobile devices, low-end PC).

Net Synergies Summary

Key Assumptions:

Growth Profile:

1 Xbox Game Pass Acceleration:

- Revenue from incremental Xbox Game Pass subscribers driven by tentpole franchise (Fallout, The Elder Scrolls, Starfield) releases in FY21, FY22, FY24, FY25, FY28, and FY29; complementary franchises release 3.2 titles per year
- Margin profile assumes 85% margin for Console-first subscriptions and 50% margin for xCloud-first subscriptions. post-sale monetization margin assumed at 85%

2

- No incremental OPEX assumed

• Xbox Game Pass Mix Shift:

- 50% of ZeniMax's Xbox revenue is shifted to Xbox Game Pass (assumes 25% of ZeniMax's console revenue is Xbox – based on overall console market share)

3

- No incremental OPEX assumed

• Net Synergies:

- Improved margin profile due to replacement of lower margin revenue (traditional Xbox transactions) with higher margin revenue (Xbox Game Pass)

\$ Millions	Full Year Ending June 30	H1 FY21	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29
1 Game Pass Acceleration											
Net Revenue	\$77	\$217	\$221	\$692	\$723	\$702	\$659	\$851	\$1,193	\$895	
COGS	(\$16)	(\$42)	(\$42)	(\$153)	(\$168)	(\$159)	(\$149)	(\$192)	(\$268)	(\$200)	
Gross Margin	\$62	\$174	\$179	\$539	\$556	\$543	\$510	\$659	\$925	\$695	
2 Game Pass Mix Shift											
Net Revenue	(29)	(62)	(26)	(76)	(124)	(82)	(37)	(49)	(126)	(128)	
COGS	\$19	\$22	\$9	\$26	\$43	\$29	\$13	\$17	\$44	\$45	
Gross Margin	(9)	(40)	(17)	(49)	(81)	(53)	(24)	(32)	(82)	(83)	
3 Net Synergies											
Net Revenue	\$48	\$155	\$195	\$617	\$599	\$620	\$622	\$802	\$1,067	\$768	
COGS	\$4	(\$21)	(\$33)	(\$127)	(\$124)	(\$131)	(\$136)	(\$175)	(\$224)	(\$156)	
Gross Margin	\$52	\$134	\$162	\$490	\$475	\$490	\$486	\$628	\$843	\$612	

Buy Case P&L Summary

\$ Millions	First Year Ending June 30	H2 FY21	FY21	FY20	FY19	FY18	FY17	FY16	FY15	FY14	FY13
Existing Business											
Revenue		\$561	\$1,231	\$816	\$1,409	\$2,019	\$1,513	\$920	\$1,118	\$2,093	\$2,137
Gross Margin		\$474	\$1,041	\$677	\$1,190	\$1,707	\$1,268	\$771	\$937	\$1,754	\$1,791
% Margin		84%	85%	83%	84%	85%	84%	84%	84%	84%	84%
Accountability Margin		\$172	\$409	\$2	\$471	\$940	\$449	(\$105)	\$2	\$754	\$720
% Margin		31%	33%	0%	33%	47%	30%	(11%)	0%	36%	34%
Net synergies											
Net Revenue		\$48	\$155	\$195	\$617	\$599	\$620	\$622	\$802	\$1,067	\$768
Gross Margin and Accountability Margin		\$52	\$134	\$162	\$490	\$475	\$490	\$486	\$628	\$843	\$612
Combined											
Revenue		\$609	\$1,386	\$1,011	\$2,026	\$2,618	\$2,134	\$1,542	\$1,920	\$3,160	\$2,904
% Growth			18%	(27%)	100%	29%	(18%)	(28%)	25%	65%	(8%)
Gross Margin		\$526	\$1,175	\$839	\$1,680	\$2,182	\$1,758	\$1,257	\$1,565	\$2,587	\$2,403
% Margin		85%	85%	83%	83%	83%	82%	82%	81%	82%	83%
Accountability Margin (incl. Deal Expense)		\$228	\$543	\$184	\$969	\$1,415	\$889	\$601	\$629	\$1,577	\$1,388
% Margin		34%	39%	16%	47%	54%	44%	25%	33%	51%	46%
A Accountability Margin (incl. Deal Expense)		\$151	\$409	\$17	\$969	\$1,415	\$889	\$601	\$629	\$1,577	\$1,388
% Margin		27%	34%	13%	47%	54%	44%	25%	33%	51%	46%

A Includes \$75M of deal and integration costs and \$75M of retention costs expensed over 2 years.

Value to Microsoft

Drivers	Description	Value to Microsoft		
		FY21-FY30 NPV	Terminal Value	Total NPV
1 Existing Business	Continued sales of ZeniMax's portfolio on all platforms (console, PC, mobile)	\$2,200	\$2,640	\$4,840
2 Net Synergies	Incremental Xbox Game Pass monetization, net of mix shift (cannibalization) of 50% of transactional sales on Xbox	\$2,130	\$3,520	\$5,660
Total Value to Microsoft		\$4,330	\$6,160	\$10,500

Notes and key assumptions:

- Synergies NPV includes \$75M of retention costs and \$75M of deal and integration costs
- 12/31/20 close date
- 21% tax rate
- 7.87% discount rate
- Terminal value uses normalized/average of FY28-30 and 0% perpetuity growth rate

Sensitivities: Total Value to Microsoft

Existing Business

		Total Value to Microsoft				
		Tentpole Units				
		As Forecasted				
		-30%	-15%	15%	30%	
R&D Headcount Growth / Year	0%	\$ 8,260	\$ 9,720	\$ 11,180	\$ 12,630	\$ 14,080
	1%	\$ 8,120	\$ 9,570	\$ 11,030	\$ 12,480	\$ 13,930
	3%	\$ 7,580	\$ 9,040	\$ 10,500	\$ 11,940	\$ 13,400
	5%	\$ 6,980	\$ 8,440	\$ 9,890	\$ 11,340	\$ 12,800
	7%	\$ 6,300	\$ 7,760	\$ 9,220	\$ 10,660	\$ 12,120
	Elder Scrolls VI		28.0	34.0	40.0	46.0
Fallout 5		17.5	21.3	25.0	28.8	32.5
Starfield		17.5	21.3	25.0	28.8	32.5

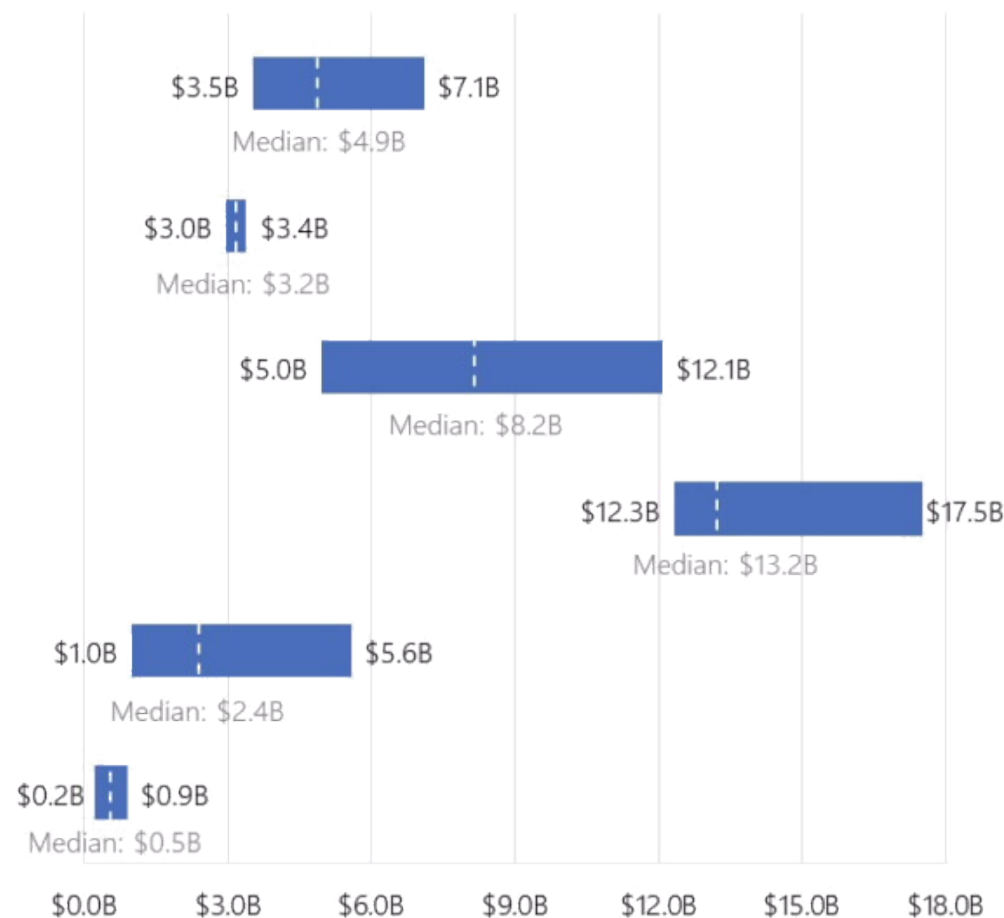
Net Synergies

		Total Value to Microsoft				
		Annual hours / ZeniMax Title / Subscriber				
		3.00	4.00	5.00	6.00	7.00
Average Revenue per sub in FY30*	\$ 8.50	\$ 6,910	\$ 8,240	\$ 9,560	\$ 10,890	\$ 12,220
	\$ 9.50	\$ 7,140	\$ 8,580	\$ 10,020	\$ 11,450	\$ 12,890
	\$ 10.50	\$ 7,390	\$ 8,940	\$ 10,500	\$ 12,050	\$ 13,600

*Subscription revenue only; excludes post-sales monetization

Market Value

		Multiples Range	ZeniMax Management Forecast
Western Trading Comparables ⁽¹⁾	EV / Revenue CY2020E	4.1x - 8.1x (Median: 5.6x) (TTWO: 5.2x)	\$873M
	EV / EBITDA CY2020E	19.6x - 22.4x (Median: 21.0x)	\$152M
	EV / Revenue CY2021E	3.2x - 7.7x (Median: 5.2x) (TTWO: 4.7x)	\$1,567M
	EV / EBITDA CY2021E	19.3x - 27.4x (Median: 20.7x)	\$640M
Precedent Transactions	EV / LTM ⁽²⁾ Revenue	1.4x - 7.9x (Median: 3.4x)	\$707M
	EV / LTM ⁽²⁾ EBITDA	4.0x - 16.0x (Median: 9.6x)	\$57M



Source: Company information and filings, CapitalIQ, Thomson

Note: Market data as of 7/24/20. ZeniMax management forecast are GAAP, include SBC, and are adjusted for capitalized R&D for consistency with comparables and Microsoft accounting practices

(1) Western comparable companies include Activision Blizzard, Electronic Arts, Take-Two and Ubisoft

(2) "Last Twelve Months." Assumed LTM as of 6/30/20 based on 50% of FY20E and 50% of FY19A

Preliminary Accretion / Dilution Analysis

Key Assumptions / Notes

- 1 100% cash consideration
- 2 12/31/20 close date
- 3 Accountability Margin (Buy Case)
- 4 \$75M in retention costs expensed over 2 years
- 5 2% foregone interest income
- 6 25% allocated to purchased intangible assets amortized over 5 years; 75% allocated to goodwill
- 7 \$75M in deal and integration costs expensed over 2 years
- 8 50% writedown of \$157M deferred revenue per ZeniMax's latest balance sheet

Enterprise Value	1 \$5.0B			\$7.0B			\$9.0B		
	2 H2 FY21E	FY22E	FY23E	H2 FY21E	FY22E	FY23E	H2 FY21E	FY22E	FY23E
Fiscal Year Ending 6/30 (\$M, except for per share data)									
Incremental Accountability Margin (\$M)	\$198	\$543	\$164	\$198	\$543	\$164	\$198	\$543	\$164
A: Retention Costs 4	19	38	19	19	38	19	19	38	19
B: Foregone Interest Income 5	50	100	100	70	140	140	90	180	180
C: Purchase Accounting Expenses (GAAP-only) 6	123	247	247	173	347	347	223	447	447
D: Deal and Integration Expenses (GAAP-only) 7	19	38	19	19	38	19	19	38	19
E: Deferred Revenue Writedown (GAAP-only) 8	78	-	-	78	-	-	78	-	-
Acquisition Costs	289	422	384	359	562	524	429	702	664
GAAP Pre-Tax Income Impact	(\$91)	\$121	(\$220)	(\$161)	(\$19)	(\$360)	(\$231)	(\$159)	(\$500)
GAAP Net Income Impact	(72)	96	(173)	(127)	(15)	(284)	(182)	(126)	(395)
GAAP EPS Impact (\$)	(\$0.01)	\$0.01	(\$0.02)	(\$0.02)	(\$0.00)	(\$0.04)	(\$0.02)	(\$0.02)	(\$0.05)
GAAP EPS Impact (%)	(0.3%)	0.2%	(0.3%)	(0.5%)	(0.0%)	(0.5%)	(0.8%)	(0.2%)	(0.6%)
Non-GAAP reconciliation									
Add back: GAAP-only Acquisition Costs (C+D+E)	220	284	265	270	384	365	320	484	465
Non-GAAP Pre-Tax Income Impact	\$130	\$405	\$46	\$110	\$365	\$6	\$90	\$325	(\$34)
Non-GAAP Net Income Impact	102	320	36	87	288	5	71	257	(27)
Non-GAAP EPS Impact (\$)	\$0.01	\$0.04	\$0.00	\$0.01	\$0.04	\$0.00	\$0.01	\$0.03	(\$0.00)
Non-GAAP EPS Impact (%)	0.4%	0.6%	0.1%	0.4%	0.5%	0.0%	0.3%	0.5%	(0.0%)
Incremental Pre-Tax AM to Break-even	-	-	-	-	-	-	-	-	\$34

Source: Company information, Thomson, Capital IQ
 Notes: EPS Impact calculated using Microsoft Wall Street consensus estimates, assumes 21% tax rate

Next Steps

- Valuation guidance from Robert Altman (Chairman & CEO)
- Align on range for potential offer
- Determine approach with board

Appendix

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Xbox Game Pass Hours for ZeniMax Content

- 1 **Total Hours for New ZeniMax Content at Current Xbox Game Pass Ending Balance (12M):** Forecasted launch and residual years' hours for future ZeniMax titles based on performance of similar scale titles in Xbox Game Pass. Residual years' hours are decayed from launch year hours on an annual basis. See table to the right.
- 2 **Scaling Factor (Future/Current):** Applied scaling factor to total hours at current Xbox Game Pass Ending Balance to reflect future total hours at future years
- 3 **Scaled Xbox Game Pass Hours from ZeniMax New Releases:** Scaled to future Xbox Game Pass Ending Balance Growth
- 4 **Xbox Game Pass Total Hours from ZeniMax Content (New Releases and Back Catalog):** Total hours for ZeniMax content include:
 - New content added to Xbox Game Pass service scaled to FY21 – FY30 Xbox Game Pass average subscription ending balance
 - Back catalog content (e.g. The Elder Scrolls) assumed to add 100M hours to the service FY22-FY23; engagement then declines FY24-FY30 as new ZeniMax content comes into the service

Franchise	Y1 Hours	Y2 Hours	Y3 Hours	Total
Elder Scrolls*	184	132	124	440
Fallout	66	31	23	120
Starfield	66	31	23	120
Complementary	13	6	0	19

*Elder Scrolls hours held constant at Y3 hours until next title launch

	H2 FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30
Elder Scrolls	0	0	0	184	132	124	124	124	184	132
Fallout	33	82	42	89	31	23	0	66	31	23
Starfield	33	15	11	0	66	31	23	0	66	31
Complementary	30	61	61	61	61	61	61	61	61	61
1 Total Hours for New ZeniMax Content	97	158	114	334	290	238	207	251	342	246
Current Xbox Game Pass Ending Balance	12	12	12	12	12	12	12	12	12	12
Future Xbox Game Pass Ending Balance	17	23	30	37	44	51	58	65	70	75
2 Scaling Factor	1.4	1.9	2.5	3.1	3.6	4.3	4.8	5.4	5.8	6.3
Total Hours for New ZeniMax Content	97	158	114	334	290	238	207	251	342	246
Scaling Factor	1.4	1.9	2.5	3.1	3.6	4.3	4.8	5.4	5.8	6.3
3 Xbox Game Pass Hours from New Releases	139	302	289	1,036	1,054	1,020	998	1,359	1,993	1,539
Total Hours from ZeniMax Back Catalog	0	100	100	85	72	61	52	44	37	32
4 Total Xbox Game Pass Hours for ZeniMax Content	139	402	389	1,121	1,126	1,081	1,050	1,403	2,030	1,571

Note: Xbox Game Pass ending balance was ~12 million at the time of the original engagement forecast. Engagement (hours) projection assumes day-and-date release and based on guidance from Xbox Game Pass Business Planning. 1. Xbox Game Pass Total Hours for ZeniMax Content is new content added to the service scaled to current sub EB. 2. Xbox Game Pass Total Hours for ZeniMax Content includes new titles and back catalog effect.

ZeniMax Management Forecast

Title Release Schedule

	<u>Console/PC</u>	<u>F2P/Mobile</u>
FY20E	<ul style="list-style-type: none"> DOOM Eternal & DLC The Elder Scrolls Online: Greymoor Fallout: Wastelanders Deathloop 	<ul style="list-style-type: none"> Fallout Shelter Online Project Whirlwind
FY21E	<ul style="list-style-type: none"> Starfield Elder Scrolls Online: Expansion Redfall DOOM Eternal DLC Ghostwire: Tokyo Fallout Worlds (Fallout 76) Project Hibiki 	<ul style="list-style-type: none"> Project Ubu Project Wanderer
FY22E	<ul style="list-style-type: none"> Indiana Jones Game Oblivion Remaster Elder Scrolls Online: Expansion Starfield DLC 	<ul style="list-style-type: none"> 3 planned titles
FY23E	<ul style="list-style-type: none"> DOOM Year Zero & DLC Project Kestrel Elder Scrolls Online: Expansion Project Platinum 	<ul style="list-style-type: none"> 1 planned title
FY24E	<ul style="list-style-type: none"> The Elder Scrolls VI Project Kestrel: Expansion Licensed IP Game Fallout 3 Remaster Elder Scrolls Online: Expansion Ghostwire: Tokyo Sequel Dishonored 3 DOOM Year Zero DLC 	<ul style="list-style-type: none"> 1 planned title

Source: Company Presentation
 Note: Forecast reflects non-GAAP revenue

Revenue Forecast by Title

<i>\$, Millions</i>	Fiscal year ending December 31,				
	FY20E	FY21E	FY22E	FY23E	FY24E
DOOM Eternal	\$390	\$120	\$45	\$25	\$20
Elder Scrolls Online	200	190	180	160	125
Fallout 76	80	45	35	35	35
Deathloop	55	35	10	5	-
Starfield	-	600	215	50	35
Redfall	-	155	45	25	20
Ghostwire	-	60	30	10	5
Project Hibiki	-	35	15	10	5
Indiana Jones Game	-	-	230	55	25
Oblivion Remaster	-	-	190	55	40
DOOM Year Zero	-	-	-	455	140
Project Kestrel	-	-	-	280	275
Project Platinum	-	-	-	125	35
The Elder Scrolls VI	-	-	-	-	1,000
Licensed IP Game	-	-	-	-	225
Fallout 3 Remaster	-	-	-	-	190
Ghostwire 2	-	-	-	-	90
Dishonored 3	-	-	-	-	90
Total	\$725	\$1,240	\$995	\$1,290	\$2,355
Free to Play	45	140	190	275	215
Catalog / Other	135	120	115	85	70
Total	\$905	\$1,500	\$1,300	\$1,650	\$2,640

Forecast Comparison

Fiscal year ending Dec 31	Management Forecast							Microsoft Forecast						
	\$, Millions	FY19A	FY20E	FY21E	FY22E	FY23E	FY24E	CAGR/ Avg Mrg	FY20E	FY21E	FY22E	FY23E	FY24E	CAGR/ Avg Mrg
1 Revenue	\$540	\$873	\$1,567	\$1,393	\$1,566	\$2,607			\$716	\$1,528	\$934	\$698	\$2,119	
% Growth	5%	62%	79%	(11%)	12%	66%	37%		33%	114%	(39%)	(25%)	203%	31%
COGS	\$145	\$149	\$232	\$230	\$280	\$384			\$122	\$226	\$154	\$125	\$312	
Gross Profit	\$395	\$725	\$1,335	\$1,164	\$1,286	\$2,223			\$594	\$1,302	\$780	\$573	\$1,807	
2 % Margin	73%	83%	85%	84%	82%	85%	82%		83%	85%	84%	82%	85%	82%
3 Operating Expenses	\$455	\$594	\$726	\$728	\$799	\$923			\$594	\$613	\$653	\$696	\$743	
Accountability Margin ⁽¹⁾	(\$61)	\$130	\$609	\$435	\$487	\$1,299			(\$1)	\$689	\$128	(\$123)	\$1,064	
% Margin	(11%)	15%	39%	31%	31%	50%	26%		(0%)	45%	14%	(18%)	50%	13%
EBITDA (incl. SBC)	(\$38)	\$152	\$640	\$468	\$509	\$1,319			(\$1)	\$715	\$156	(\$104)	\$1,097	
% Margin	(7%)	17%	41%	34%	33%	51%	28%		(0%)	47%	17%	(15%)	52%	16%

Comments:

1 Revenue:

- Buy case assumes lower total revenue than management forecast due to scaled down performance in complementary titles

2 Gross Margin:

- Buy case margin percentage consistent with management forecast

3 Operating Expenses:

- Buy case operating expense figures based on assumptions in slide 6

Source: Company Presentation

Note: CAGR and average margin based on 2019A – 2024E

(1) GAAP financials, including SBC and adjusted for capitalized R&D for consistency with Microsoft accounting practices

CY15-CY19 Top 20 Most Engaged Xbox Franchises

Rank	Franchise	Publisher	Total Hours Played (B)	Monthly Average Users (M)	Average Annual Playtime (Hours)
1	Fortnite	Epic Games	10.9	12.8	212
2	Call of Duty	Activision Blizzard	9.9	11.4	219
3	FIFA	Electronic Arts	6.6	6.7	247
4	Grand Theft Auto	Take Two	6.4	6.9	233
5	NBA 2K	Take Two	4.0	3.5	285
6	Minecraft	Xbox Game Studios	3.9	7.7	127
7	Destiny	Bungie	3.3	2.0	420
8	Tom Clancy's	Ubisoft	2.8	3.3	213
9	Madden NFL	Electronic Arts	2.1	2.7	191
10	Forza	Xbox Game Studios	2.0	4.6	109
11	Battlefield	Electronic Arts	1.9	3.4	142
12	Halo	Xbox Game Studios	1.5	3.3	112
13	Fallout	ZeniMax	1.4	1.6	218
14	Assassin's Creed	Ubisoft	1.4	2.6	131
15	The Elder Scrolls	ZeniMax	1.4	1.3	262
16	Roblox	Roblox	1.3	3.2	104
17	Overwatch	Activision Blizzard	1.2	1.9	165
18	Gears of War	Xbox Game Studios	1.0	1.8	131
19	Rocket League	Epic Games	0.9	2.4	96
20	Red Dead Redemption	Take Two	0.9	0.9	231

FY20 Top 20 Most Engaged Xbox Game Pass Titles

Rank	Title	Publisher	FY20 Xbox Game Pass Hours Played (M)	Monthly Avg. Engaged Subscribers (M)	Average FY20 Hours per Subscriber
1	Grand Theft Auto V	Take Two	127	10.0	12.6
2	Minecraft	Xbox Game Studios	125	10.3	12.1
3	Forza Horizon 4	Xbox Game Studios	96	7.0	13.7
4	NBA 2K20	Take Two	70	4.0	17.6
5	Gears 5	Xbox Game Studios	56	4.0	13.9
6	Rocket League	Epic Games	47	5.3	8.9
7	Ark: Survival Evolved	Studio Wildcard	45	3.0	14.5
8	Sea of Thieves	Xbox Game Studios	42	3.8	11.1
9	Red Dead Redemption 2	Take Two	31	4.9	6.4
10	The Outer Worlds	Take Two	26	2.6	10.0
11	Dead By Daylight	505 Games	22	2.4	9.4
12	Halo: Master Chief Collection	Xbox Game Studios	20	3.1	6.5
13	The Witcher 3: Wild Hunt	CD Projekt Red	19	2.9	6.7
14	State of Decay 2	Xbox Game Studios	18	2.0	9.4
15	Minecraft Dungeons	Xbox Game Studios	16	2.4	6.5
16	Halo 5: Guardians	Xbox Game Studios	15	2.4	6.0
17	Batman: Arkham Knight	Warner Bros.	12	2.0	6.4
18	PUBG	PUBG Corp.	11	3.5	3.4
19	Human Fall Flat	Curve Digital	11	3.1	3.6

Source: Gan

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Leadership Team

Management Team			
Name	Title	Joined	Prior Experience
Robert Altman	Chairman & CEO	1999	President of First American Corporation, Partner at Clark Clifford
James Leder	President & COO	N/A	N/A
Cindy Tallent	EVP & CFO	N/A	CFO of Teligent, VP of Finance at GTE Spacenet
Todd Vaughn	SVP of Product Development	1998	Deputy editor of PC Gamer Magazine
Todd Howard	Executive Producer, Bethesda Game Studios	1994	Led development for The Elder Scrolls: Oblivion, The Elder Scrolls: Skyrim, Fallout 3, and other Bethesda games
Matt Firor	President, ZeniMax Online Studios	2007	VP of Product Development at Mythic Games, Founder of Ultra Mega Games

Board of Directors			
Name	Title / Affiliation	Joined	Experience
Robert Altman	Chairman & CEO	1999	President of First American Corporation, Partner at Clark Clifford
Jerry Bruckheimer	Jerry Bruckheimer Films	2014	Film and television producer; Founder of Jerry Bruckheimer Films
Ernest Del	Senior Advisor	1999	Board Member of Silver Eagle Acquisition Corp and Delivery Agent
Michael Dominguez	Managing Director, Providence Equity Partners	2007	Board Member of The Chermin Group, EdgeConneX, OUTFRONT Media, RentPath, TAIT, Topgolf
Leslie Moonves	Private Investor	2008	Former Chairman and CEO of CBS Corporation
Cal Ripken, Jr.	President & CEO, Ripken Baseball	2008	President and CEO of Ripken Baseball; Former Major League Baseball player
Harry Sloan	Chairman and CEO, Global Eagle Holdings	1999	Chairman and CEO of Global Eagle Acquisition Corp; Former Chairman and CEO of Metro-Goldwyn-Mayer
Robert Trump	President, Trump Management	N/A	President of Trump Management; Real estate developer

Source: Bloomberg, Company Website, LinkedIn, PitchBook

Trading Comparables

\$, millions ex. per share	Price	% 52-wk	Equity	Enterprise	EV/Revenue		EV/EBITDA (Incl. SBC)		Revenue		Revenue Growth		EBITDA Margin (Incl. SBC)		
	7/24/20	high	Value	Value	CY 20E	CY 21E	CY 20E	CY 21E	CY 20E	CY 21E	CY 20E	CY 21E	CY 20E	CY 21E	
Western															
Activision Blizzard	\$79.99	97%	\$62,878	\$59,594	8.1x	7.7x	22.4x	20.7x	\$7,313	\$7,728	13%	6%	36%	37%	
Electronic Arts	\$135.24	95%	\$40,330	\$35,595	5.9x	5.7x	19.6x	19.3x	\$6,009	\$6,244	12%	4%	30%	30%	
Take-Two	\$156.02	100%	\$18,644	\$16,009	5.2x	4.7x	NM	NM	\$3,064	\$3,391	7%	11%	15%	12%	
Ubisoft	\$82.62	88%	\$10,290	\$10,698	4.1x	3.2x	NM	27.4x	\$2,636	\$3,371	37%	28%	6%	12%	
					Mean	5.8x	5.3x	21.0x	22.5x	\$4,756	\$5,183	17%	12%	22%	23%
					Median	5.6x	5.2x	21.0x	20.7x	\$4,537	\$4,817	12%	8%	23%	21%
Japanese															
Nintendo	\$450.46	92%	\$53,660	\$39,921	3.1x	3.2x	10.2x	10.1x	\$12,819	\$12,341	11%	(4%)	30%	32%	
Square Enix	\$55.46	97%	\$6,624	\$5,438	1.8x	1.8x	12.9x	10.4x	\$2,950	\$3,026	11%	3%	14%	17%	
Capcom	\$37.98	94%	\$4,054	\$3,494	4.3x	3.9x	15.4x	11.6x	\$807	\$895	(7%)	11%	28%	34%	
					Mean	3.1x	3.0x	12.9x	10.7x	\$5,525	\$5,421	5%	3%	24%	28%
					Median	3.1x	3.2x	12.9x	10.4x	\$2,950	\$3,026	11%	3%	28%	32%

Source: 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 for western comparables

Precedent Transactions

Announced	Target	Acquirer	Enterprise Value (\$M)	EV/LTM Revenue	EV/LTM EBITDA	Target Main Titles
06/01/20	Peak Games	Zynga	\$1,800	2.8x	15.0x	Toon Blast, Toy Blast
04/28/20	Jagex	Macarthur 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, Halo Online
08/26/19	Seriously	Playtika	\$275	5.0x	NA	Best Fiends
08/19/19	Insomniac Games	Sony	\$229	NA	NA	Marvel's Spider-Man, Ratchet & Clank, The Unspoken, Song of the Deep
08/15/19	Catalis/Curve Digital	NorthEdge Capital	\$111	NA	NA	Embr, Hotshot Racing, A Knight's Quest, American Fugitive, Beholder
12/20/18	Small Giant Games	Zynga	\$560	NA	NA	Rope Racers, Empires & Puzzles
09/13/18	Shengqu 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	\$225	NA	NA	Eve, Dust 514, Gunjack
08/15/18	Bluehole Studio	Tencent	\$509	NA	NA	TERA, Devilian, PlayerUnknown's Battlegrounds, PUBG
06/10/18	Ninja Theory	Microsoft	\$117	6.0x	16.0x	Hellblade, Bleeding Edge, VR Projects
05/30/18	Avalanche Studios	Nordisk Film	\$136	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	11.9x	Drawn, Fairway Solitaire, Hidden Expedition
11/09/17	Respawn Entertainment	Electronic Arts	\$315	NA	NA	Titanfall, Star Wars VR
02/01/17	Social Point	Take-Two Interactive Software	\$250	2.8x	12.6x	Dragon City, Monster Legends
07/04/16	Splash Damage	Leyou 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
11/02/15	King Digital	Activision Blizzard	\$5,900	2.8x	8.2x	Candy Crush, Farm Heroes, Pet Rescue
06/09/15	China Mobile Games	Pegasus Investment	\$689	3.4x	NM	Candleman, Storm Battleship, Sealed 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
04/03/15	Shanda Games	Capitalhold Limited	\$1,900	3.2x	9.2x	AION, Maple story, The World of Legend, Ragnarok Online
11/12/14	Big Fish Games	Churchill Downs	\$485	1.6x	7.8x	Drawn, Fairway Solitaire, Hidden Expedition
10/14/14	Digital Extremes	Multi Dynamic Games/Perfect Online Holding	\$120	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	ZONline
01/30/14	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	Summit Partners/TA	\$350	NA	NA	Battlestar Galactica, Farmerama, Drakensang, DarkOrbit, Seafight
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	4.0x	9.9x	
			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.

1. | STRATEGY OVERVIEW

1.1. | Market Opportunity

The game industry generated \$182 billion¹ in total revenue in 2019—larger than the global home video, movie box office, and music industries² 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 billion³ in total. In the next decade, we estimate that the 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 market⁴.

Gaming—which is computationally intensive, accounts for 72%⁵ of mobile store spend, and drives 20%⁶ of non-browser time across all consumer Windows 10 machines—also represents a high-value cloud workload and potential growth vector for Azure.

1.2. | 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

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

² 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.

³ Analyst estimates, internal analysis ("CY2019 Gamer Value").

⁴ Public financial disclosure, equity research, internal analysis ("CY2019 Game Industry Profit Pools").

⁵ AppAnnie "State of Mobile 2020". Includes iOS App Store and Android Google Play.

⁶ Windows 10 Telemetry.

1.3. | 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 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.

2. | ACCELERATING XBOX GAME PASS GROWTH

2

2.1. | 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.

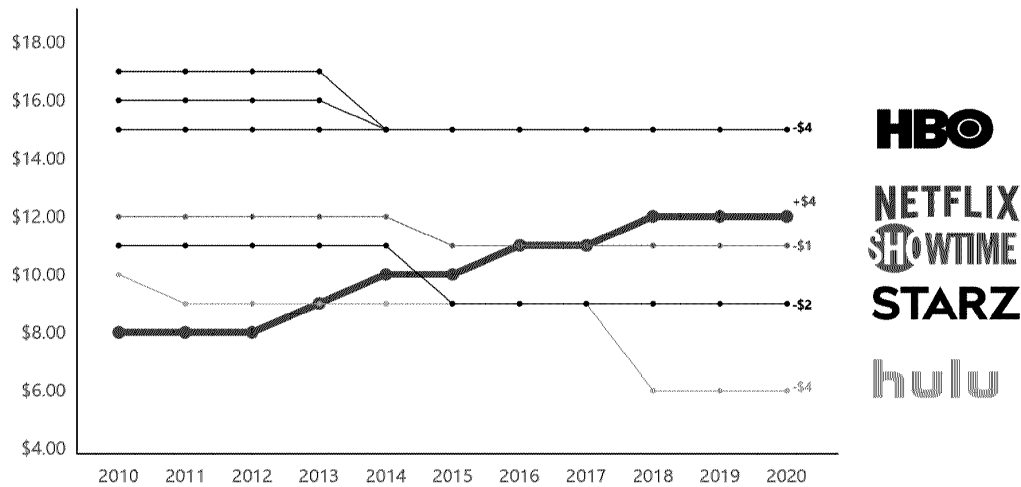
Beyond the financial health that typically extends from business growth, subscriber scale is *essential* in building a subscription service. The advantage that scale affords becomes self-reinforcing across multiple key vectors:

- **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 Hulu⁷.

- **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:

Figure 1: Effective Average Revenue Per User of Streaming Video Services⁸



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%⁹, helping jumpstart the virtuous

⁷ Figures as of January 2019

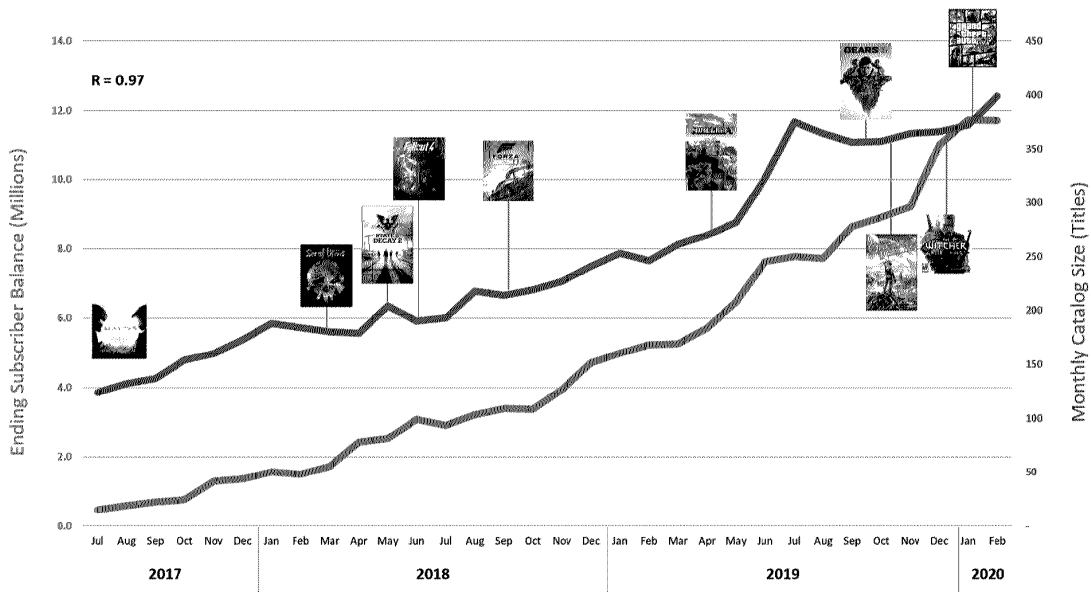
⁸ Matthew Ball, January 2020

⁹ Netflix disclosure

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:

Figure 2: 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

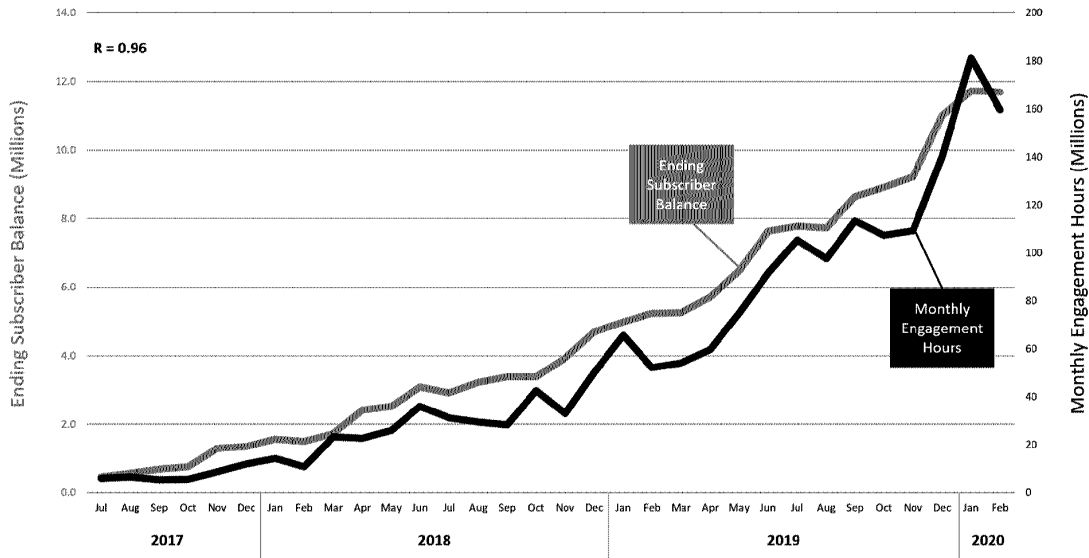
C: Content engagement is the best proxy for subscriber growth.

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



2.2. | Xbox Game Pass State of the Union

Xbox Game Pass is the 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.

2.3. | 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.

3. | ZENIMAX

3

3.1. | Company Overview

Headquartered in Rockville, Maryland, ZeniMax Media is one of the largest privately held game developers and publishers in the world. ZeniMax's eight core development studios and multiple support teams are led by some of the world's pre-eminent game creators and span the globe, with locations in Maryland, Texas, Sweden, Canada, Germany, France, and Japan. ZeniMax has ~2,400 full time employees, and in CY2019, it generated \$540 million of revenue.

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

- Tentpole Franchises: ZeniMax's *Elder Scrolls* and *Fallout* are among the industry's leading franchises and would provide the blockbuster experiences required to accelerate the growth of Xbox Game Pass and anchor our expansion across console, PC, and cloud. In addition to their proven commercial strength (30+ million units sold per release), these franchises also drive outsized engagement that is well-suited for a subscription service. For example, *The Elder Scrolls* and *Fallout* were among the top-15 most-played franchises on Xbox from 2015 to 2019, ahead of *Red Dead Redemption* and *Gears of War*, with an average per-user playtime in excess of 200 hours annually, roughly twice that of *Halo*¹⁰. Both franchises are also notable for their strength on PC and have recently extended to mobile.
- Complementary Franchises: ZeniMax also publishes a broader portfolio of at-scale franchises that drive healthy transactional sales and are also proven performers in Xbox Game Pass. For example, a limited selection of back-catalog titles from ZeniMax's *Doom*, *Wolfenstein*, and *Rage* franchises has driven ~23 million hours of lifetime engagement for Xbox Game Pass, outperforming industry-leading franchises like Take-Two's *Borderlands* series¹⁰. Importantly, these complementary franchises release on both console and PC at a regular cadence across

¹⁰ Xbox Live telemetry

a variety of genres. Finally, ZeniMax has a deep console & PC backcatalog that would provide critical content scale and drive additional Xbox Game Pass engagement.

Figure 4: ZeniMax Development Studios

Studio	Location(s)	Employees	Franchise	Commentary
Tentpole Franchises				
Bethesda Game Studios	Rockville, MD Austin, TX Dallas, TX	400	The Elder Scrolls	Fantasy role-playing game
			Fallout	Dystopian future role-playing game
			Starfield	New space-based role-playing game
ZeniMax Online	Hunt Valley, MD	400	The Elder Scrolls ONLINE	Online multiplayer role-playing game
Complementary Franchises				
Machine Games	Uppsala, Sweden	150	Wolfenstein	Reboot of 1990's classic shooter
Id Software	Richardson, TX	250	Doom	Reboot of 1990's classic shooter
			QUAKE	Reboot of 1990's classic shooter
Tango Gameworks	Tokyo, Japan	90	GHOSTWIRE	Japanese survival horror games
Arkane Studios	Austin, TX Lyon, France	240	DEATHLOOP	New "immersive simulation"
Roundhouse Studios	Madison, WI	40	PREY	Acquired in November 2019
Alpha Dog Games	Halifax, NS	15	New mobile studio	Acquired in October 2019

We believe ZeniMax'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.

3.2. | Alternative Acceleration Opportunities

As described in Section 2.2, there is a limited number of at-scale content owners in the industry. Each potential target comes with its own unique set of advantages and considerations. Over time, as we continue to scale Xbox Game Pass, we may find it advantageous to pursue multiple acquisitions, for example, as we extend into Asia. Relative to other acquisition targets, we believe ZeniMax's deep portfolio of owned franchises with a proven ability to attract and engage subscribers across console, PC, and cloud would help us accelerate Xbox Game Pass growth in our current markets, and in turn, lay the foundation for long-term growth and economic return.

To summarize the leading acquisition targets:

Figure 5: Comparison of ZeniMax and Alternative Acquisition Opportunities¹¹

Company	Enterprise Value	Commentary
ZeniMax Media	Privately held	Deep stable of owned franchises with strength on console & PC
Activision Blizzard	\$60 billion	Best-in-class content, built on owned franchises, spanning console, PC, & mobile
Bandai Namco	\$10 billion	Asia-focused publisher with owned franchises and strength in console & mobile
Electronic Arts	\$36 billion	Console-centric content portfolio; heavy reliance on licensed intellectual property
Square Enix	\$5 billion	Asia-focused publisher with owned franchises and strength in console & mobile
Take-Two Interactive	\$16 billion	Deep stable of owned franchises with strength on console & PC
Ubisoft	\$11 billion	Console-centric content portfolio; mix of owned franchises & licensed intellectual property
Valve	Privately held	Stale but relevant owned PC franchises; owns the world's largest 3 rd party PC store (Steam)
Warner Bros. Interactive Entertainment	AT&T subsidiary	High dependence on licensed intellectual property; strength on console & mobile

¹¹ Enterprise values as of July 7, 2020.

4. | ACQUISITION ECONOMICS

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3
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4.1. | Operating Plan

The ultimate integration plan for ZeniMax would be determined in conjunction with the company's management team as part of due diligence and planning. However, our long-term objective is to have ZeniMax's leadership team report to Phil Spencer with the following guidance:

- 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 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 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. 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

5

Microsoft has limited experience with major publisher acquisitions. Our preliminary integration plan is intended to preserve a degree of cultural and operating autonomy by having ZeniMax's leadership team report directly to Phil Spencer. However, there is a risk that this plan may not completely account for cultural and/or other integration challenges. In particular:

- Reliance on primary franchises: The majority of ZeniMax's revenues is consistently driven by two tentpole franchises: *Elder Scrolls* and *Fallout*. The continued success of these franchises, along with their future releases, is critical to the case for acquisition.
- Nascent mobile and live service capabilities: ZeniMax's previous attempts to bring its proven franchises (i.e. *Elder Scrolls*, *Fallout*) onto mobile endpoints (e.g. *Fallout Shelter*) or translating them into multiplayer experiences (e.g. *Elder Scrolls Online*) have seen limited success.

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 ZeniMax Media would create sustained differentiation in this competitive environment.