

Amazon.com

10-K Tidbits: Several trends to like exiting 2023

Maintain Rating: BUY | PO: 204.00 USD | Price: 171.81 USD

10-K Review: AWS backlog growth biggest positive

Amazon released its 10-K after reporting 4Q'23 earnings (see [note](#)), and we outline several key takeaways: (1) strong AWS backlog growth of 41% y/y, now at \$156bn, suggests acceleration in growth in 2024; (2) Video/Music content expense grew 14% y/y to \$19bn; (3) more granular Intl. revenue disclosures indicate Germany/UK were most improved ex-FX, likely gaining share; (4) Unit growth outpaced fulfillment square footage for the first time since 2019; and (5) AWS Capex declined 10% y/y in '23, helping drive AWS FCF margins up 7pts to 14% (approx. \$12.3bn in FCF).

AWS capex down and free cash flow margins up

Amazon disclosed \$12.5bn in depreciation for AWS, which we use to estimate \$37.2bn in AWS EBITDA for 2023 (41% margin, flat y/y). Despite investments in Generative AI, capex (ex. leases) for AWS declined 10% y/y to \$24.7bn. We est. \$12.3bn in AWS FCF, representing a 14% margin, a 7pt improvement y/y on lower capex. Looking ahead, we expect leverage from accelerating AWS growth may be offset by higher AWS capex (we are raising our total 2024 Amazon capex estimate to \$56bn from \$52bn, no change to EPS estimates), and we project a relatively stable AWS FCF margin of 14/15% in '24/'25 (\$14.3bn/\$18.2bn).

Amazon realizing unit leverage on fulfilment capacity

For retail, fulfillment sq. ftg. growth (9%) was below unit growth (10%) for the first time since '19. Amazon is benefitting from declining cost-per-serve from its regionalization model, with further opportunities for leverage in AMZL's inbound network. We estimate 10% y/y retail capex growth in 2024 (in-line with units ex. WFM) vs. 24% for AWS.

More granular Int'l breakdown, UK/Germany accelerated

Amazon provided a more granular breakdown of International revenues, with Germany and the UK improving most (8/7pts y/y on FX-neutral basis). Japan slowed 8pts vs. 2022 to 11% growth, and Amazon's US revenue decelerated 2pts to 11% y/y. Both US rev. (which also includes AWS) and our GMV estimate outpaced our eCommerce industry projection of 8% (see [eCommerce Year Ahead](#)) by 3/5pts, and we believe Online retail share gains are likely to continue for Amazon. Maintain Buy.

Estimates (Dec) (US\$)	2022A	2023A	2024E	2025E	2026E
EPS	1.19	4.98	7.05	8.60	10.20
GAAP EPS	(0.27)	2.90	4.26	5.30	6.43
EPS Change (YoY)	-71.1%	318.5%	41.6%	22.0%	18.6%
Consensus EPS (Bloomberg)			4.95	6.17	7.26
DPS	0	0	0	0	0
Valuation (Dec)					
P/E	144.4x	34.5x	24.4x	20.0x	16.8x
GAAP P/E	NM	59.2x	40.3x	32.4x	26.7x
EV / EBITDA*	23.8x	16.1x	12.7x	10.8x	9.4x
Free Cash Flow Yield*	-0.7%	2.1%	0.8%	2.4%	2.7%

* For full definitions of *IQmethod*SM measures, see page 11.

05 February 2024

Equity

Justin Post
Research Analyst
BofAS
+1 415 676 3547
justin.post@bofa.com

Michael McGovern
Research Analyst
BofAS
+1 415 676 3520
mmcgovern@bofa.com

Steven McDermott
Research Analyst
BofAS
+1 646 855 4472
steven.mcdermott@bofa.com

Stock Data

Price	171.81 USD
Price Objective	204.00 USD
Date Established	2-Feb-2024
Investment Opinion	B-1-9
52-Week Range	88.12 USD - 172.50 USD
Mkt Val (mn) / Shares Out (mn)	1,747,480 USD / 10,171.0
Free Float	88.4%
Average Daily Value (mn)	7945.07 USD
BofA Ticker / Exchange	AMZN / NAS
Bloomberg / Reuters	AMZN US / AMZN.OQ
ROE (2024E)	30.3%
Net Dbt to Eqty (Dec-2023A)	36.8%
ESGMeter TM	High

ESGMeter is not indicative of a company's future stock price performance and is not an investment recommendation or rating. ESGMeter is independent of BofA Global Research's equity investment rating, volatility risk rating, income rating, and price objective for that company. For full details, refer to ["BofA ESGMeter Methodology"](#).

AMZL: Amazon Logistics

WFM: Whole Foods Market

AWS: Amazon Web Services

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Timestamp: 05 February 2024 04:00AM EST

iQprofileSM Amazon.com

iQmethodSM – Bus Performance*

(US\$ Millions)	2022A	2023A	2024E	2025E	2026E
Return on Capital Employed	6.0%	15.6%	18.2%	18.0%	19.2%
Return on Equity	9.1%	29.4%	30.3%	26.9%	27.7%
Operating Margin	6.4%	10.7%	13.6%	15.0%	16.0%
Free Cash Flow	(11,569)	36,813	13,169	42,196	47,022

iQmethodSM – Quality of Earnings*

(US\$ Millions)	2022A	2023A	2024E	2025E	2026E
Cash Realization Ratio	3.8x	1.7x	1.0x	1.2x	1.1x
Asset Replacement Ratio	1.4x	1.0x	1.1x	1.1x	1.1x
Tax Rate	54.2%	19.3%	19.7%	20.1%	20.3%
Net Debt-to-Equity Ratio	62.5%	36.8%	10.1%	-17.5%	-17.6%
Interest Cover	14.0x	19.4x	30.8x	37.6x	44.6x

Income Statement Data (Dec)

(US\$ Millions)	2022A	2023A	2024E	2025E	2026E
Sales	513,983	574,785	644,082	717,075	793,052
% Change	9.4%	11.8%	12.1%	11.3%	10.6%
Gross Profit	225,152	270,046	313,099	355,063	398,905
% Change	14.0%	19.9%	15.9%	13.4%	12.3%
EBITDA	74,487	110,305	139,893	164,244	189,105
% Change	3.5%	48.1%	26.8%	17.4%	15.1%
Net Interest & Other Income	(18,184)	705	548	548	748
Net Income (Adjusted)	12,170	51,125	72,497	88,406	104,856
% Change	-70.9%	320.1%	41.8%	21.9%	18.6%

Free Cash Flow Data (Dec)

(US\$ Millions)	2022A	2023A	2024E	2025E	2026E
Net Income from Cont Operations (GAAP)	(2,717)	29,790	43,746	54,498	66,079
Depreciation & Amortization	41,461	48,663	52,030	56,980	61,980
Change in Working Capital	(21,544)	(13,691)	(29,722)	(7,805)	1,023
Deferred Taxation Charge	(4,192)	(5,876)	16	16	16
Other Adjustments, Net	33,744	26,060	3,099	507	(12,577)
Capital Expenditure	(58,321)	(48,133)	(56,000)	(62,000)	(69,500)
Free Cash Flow	-11,569	36,813	13,169	42,196	47,022
% Change	-27.6%	NM	-64.2%	220.4%	11.4%
Share / Issue Repurchase	10,230	(7,548)	4	8	8
Cost of Dividends Paid	0	0	0	0	0
Change in Debt	13,678	(3,676)	(120)	(120)	(120)

Balance Sheet Data (Dec)

(US\$ Millions)	2022A	2023A	2024E	2025E	2026E
Cash & Equivalents	70,026	86,780	132,884	227,497	227,497
Trade Receivables	42,360	52,253	60,075	68,879	76,046
Other Current Assets	34,405	33,318	59,586	66,556	67,005
Property, Plant & Equipment	186,715	204,177	208,147	213,167	220,687
Other Non-Current Assets	129,169	151,326	151,326	151,326	151,326
Total Assets	462,675	527,854	612,017	727,425	742,561
Short-Term Debt	0	0	0	0	0
Other Current Liabilities	155,393	164,917	173,603	187,335	202,734
Long-Term Debt	161,239	161,062	161,012	160,962	160,762
Other Non-Current Liabilities	NA	NA	NA	NA	NA
Total Liabilities	316,632	325,979	334,615	348,297	363,496
Total Equity	146,043	201,875	277,402	379,129	379,065
Total Equity & Liabilities	462,675	527,854	612,017	727,425	742,561

* For full definitions of iQmethodSM measures, see page 11.

Company Sector

Internet/e-Commerce

Company Description

Amazon.com is one of the world's largest online retailers with a global brand and country specific sites in the U.S., UK, Germany, France, Japan, Canada, China, Spain, Italy, Mexico and India. Amazon also owns several other online retailers and online properties including Zappos.com, Diapers.com, Woot.com, Twitch.com and others. Amazon also operates Amazon Web Services (AWS), a leading cloud-based computing platform for developers and enterprises, and Whole Foods Markets.

Investment Rationale

Amazon is an eCommerce and cloud computing leader with higher market share and margin potential stemming from its global scale, fulfillment footprint and technology platform investments. We think Amazon's focus on the customers and the buyer experience is right for the Internet. We think Amazon is well positioned to capitalize on the global growth of eCommerce and other secular trends such as cloud computing, online advertising and connected devices.

Stock Data

Average Daily Volume 46,243,328

Quarterly Earnings Estimates

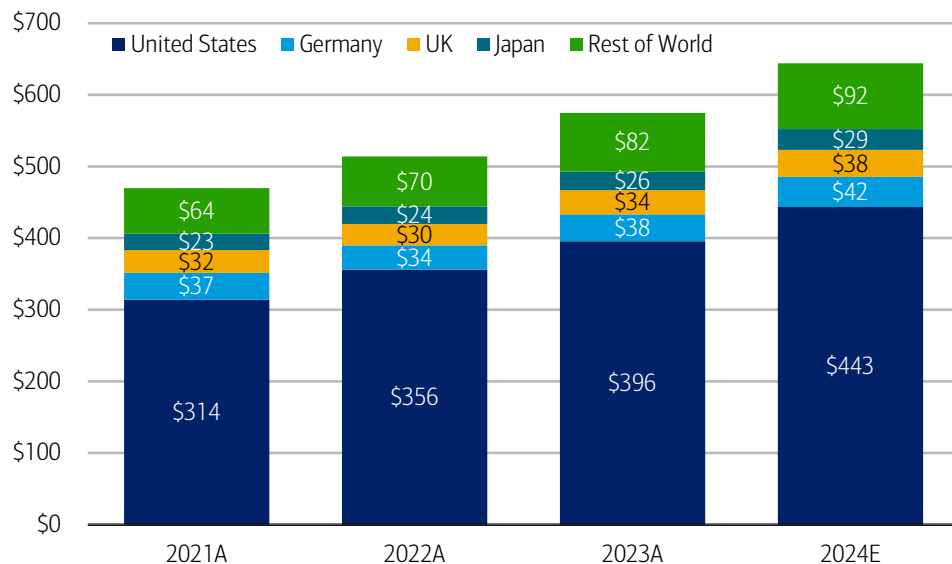
	2023	2024
Q1	0.73A	1.43E
Q2	1.18A	1.78E
Q3	1.46A	1.84E
Q4	1.61A	2.00E

International Revenue Breakdown

Amazon gave a more granular breakdown of global revenues, with the US at \$396bn (11% y/y), Germany at \$38bn (12%), the UK at \$34bn (12%), Japan at \$26bn (7%), though grew 13% ex-FX, and ROW at \$82bn (17%). In 2023, the US generated 69% of total revenue, with Germany at 7%, the UK at 6%, and Japan at 5% (all stable y/y).

Exhibit 1: Global revenues (\$bn)

All regions grew in 2023



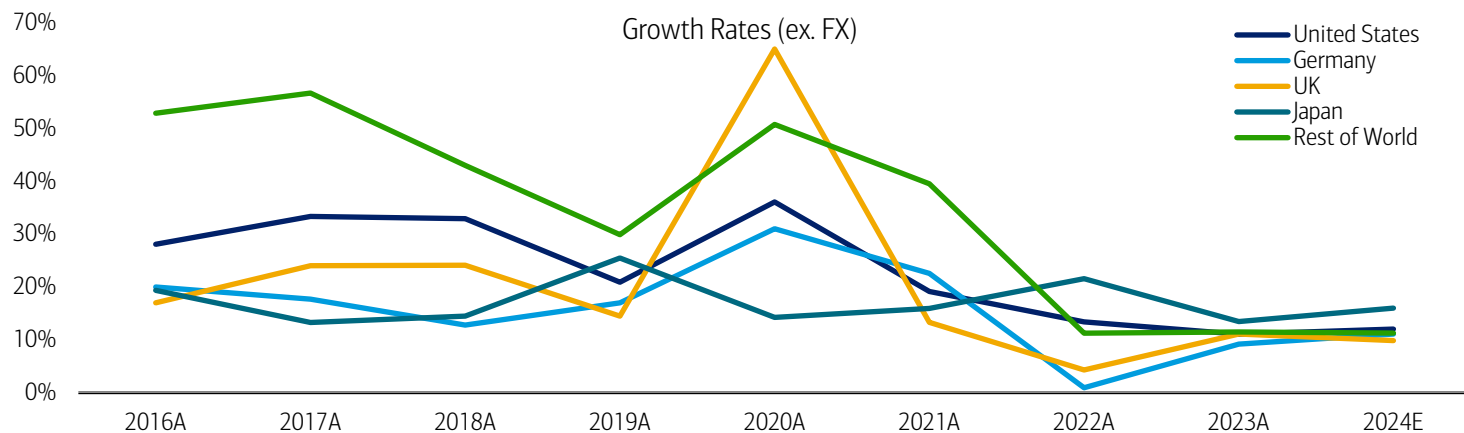
Source: Company reports, BofA Global Research

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On an ex-FX growth basis, Germany improved the most, accelerating 8pts to 9% y/y, followed by the UK improving 7pts to 11% y/y. US growth decelerated 2pts to 11% y/y, and Japan decelerated 9pts to 13% y/y. Commentary from peers indicating macro pressures in Europe in 2023 suggest possible share gains in the region.

Exhibit 2: FX-neutral growth rates

Growth on an FX neutral basis improved by 8pts in Germany to 9% y/y in 2023



Source: Company reports, Bloomberg, BofA Global Research

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Exhibit 3: Global revenues

In 2023, the US generated \$396bn of revenue, Germany \$38bn, the UK \$34bn, and Japan \$26bn.

Revenue	2015A	2016A	2017A	2018A	2019A	2020A	2021A	2022A	2023A	2024E
United States	\$70,537	\$90,349	\$120,486	\$160,146	\$193,636	\$263,520	\$314,006	\$356,113	\$395,637	\$443,336
Germany	\$11,816	\$14,148	\$16,951	\$19,887	\$22,232	\$29,565	\$37,326	\$33,598	\$37,588	\$42,120
UK	\$9,033	\$9,547	\$11,372	\$14,524	\$16,002	\$26,483	\$31,914	\$30,074	\$33,591	\$37,641
Japan	\$8,264	\$10,797	\$11,907	\$13,829	\$17,527	\$20,461	\$23,071	\$24,396	\$26,002	\$29,137
Rest of World	\$7,356	\$11,146	\$17,150	\$24,507	\$31,125	\$46,035	\$63,505	\$69,802	\$81,967	\$91,849
Global	\$107,006	\$135,987	\$177,866	\$232,893	\$280,522	\$386,064	\$469,822	\$513,983	\$574,785	\$644,082
y/y Growth	2015A	2016A	2017A	2018A	2019A	2020A	2021A	2022A	2023A	2024E
United States	29%	28%	33%	33%	21%	36%	19%	13%	11%	12%
Germany	-1%	20%	20%	17%	12%	33%	26%	-10%	12%	12%
UK	8%	6%	19%	28%	10%	65%	21%	-6%	12%	12%
Japan	4%	31%	10%	16%	27%	17%	13%	6%	7%	12%
Rest of World	21%	52%	54%	43%	27%	48%	38%	10%	17%	12%
Global	20%	27%	31%	31%	20%	38%	22%	9%	12%	12%
Est. FX-Neutral y/y Growth	2015A	2016A	2017A	2018A	2019A	2020A	2021A	2022A	2023A	2024E
United States	29%	28%	33%	33%	21%	36%	19%	13%	11%	12%
Germany	16%	20%	18%	13%	17%	31%	23%	1%	9%	11%
UK	16%	17%	24%	24%	15%	65%	13%	4%	11%	10%
Japan	17%	19%	13%	15%	25%	14%	16%	22%	13%	16%
Rest of World	24%	53%	57%	43%	30%	51%	40%	11%	12%	11%
% of Total Revenue	2015A	2016A	2017A	2018A	2019A	2020A	2021A	2022A	2023A	2024E
United States	66%	66%	68%	69%	69%	68%	67%	69%	69%	69%
Germany	11%	10%	10%	9%	8%	8%	8%	7%	7%	7%
UK	8%	7%	6%	6%	6%	7%	7%	6%	6%	6%
Japan	8%	8%	7%	6%	6%	5%	5%	5%	5%	5%
Rest of World	7%	8%	10%	11%	11%	12%	14%	14%	14%	14%
FX % Change*	2015A	2016A	2017A	2018A	2019A	2020A	2021A	2022A	2023A	2024E
Germany	-16%	0%	2%	5%	-5%	2%	4%	-11%	3%	1%
UK	-7%	-11%	-5%	4%	-4%	0%	7%	-10%	1%	2%
Japan	-13%	11%	-3%	2%	1%	2%	-3%	-16%	-7%	-4%
Rest of World**	-3%	-1%	-3%	0%	-3%	-3%	-2%	-1%	6%	1%

Source: Company reports, Bloomberg, BofA Global Research estimates

*Based on change in average sport rate in period compared to prior period

**Rest of World includes France, Australia, India, China, Brazil, Middle East

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AWS Capex & Cash Flow Analysis

For 2023, Amazon reported \$12.5bn in AWS depreciation, up 27% from \$9.9bn in 2022. AWS depreciation as a percent of revenue increased 150bps y/y to 13.8%, but is below pre-pandemic levels possibly due to the extension of useful life estimates for equipment. In 2024, Amazon will extend the useful life of servers again from five to six years. Based on our depreciation estimates for 2024 of \$13.8bn (13.0% of AWS revenue), we project AWS will generate \$45.1bn in EBITDA, representing a 43% margin (+2pts y/y). We assign AWS a slight P/S discount of 8.0x 2025 sales (translating to 18.5x EBITDA) vs. peers trading at 9.0x P/S due to a conglomerate discount. Given commentary indicating increased capex to support AWS growth, along with GenAI and LLM investments, we think investors will also consider AWS cash flow in valuation.

Exhibit 4: AWS EBITDA

Based on our depreciation estimates, we project AWS will generate \$45.1bn in 2024 EBITDA, representing a 43% margin (+2pts y/y)

AWS EBITDA & FCF	2016A	2017A	2018A	2019A	2020A	2021A	2022A	2023A	2024E	2025E	2026E
AWS Revenue	\$12,219	\$17,458	\$25,656	\$35,026	\$45,370	\$62,202	\$80,096	\$90,757	\$105,767	\$122,028	\$139,722
Y/Y Growth	55%	43%	47%	37%	30%	37%	29%	13%	17%	15%	15%
Segment Profit	\$3,109	\$4,331	\$7,296	\$9,201	\$13,531	\$18,532	\$22,841	\$24,631	\$31,398	\$36,793	\$42,615
Y/Y Growth	106%	39%	68%	26%	47%	37%	23%	8%	27%	17%	16%
Segment Margin	25%	25%	28%	26%	30%	30%	29%	27%	30%	30%	31%
Depreciation	\$3,461	\$4,524	\$6,095	\$8,158	\$7,603	\$10,653	\$9,876	\$12,531	\$13,750	\$16,352	\$19,282
% of AWS Revenue	28.3%	25.9%	23.8%	23.3%	16.8%	17.1%	12.3%	13.8%	13.0%	13.4%	13.8%
% y/y growth	34%	31%	35%	34%	-7%	40%	-7%	27%	10%	19%	18%
AWS EBITDA	\$6,570	\$8,855	\$13,391	\$17,359	\$21,134	\$29,185	\$32,717	\$37,162	\$45,147	\$53,145	\$61,897
Y/Y Growth	61%	35%	51%	30%	22%	38%	12%	14%	21%	18%	16%
EBITDA Margin	54%	51%	52%	50%	47%	47%	41%	41%	43%	44%	44%

Source: Company reports, BofA Global Research estimates

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AWS Capex

AWS capex (excluding capital leases) declined by 10% y/y in 2023 to \$24.7bn, but increased as a percent of total net capex to 51% (+4pts y/y), per Amazon's 10-K. Mgmt. indicated total capex is expected to grow y/y, primarily to support AWS growth and incremental investments in Generative AI & LLMs. We now project \$30.7bn in non-lease AWS capex (+24% y/y) in '24 vs. total capex of \$56bn growing 16% y/y, suggesting only 10% retail capex growth. Notably, Amazon has significantly reduced the use of capital leases over the past couple of years, at just \$117mn in 2023 (-54% y/y).

Exhibit 5: AWS Capex

We project \$30.7bn in AWS capex (excluding capital leases) for 2024.

AWS Capex:	2016A	2017A	2018A	2019A	2020A	2021A	2022A	2023A	2024E	2025E	2026E
AWS Total Capex (capex+capital leases)	\$5,193	\$9,190	\$9,783	\$13,058	\$16,530	\$22,047	\$27,755	\$24,843	\$30,831	\$34,961	\$39,332
% y/y growth	11%	77%	6%	33%	27%	33%	26%	-10%	24%	13%	13%
Capital leases added	\$4,000	\$7,300	\$8,400	\$10,600	\$7,700	\$3,500	\$253	\$117	\$159	\$183	\$210
% of AWS Revenue	33%	42%	33%	30%	17%	6%	0%	0%	0%	0%	0%
AWS Capex	\$1,193	\$1,890	\$1,383	\$2,458	\$8,830	\$18,547	\$27,502	\$24,726	\$30,673	\$34,778	\$39,122
y/y growth	22%	58%	-27%	78%	259%	110%	48%	-10%	24%	13%	12%
% of AWS Revenue	10%	11%	5%	7%	19%	30%	34%	27%	29%	29%	28%
Total Amazon Capex	\$6,736	\$10,057	\$11,693	\$12,690	\$35,046	\$55,396	\$58,321	\$48,133	\$56,000	\$62,000	\$69,500
AWS %	18%	19%	12%	19%	25%	33%	47%	51%	55%	56%	56%

Source: Company reports, BofA Global Research estimates

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AWS Cash flow analysis

Amazon's 10-K disclosures on AWS capex allow us to better estimate free cash flow for AWS. When we include capital lease expense (which has decreased significantly over the past 4 years), we estimate 2023 free cash flow of \$12.3bn.

Exhibit 6: AWS FCF

EBITDA minus capex minus capital leases yields \$12.3bn of AWS FCF in 2023

	2016A	2017A	2018A	2019A	2020A	2021A	2022A	2023A	2024E	2025E	2026E
EBITDA	\$6,570	\$8,855	\$13,391	\$17,359	\$21,134	\$29,185	\$32,717	\$37,162	\$45,147	\$53,145	\$61,897
Y/Y Growth	61%	35%	51%	30%	22%	38%	12%	14%	21%	18%	16%
Margin	54%	51%	52%	50%	47%	47%	41%	41%	43%	44%	44%
Capex (excluding capital leases)	\$1,193	\$1,890	\$1,383	\$2,458	\$8,830	\$18,547	\$27,502	\$24,726	\$30,673	\$34,778	\$39,122
Y/Y Growth	22%	58%	-27%	78%	259%	110%	48%	-10%	24%	13%	12%
Capital leases	\$4,000	\$7,300	\$8,400	\$10,600	\$7,700	\$3,500	\$253	\$117	\$159	\$183	\$210
Y/Y Growth	8%	83%	15%	26%	-27%	-55%	-93%	-54%	36%	15%	15%
FCF	\$1,377	(\$335)	\$3,608	\$4,301	\$4,604	\$7,138	\$4,962	\$12,319	\$14,316	\$18,184	\$22,565
FCF Margins	11%	-2%	14%	12%	10%	11%	6%	14%	14%	15%	16%

Source: Company reports, BofA Global Research estimates

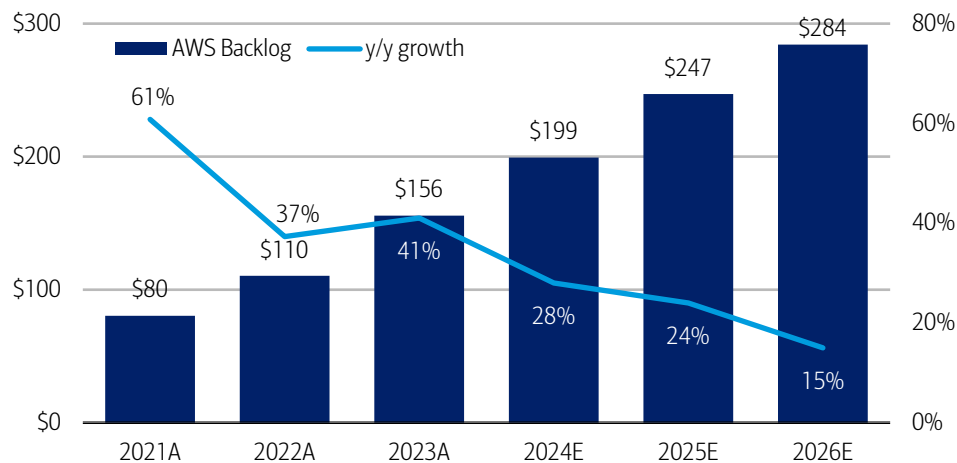
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AWS Backlog

Amazon reported \$155.7bn in unearned revenue (AWS backlog) with an average remaining time on Amazon's long-term contracts of 4.0 years (vs. 2023 at 3.7 years). AWS backlog growth was the biggest positive of 4Q'23, in our view, accelerating to a strong 41% y/y, possibly indicating growing AI demand. We estimate 28% backlog growth in 2024 (above historical levels of dollar growth), as we assume a positive AI cycle ahead.

Exhibit 7: AWS backlog (\$bn)

AWS backlog increased 41% y/y to \$155.7bn in 2023



Source: Company reports, BofA Global Research estimates

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Video & Music Content Expense

In 2023, Amazon's digital video and music content expense increased 14% y/y to \$18.9bn, with a 3pt acceleration in 4Q despite a 17pt tougher comp. On the 4Q'23 earnings call, CEO Andy Jassy stated that Prime Video "can be a large and profitable business on its own" and that the introduction of Prime Video ads (see [Margin Upside note](#)) will enable Amazon to "continue investing meaningfully in content over time". We expect additional International Prime content expense (sports) in 2024 and total content to grow by 20% y/y in \$22.6bn in 2024 (6pt accel), with incremental advertising and subscription revenue (we est. Prime Video can generate nearly \$5bn in incremental ad + sub revenue) helping fund content and improve profitability.

Exhibit 9: Content expense analysis

In 2023, content expense increased 14% y/y to \$18.9bn, and mgmt. indicated that Prime Video ads will help fund future content.

\$bn	2021A	2022A	1Q23A	2Q23A	3Q23A	4Q23A	2023A	1Q24E	2Q24E	3Q24E	4Q24E	2024E
Digital Video & Music Content Expense	\$13.0	\$16.6	\$4.0	\$4.4	\$4.6	\$5.9	\$18.9	\$4.9	\$5.2	\$5.4	\$7.1	\$22.6
Y/Y	18%	28%	14%	19%	10%	13%	14%	23%	18%	18%	20%	20%
Q/Q			-23%	10%	5%	28%		-17%	6%	5%	30%	

Source: Company reports, BofA Global Research

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Infrastructure Growth

AWS facilities growth slowed to 14% y/y, a 14pt deceleration from 2022. AWS owns 47% of its total square footage, up 1pt y/y to its highest level thus far.

For retail, US growth slowed to 5%, a 1pt deceleration, while International growth increased 18%, a 4pt acceleration. Amazon owns just 4% of its square footage in North America (1pt y/y), and 5% Internationally (1pt y/y). Amazon's US distribution square footage is 3x MWPVL estimates for Walmart distribution square footage of 150mn square feet, though Walmart also uses its stores for Online sales distribution.

Exhibit 10: Infrastructure square footage analysis

AWS facilities now include 38.2mn of square feet, while retail has 612.8mn

Leased Square Footage ('000)	2016A	2017A	2018A	2019A	2020A	2021A	2022A	2023A
N. America	93,716	147,277	165,503	199,473	298,879	383,660	403,984	424,145
International	57,243	66,328	70,619	74,231	102,192	124,246	140,898	165,329
AWS	5,431	6,197	9,740	10,553	10,599	14,152	18,034	20,434
y/y growth								
N. America	40%	57%	12%	21%	50%	28%	5%	5%
International	25%	16%	6%	5%	38%	22%	13%	17%
AWS	13%	14%	57%	8%	0%	34%	27%	13%
Owned Square Footage	2016A	2017A	2018A	2019A	2020A	2021A	2022A	2023A
N. America	586	2,140	1,977	1,983	3,813	9,863	13,595	15,438
International	218	4,167	895	958	1,294	5,103	6,292	7,931
AWS	2,690	4,024	4,404	5,882	7,465	11,960	15,446	17,770
y/y growth								
N. America	47%	265%	-8%	0%	92%	159%	38%	14%
International	52%	1811%	-79%	7%	35%	294%	23%	26%
AWS	42%	50%	9%	34%	27%	60%	29%	15%
Total Square Footage	2016A	2017A	2018A	2019A	2020A	2021A	2022A	2023A
N. America	94,302	149,417	167,480	201,456	302,692	393,523	417,579	439,583
International	57,461	70,495	71,514	75,189	103,486	129,349	147,190	173,260
AWS	8,121	10,221	14,144	16,435	18,064	26,112	33,480	38,204
y/y growth								
N. America	40%	58%	12%	20%	50%	30%	6%	5%
International	25%	23%	1%	5%	38%	25%	14%	18%
AWS	21%	26%	38%	16%	10%	45%	28%	14%
Owned as % of total	2016A	2017A	2018A	2019A	2020A	2021A	2022A	2023A
N. America	1%	1%	1%	1%	1%	3%	3%	4%
International	0%	6%	1%	1%	1%	4%	4%	5%
AWS	33%	39%	31%	36%	41%	46%	46%	47%

Source: Company reports, BofA Global Research

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Other Infrastructure Investments

In 2023, Amazon's North America Fulfillment & Data Center footprint reached 439mn square feet (+6% y/y, 1pt decel) and International Fulfillment & Data Center footprint reached 189mn sq. ft. (17% y/y, 1pt accel). Total office space grew 3% y/y to 65mn sq. ft., with the largest expansion in North America (4% y/y). Amazon's physical store presence was flat y/y at 24mn square feet as Amazon paused expansion in grocery and shuttered international stores. Total square footage grew 8% y/y, a 1pt decel vs. 2022 but well below 2021 at 28% as Amazon realizes leverage on its \$100bn+ COVID investment cycle. See [Retail Margin Checkup note](#) for more detailed thoughts on leverage against Amazon's logistics infrastructure.

Exhibit 11: Amazon square footage disclosures

In 2023, Amazon's total footprint reached 716mn square feet (8% y/y)

	2021			2022			2023		
	North America	International	Total	North America	International	Total	North America	International	Total
Office Space	33,657	22,785	56,442	37,403	25,758	63,161	38,877	26,330	65,207
Physical Stores	23,058	235	23,293	23,543	291	23,834	23,578	255	23,833
Fulfillment, Data centers, & Other	387,055	138,636	525,691	413,656	160,749	574,405	438,647	188,567	627,214
Total	443,770	161,656	605,426	474,602	186,798	661,400	501,102	215,152	716,254

	2021			2022			2023		
	North America	International	Total	North America	International	Total	North America	International	Total
Y/Y Growth									
Office Space	14%	9%	12%	11%	13%	12%	4%	2%	3%
Physical Stores	6%	39%	6%	2%	24%	2%	0%	-12%	0%
Fulfillment, Data centers, & Other	32%	28%	31%	7%	16%	9%	6%	17%	9%
Total	28%	25%	28%	7%	16%	9%	6%	15%	8%

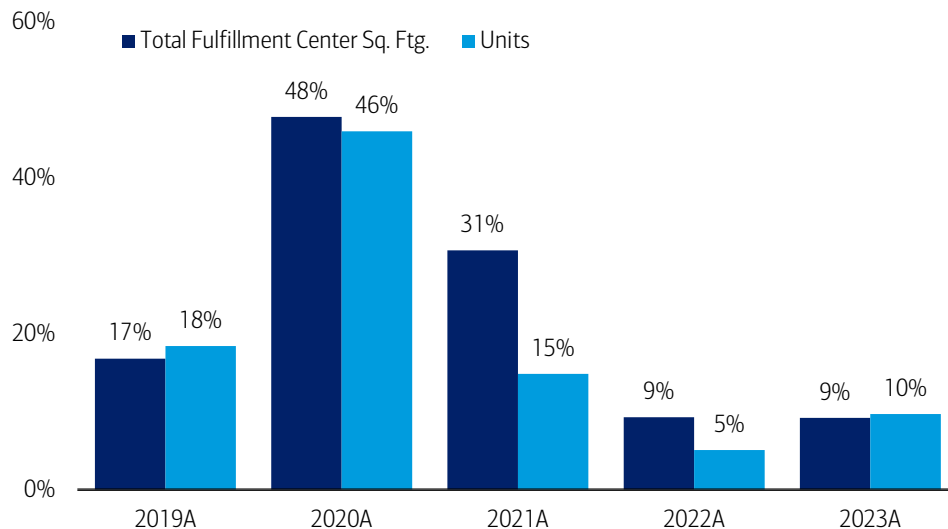
Source: Company reports, BofA Global Research

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Unit growth of 10% outpaced fulfillment center sq. ftg. growth (9% y/y) for the first time since 2019 as Amazon slowed logistics investments. On the 4Q'23 earnings call, management noted that the company's regionalization network also reduced transportation distances, which has helped lower Amazon's cost to serve for the first time since 2018 (in the US, cost to serve declined by over \$0.45 per unit y/y). According to mgmt., there are further opportunities to reduce Amazon's cost to serve, including finding efficiencies in AMZL's inbound network.

Exhibit 11: Fulfillment center sq. ftg. growth vs. Amazon paid unit growth

Unit growth outpaced fulfillment center sq. ftg. growth for the first time since 2019



Source: Company reports, BofA Global Research

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Price objective basis & risk

Amazon.com (AMZN)

Our PO of \$204 is based on our SOTP analysis that values the 1P retail business at 1.1x 2025E Revenue (including subscription/Prime membership fees), 3P retail business at 2.6x 2025E Revenue, AWS at 8.0x 2025 Sales, and the advertising business at 5.0x 2025 Sales. For 2025E, our 8.0x AWS multiple is relatively below our SaaS comps at 8.9x, our 1.1x GMV multiple is a slight discount to our retail comps at 1.2x, and our 5.0x advertising multiple is a slight discount to our digital advertising comps at 5.2x. We think some conglomerate discount is warranted with elevated regulatory/antitrust risk, but long-term we believe that in-line to discount multiples are warranted given growth rates in-excess of peers.

Our PO of \$204 for Amazon implies 3.0x P/Sales, a multiple toward the high end of Amazon's historical range of 1.0-3.5x. With improving margins long-term, we expect the revenue multiple should trend upward over time.

Downside risks to our price objective are increasing competition from offline and local retailers, AWS client cost optimization impact on revenues and margins, and regulatory pressure on the 3P marketplace. The stock has been subject to heavy volatility in the past, based on margin trends, and this volatility could increase due to economic uncertainty.

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US - Internet Coverage Cluster

Investment rating	Company	BofA Ticker	Bloomberg symbol	Analyst
BUY				
	Alphabet	GOOGL	GOOGL US	Justin Post
	Alphabet	GOOG	GOOG US	Justin Post
	Amazon.com	AMZN	AMZN US	Justin Post
	AppLovin	APP	APP US	Omar Dessouky, CFA
	DoorDash	DASH	DASH US	Michael McGovern
	DoubleVerify Holdings, Inc.	DV	DV US	Omar Dessouky, CFA
	Electronic Arts	EA	EA US	Omar Dessouky, CFA
	Expedia	EXPE	EXPE US	Justin Post
	Integral Ad Science Holding Corp.	IAS	IAS US	Omar Dessouky, CFA
	LegalZoom	LZ	LZ US	Michael McGovern
	Match Group	MTCH	MTCH US	Curtis Nagle, CFA
	Meta Platforms Inc	META	META US	Justin Post
	Pinterest	PINS	PINS US	Justin Post
	RH	RH	RH US	Curtis Nagle, CFA
	Roblox Corp. Class A	RBLX	RBLX US	Omar Dessouky, CFA
	Squarespace, Inc.	SQSP	SQSP US	Michael McGovern
	Uber	UBER	UBER US	Justin Post
	Udemy Inc	UDMY	UDMY US	Curtis Nagle, CFA
	Vivid Seats	SEAT	SEAT US	Curtis Nagle, CFA
	Wayfair	W	W US	Curtis Nagle, CFA
	Wix.com	WIX	WIX US	Michael McGovern
NEUTRAL				
	ACV Auctions	ACVA	ACVA US	Curtis Nagle, CFA
	Airbnb	ABNB	ABNB US	Justin Post
	Beyond Inc	BYON	BYON US	Curtis Nagle, CFA
	Booking Holdings Inc	BKNG	BKNG US	Justin Post
	Bumble	BMBL	BMBL US	Curtis Nagle, CFA
	Digital Turbine, Inc	APPS	APPS US	Omar Dessouky, CFA

US - Internet Coverage Cluster

Investment rating	Company	BofA Ticker	Bloomberg symbol	Analyst
	Duolingo	DUOL	DUOL US	Curtis Nagle, CFA
	eBay	EBAY	EBAY US	Justin Post
	Etsy, Inc.	ETSY	ETSY US	Curtis Nagle, CFA
	Instacart	CART	CART US	Justin Post
	Magnite, Inc.	MGNI	MGNI US	Omar Dessouky, CFA
	Snap	SNAP	SNAP US	Justin Post
	Take-Two Interactive	TTWO	TTWO US	Omar Dessouky, CFA
	Zillow	ZG	ZG US	Curtis Nagle, CFA
	Zillow	Z	Z US	Curtis Nagle, CFA
UNDERPERFORM				
	Chewy Inc	CHWY	CHWY US	Curtis Nagle, CFA
	Lyft, Inc.	LYFT	LYFT US	Michael McGovern
	Opendoor Technologies	OPEN	OPEN US	Curtis Nagle, CFA
	Peloton	PTON	PTON US	Curtis Nagle, CFA
	Playtika	PLTK	PLTK US	Omar Dessouky, CFA
	Redfin Corp	RDFN	RDFN US	Curtis Nagle, CFA
	Shutterstock	SSTK	SSTK US	Curtis Nagle, CFA

iQmethodSM Measures Definitions**Business Performance**

Return On Capital Employed

Return On Equity

Operating Margin

Earnings Growth

Free Cash Flow

Quality of Earnings

Cash Realization Ratio

Asset Replacement Ratio

Tax Rate

Net Debt-To-Equity Ratio

Interest Cover

Valuation Toolkit

Price / Earnings Ratio

Price / Book Value

Dividend Yield

Free Cash Flow Yield

Enterprise Value / Sales

EV / EBITDA

Numerator

NOPAT = (EBIT + Interest Income) × (1 – Tax Rate) + Goodwill Amortization

Net Income

Operating Profit

Expected 5 Year CAGR From Latest Actual

Cash Flow From Operations – Total Capex

Numerator

Cash Flow From Operations

Capex

Tax Charge

Net Debt = Total Debt – Cash & Equivalents

EBIT

Numerator

Current Share Price

Current Share Price

Annualised Declared Cash Dividend

Cash Flow From Operations – Total Capex

EV = Current Share Price × Current Shares + Minority Equity + Net Debt +

Other LT Liabilities

Enterprise Value

Denominator

Total Assets – Current Liabilities + ST Debt + Accumulated Goodwill

Amortization

Shareholders' Equity

Sales

N/A

N/A

Denominator

Net Income

Depreciation

Pre-Tax Income

Total Equity

Interest Expense

Denominator

Diluted Earnings Per Share (Basis As Specified)

Shareholders' Equity / Current Basic Shares

Current Share Price

Market Cap = Current Share Price × Current Basic Shares

Sales

Basic EBIT + Depreciation + Amortization

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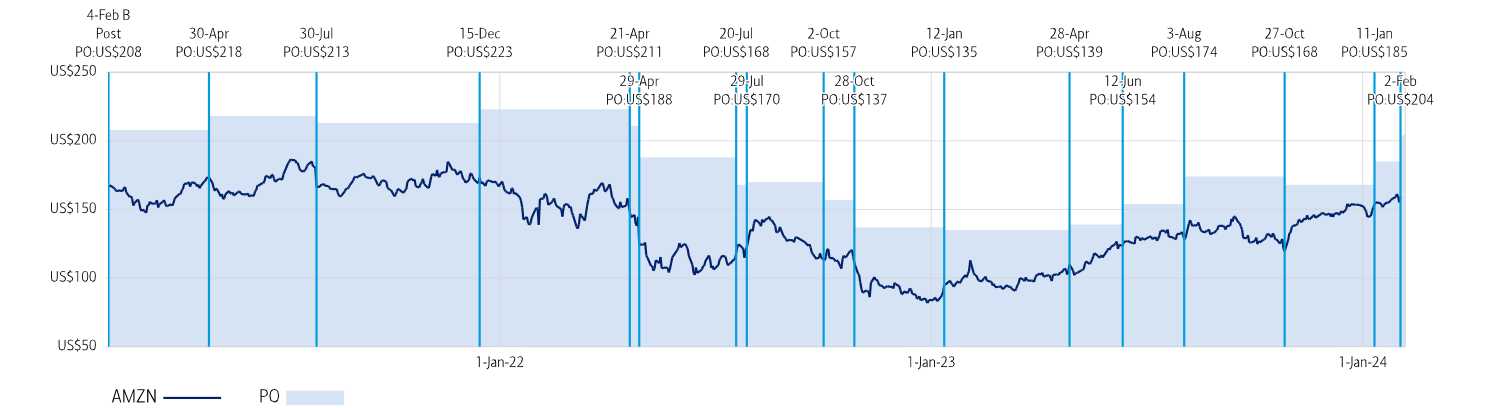
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Amazon.com (AMZN) Price Chart



B: Buy, N: Neutral, U: Underperform, PO: Price Objective, NA: No longer valid, NR: No Rating

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Equity Investment Rating Distribution: Technology Group (as of 31 Dec 2023)

Coverage Universe	Count	Percent	Inv. Banking Relationships ^{R1}	Count	Percent
Buy	215	53.09%	Buy	111	51.63%
Hold	97	23.95%	Hold	45	46.39%
Sell	93	22.96%	Sell	24	25.81%

Equity Investment Rating Distribution: Global Group (as of 31 Dec 2023)

Coverage Universe	Count	Percent	Inv. Banking Relationships ^{R1}	Count	Percent
Buy	1895	53.62%	Buy	1083	57.15%
Hold	832	23.54%	Hold	454	54.57%
Sell	807	22.84%	Sell	383	47.46%

^{R1} Issuers that were investment banking clients of BofA Securities or one of its affiliates within the past 12 months. For purposes of this Investment Rating Distribution, the coverage universe includes only stocks. A stock rated Neutral is included as a Hold, and a stock rated Underperform is included as a Sell.

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Investment rating	Total return expectation (within 12-month period of date of initial rating)	Ratings dispersion guidelines for coverage cluster ^{R2}
Buy	≥ 10%	≤ 70%
Neutral	≥ 0%	≤ 30%
Underperform	N/A	≥ 20%

^{R2}Ratings dispersions may vary from time to time where BofA Global Research believes it better reflects the investment prospects of stocks in a Coverage Cluster.

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